



S5700 Series Ethernet Switches

Hardware Description

Issue **46**

Date **2020-05-15**

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Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base
Bantian, Longgang
Shenzhen 518129
People's Republic of China

Website: <https://e.huawei.com>

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1 About This Document



Intended Audience

This document provides an overall description of the switch hardware, helping you obtain detailed information about each chassis, card, power module, fan module, cable, and optical module.

This document is intended for network engineers responsible for network design and deployment. You should understand your network well, including the network topology and service requirements.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. NOTICE is used to address practices not related to personal injury.
	Supplements the important information in the main text. NOTE is used to address information not related to personal injury, equipment damage, and environment deterioration.

Command Conventions

The command conventions that may be found in this document are defined as follows.

Convention	Description
Boldface	The keywords of a command line are in boldface .
<i>Italic</i>	Command arguments are in <i>italics</i> .
[]	Items (keywords or arguments) in brackets [] are optional.
{ x y ... }	Optional items are grouped in braces and separated by vertical bars. One item is selected.
[x y ...]	Optional items are grouped in brackets and separated by vertical bars. One item is selected or no item is selected.
{ x y ... }*	Optional items are grouped in braces and separated by vertical bars. A minimum of one item or a maximum of all items can be selected.
[x y ...]*	Optional items are grouped in brackets and separated by vertical bars. Several items or no item can be selected.
&<1-n>	The parameter before the & sign can be repeated 1 to n times.
#	A line starting with the # sign is comments.

Disclaimer

- This document is designed as a reference for you to configure your devices. Its contents, including web pages, command line input and output, are based on laboratory conditions. It provides instructions for general scenarios, but does not cover all use cases of all product models. The examples given may differ from your use case due to differences in software versions, models, and configuration files. When configuring your device, alter the configuration depending on your use case.
- The specifications provided in this document are tested in lab environment (for example, a certain type of cards have been installed on the tested device or only one protocol is run on the device). Results may differ from the listed specifications when you attempt to obtain the maximum values with multiple functions enabled on the device.
- In this document, public IP addresses may be used in feature introduction and configuration examples and are for reference only unless otherwise specified.

Device Dimension Conventions

The dimensions described in this document are theoretically typical dimensions and do not include dimension tolerances.

2 Using the Hardware Query Tool to Query Hardware Description Information

Figure 2-1 shows the interface of the **Hardware Query Tool**. You can use this tool to query the power modules, fan modules, optical modules, and cards supported by each switch model, as well as specifications of switches and modules. You can search switch products or modules by part number, product model, or module type.

Figure 2-1 Web page of the Hardware Query Tool

Info+ **Info-Finder**
A collection of documentation tools for network products(enterprise network), a good assistant for bidding, network planning, project delivery, upgrade, and maintenance.

Packet Format | **Hardware** | Alarm | Command | Log | License

Parts Query | Compatibility Query

Product * All

Version * ▾

Keyword

3 Using the Hardware Configuration Tool to Calculate Power Consumption of Equipment

Figure 3-1 shows the web page of the [Hardware Configuration Tool](#). You can use this tool to calculate the power consumption of a switch.

 **NOTE**

The heat consumption of a device can be calculated as follows based on its power consumption:

Heat consumption (BTUs per hour) = Power consumption (W) x 3.412

Figure 3-1 Web page of the Hardware Configuration Tool

Hardware Configuration Tool

Displaying configuration diagrams, power consumption, and weight in one click

Import...

Home > Switch- > Campus Switch- > S12704-

● Configure a Single Card
 ● Configure Cards in a Batch

You can enter a keyword to quickly select a card.

MPU

06	ET1D2MPUA000
05	ET1D2MPUA000

LPU (04-03)

04	Filler panel
03	Filler panel

SFU

08	Filler panel
07	Filler panel

LPU (02-01)

02	Filler panel
01	Filler panel

Clear Configurations

Hardware Configuration Diagram

Preview
Download

Power Consumption, Heat Consumption, and Weight
Calculate

Maximum Power Consumption (W) ⓘ	Total Weight (kg) ⓘ	Maximum Heat Dissipation (BTU/h) ⓘ	Typical Power Consumption (W) ⓘ	Typical Heat Dissipation (BTU/h) ⓘ
-	-	-	-	-

Export Results

4 Version Requirements for Components

This document describes all the device models and modules supported in a version. To obtain accurate subscription information, visit <http://e.huawei.com> or contact Huawei local sales offices. You can also pay attention to the product change notices (PCNs) and lifecycle management bulletins on this website.

The figures in this document are for reference only.

5 Chassis

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- [5.2 Naming Conventions](#)
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- [5.4 S5700-LI](#)
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- [5.17 S5720-EI](#)
- [5.18 S5730S-EI](#)
- [5.19 S5700-HI](#)
- [5.20 S5710-HI](#)
- [5.21 S5720-HI](#)
- [5.22 S5730-HI](#)
- [5.23 S5731-S](#)

- [5.24 S5731S-S](#)
- [5.25 S5731-H](#)
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- [5.27 S5732-H](#)
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- [5.29 S5735S-L](#)
- [5.30 S5735S-L-M](#)
- [5.31 S5735-S](#)
- [5.32 S5735-S-I](#)
- [5.33 S5735S-S](#)

5.1 Chassis Overview

The S series fixed Ethernet switches integrate the access and transmission functions to provide reliable access/aggregation and high-quality transmission of services on enterprise networks. The switches are built on an integrated hardware platform, and the hardware system consists of the chassis, power module, fan module, extended cards, and Switch Control Unit (SCU).

The S series fixed Ethernet switches are available in a variety of models for you to choose based on your network requirements.

The S5700 series includes the S5700-LI, S5700S-LI, S5700-LI-BAT, S5710-LI, S5720-LI, S5720S-LI, S5700-SI, S5720-SI, S5730-SI, S5720S-SI, S5720I-SI, S5700-EI, S5710-EI, S5720-EI, S5730S-EI, S5700-HI, S5710-HI, S5720-HI, S5730-HI, S5731-S, S5731S-S, S5731-H, S5731S-H, S5732-H, S5735-L, S5735S-L, S5735S-L-M, S5735-S, S5735-S-I, and S5735S-S subseries. The S5700-LI, S5700S-LI, S5700-LI-BAT, S5710-LI, S5720-LI, S5720S-LI, S5735-L, S5735S-L, and S5735S-L-M switches are Layer 2 switches, and all the other models in this series are Layer 3 switches.

5.2 Naming Conventions

Figure 5-1 S5700 switch naming conventions (applicable to versions earlier than V200R013C02)

S5700S-52P-PWR-LI-24S-AC

A B C D E F G H I J K

 **NOTE**

The device names in this figure are used as examples and do not represent specific devices. The uplink and downlink ports mentioned in this document refer to the recommended usage of the port, and do not indicate that the corresponding port can be used only for the downlink or uplink.

Table 5-1 S5700 switch naming convention description (applicable to versions earlier than V200R013C02)

Identifier	Description
A	Switch
B	<ul style="list-style-type: none"> ● 6: 10GE downlink ports ● 5: GE downlink ports ● 3: Layer 3 switch with 100M downlink ports ● 2: Layer 2 switch with 100M downlink ports
C	7 : switch for enterprise networks
D	Product sub-series (such as 00 or 10)
E	<ul style="list-style-type: none"> ● S: channel distribution model ● SV2: enhanced channel distribution model ● I: model supporting a wide temperature range
F	Maximum number of ports NOTE On an S5710-EI switch (such as S5710- 28C -EI), this field indicates the maximum number of fixed ports on the switch.
G	Uplink port type: <ul style="list-style-type: none"> ● C: The product supports extended cards and its uplink ports are provided by an extended card or are fixed 10GE ports. ● PC: The product supports extended cards and its uplink ports are provided by an extended card or are fixed GE ports. ● X: The product has fixed 10GE uplink ports. ● TP: The uplink ports of the product include combo ports consisting of electrical and optical ports. ● P: The uplink ports of the product are fixed GE optical ports. NOTE If the product name does not contain this field, the switch has no uplink port.
H	<ul style="list-style-type: none"> ● PWR: The product supports Power over Ethernet (PoE). ● PWH: The product supports PoE++. NOTE If the product name does not contain this field, the switch does not support PoE.

Identifier	Description
I	Level type: <ul style="list-style-type: none"> ● LI: lightweight version ● SI: standard version ● EI: enhanced version ● HI: high-level version, which supports high-performance operation, administration, and maintenance (OAM) and built-in real-time clock (RTC)
J	Downlink port type: <ul style="list-style-type: none"> ● 24S: 24 downlink SFP optical ports ● 48CS: 48 downlink compact SFP (CSFP) optical ports NOTE If the product name does not contain this field, all downlink ports of the switch are electrical ports.
K	Power supply type: <ul style="list-style-type: none"> ● AC: switch using AC power supply ● AC1 or ACF: switch using AC power supply and supporting high-power PoE power modules ● ACL: switch using AC power supply and having a built-in low-power PoE power module ● DC: switch using DC power supply ● BAT: battery LAN switch NOTE Some product models that support pluggable power modules are sold with AC or DC power modules (standard configuration), and their product names contain "-AC" or "-DC". However, the silkscreen or nameplate on the chassis does not contain "-AC" or "-DC". For example, the S5720-56C-HI supports pluggable AC and DC power modules. If its standard configuration includes AC power modules, its product name is S5720-56C-HI-AC, but the name on its silkscreen or nameplate is still S5720-56C-HI.

Figure 5-2 S5700 switch naming conventions (applicable to V200R013C02 and later versions)

S5730S-H48T4XC-MA

A B C D E F G H I J K L M

 **NOTE**

The device names in this figure are used as examples and do not represent specific devices.
The uplink and downlink ports mentioned in this document refer to the recommended usage of the port, and do not indicate that the corresponding port can be used only for the downlink or uplink.

Table 5-2 S5700 switch naming convention description (applicable to V200R013C02 and later versions)

Identifier	Description
A	Product type (1 character) The value is fixed at S, indicating that the device is an S series switch.
B	Role on the network (1 character) <ul style="list-style-type: none"> • 6: aggregation switch • 5: access switch
C	Market positioning (1 character) 7 : switch for enterprise networks
D	Product sub-series (2 characters) The left character indicates the generation, for example, S5720 and S5730. The right character indicates switches of the same series with different specifications, for example, S5720 and S5721.
E	Industry identifier (0 to 2 characters) <ul style="list-style-type: none"> • By default, this field is left empty. • S: channel distribution model
F	Level type (1 character) <ul style="list-style-type: none"> • H: high-level • M: enhanced • S: standard • L: lightweight
G	Number of downlink ports (1 or 2 characters)
H	Downlink port type (1 or 3 characters) <ul style="list-style-type: none"> • T: GE electrical port • P: GE electrical port, supporting PoE+ • UM: MultiGE electrical port, supporting PoE++ • XUM: MultiGE electrical port or 10GE optical port, supporting PoE++ • X: 10GE optical port • S: GE optical port
I	Number of uplink ports (1 character)

Identifier	Description
J	Uplink port type (1 character) <ul style="list-style-type: none">• S: GE optical port• X: 10GE optical port• C: 100GE optical port• Q: 40GE optical port
K	Support for pluggable cards (0 or 1 character) <ul style="list-style-type: none">• Empty: The switch does not support pluggable cards.• C: The switch supports pluggable cards.
L	Special function type (0 or 1 characters) <ul style="list-style-type: none">• I: The switch supports a wide temperature range.• M: The switch supports monitoring functions.
M	Power module type (0 to 2 characters) <ul style="list-style-type: none">• Empty: The switch uses pluggable power modules.• A: The switches are sold with AC power module or with built-in AC power.• D: The switches are sold with DC power module. NOTE This convention is not applicable to the S5735-S4T2X-IA150G1 and S5735-S8P2X-IA200G1.

5.3 Port Numbering Conventions

Physical ports are numbered in the following way:

A single switch uses slot ID/subcard ID/port sequence number to identify physical ports.

- Slot ID: indicates the slot where the switch is located. The value is 0.
- Subcard ID: indicates the ID of a subcard.
- Port sequence number: indicates the sequence number of a port on the switch.

A stacked switch uses Stack ID/subcard ID/port sequence number to identify physical ports.

- Stack ID: indicates the ID of a stacked switch. The value ranges from 0 to 8.
- Subcard ID: indicates the ID of a subcard.
- Port sequence number: indicates the sequence number of a port on the switch.

Table 5-3 Port numbering conventions

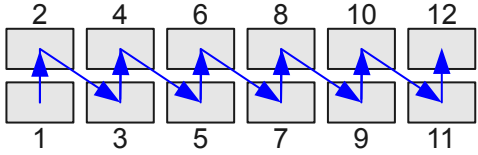
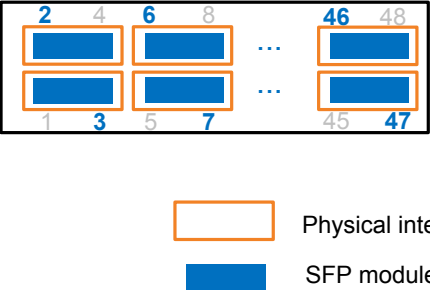
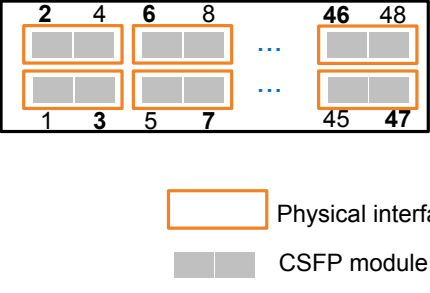
Port Numbering Diagram	Description
	<p>There are two rows of service ports on the device. These ports are numbered from bottom to top and left to right, starting from 1.</p> <p>For example, the port on the top left is numbered 0/0/2.</p> <p>Ports of different speeds are numbered separately. For example, the first 100M port is numbered ethernet 0/0/1, and the first GE port is numbered gigabitethernet 0/0/1. Other 100M and GE ports are numbered in ascending order following the two ports respectively.</p>

Table 5-4 describes the CSFP port numbering conventions.

Table 5-4 CSFP port numbering conventions

Port Numbering Diagram	Description
 <p>Physical interface</p> <p>SFP module</p>	<p>For example, an S5700-52X-LI-48CS-AC has 24 physical ports located in two rows of service ports, 12 ports in each row. When all the ports have SFP optical modules installed, the ports are numbered as follows:</p> <ul style="list-style-type: none"> • The ports in the lower row are numbered starting with 3 from left to right, with an increment of 4. • The ports in the upper row are numbered starting with 2 from left to right, with an increment of 4. <p>For example, with SFP optical modules installed, the first port at the lower left of the panel is numbered 0/0/3; the second port at the lower left is numbered 0/0/7; the first port at the upper left is numbered 0/0/2; the second port at the upper left is numbered 0/0/6.</p>
 <p>Physical interface</p> <p>CSFP module</p>	<p>When all the ports have CSFP optical modules installed, each port functions as two ports. The switch has a total of 48 ports in this case. These ports are numbered starting with 1 from bottom to top, and left to right.</p> <p>For example, if a CSFP optical module is installed on the first port at the lower left, the port is split into two ports numbered 0/0/1 and 0/0/3. If a CSFP optical module is installed on the first port at the upper left, the port is split into two ports numbered 0/0/2 and 0/0/4.</p>

Port Numbering Diagram	Description
<p> Physical interface CSFP module SFP module </p>	<p>If some ports on the switch use CSFP optical modules and some use SFP optical modules, the ports are numbered following the perspective numbering conventions.</p> <p>Assume that the first port at the lower left uses a CSFP optical module and the second port at the upper left uses an SFP optical module. In this case, the two ports derived from the first CSFP port are numbered 0/0/1 and 0/0/3, and the second SFP port is numbered 0/0/6.</p>

5.4 S5700-LI

5.4.1 S5700-10P-LI-AC

Version Mapping

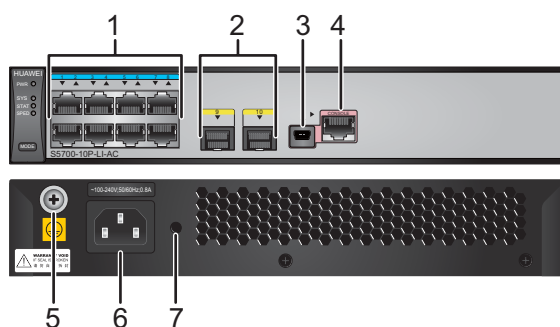
Table 5-5 lists the mapping between the S5700-10P-LI-AC chassis and software versions.

Table 5-5 Version mapping

Series	Model	Software Version
S5700-LI	S5700-10P-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-3 S5700-10P-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	AC socket NOTE It is used with an AC power cable .
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-6** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-6 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-7](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-7 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-8](#).

Table 5-8 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

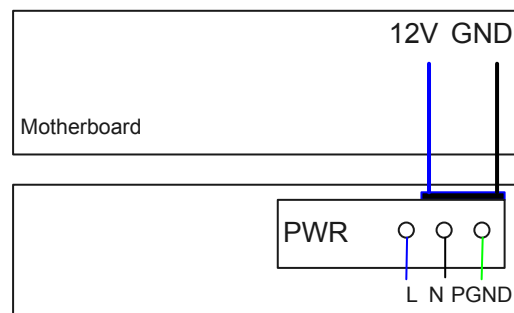
The S5700-10P-LI-AC has similar indicators to those of the S5700-28X-LI-AC, except that the S5700-10P-LI-AC does not have RPS and STCK indicators and two GE optical ports do not support the Speed mode. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-10P-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-4](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-4 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-10P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-9](#) lists technical specifications of the S5700-10P-LI-AC.

Table 5-9 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB

Item	Description
Mean time between failures (MTBF)	44.41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)
Weight (with packaging)	1.3 kg (2.87 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	11.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	9.71 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354036

5.4.2 S5700-10P-PWR-LI-AC

Version Mapping

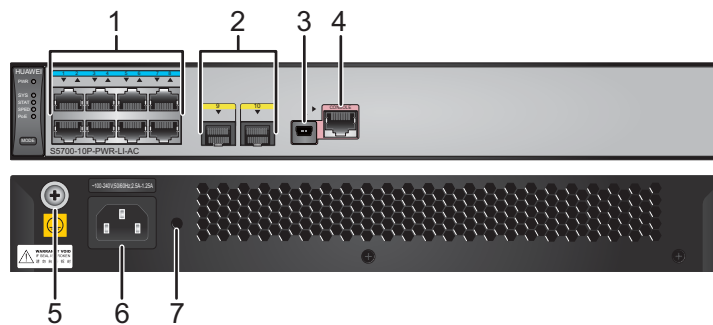
Table 5-10 lists the mapping between the S5700-10P-PWR-LI-AC chassis and software versions.

Table 5-10 Version mapping

Series	Model	Software Version
S5700-LI	S5700-10P-PWR-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-5 S5700-10P-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> GE optical module (80 km and 100 km modules not supported) GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	AC socket NOTE It is used with an AC power cable .
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-11](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-11 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-12](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-12 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-13](#).

Table 5-13 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

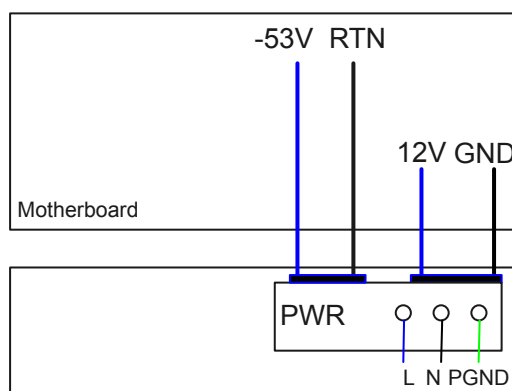
The S5700-10P-PWR-LI-AC has similar indicators to those of the S5700-28X-PWR-LI-AC, except that the S5700-10P-PWR-LI-AC does not have RPS and STCK indicators and two GE optical ports do not support the Speed mode. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-10P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 5-6 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-6 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5700-10P-PWR-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-14 lists technical specifications of the S5700-10P-PWR-LI-AC.

Table 5-14 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	36.89 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.)
Weight (with packaging)	2.3 kg (5.07 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full PoE)	142.4 W (system power consumption: 18.4 W, PoE: 124 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	13.51 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354037

5.4.3 S5700-28P-LI-AC

Version Mapping

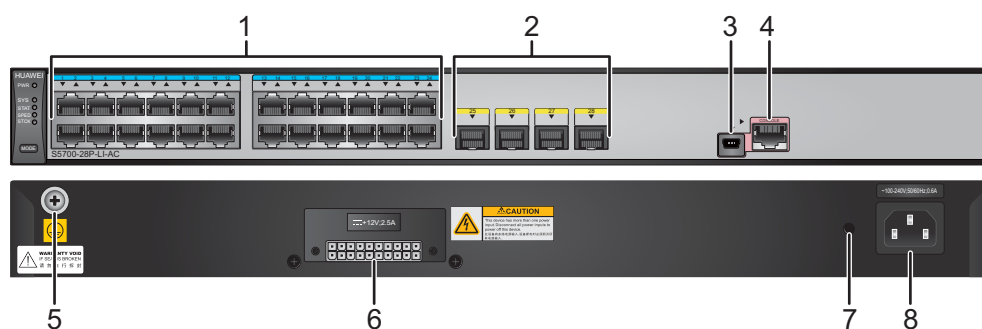
Table 5-15 lists the mapping between the S5700-28P-LI-AC chassis and software versions.

Table 5-15 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-7 S5700-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T Ethernet Electrical Port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-16** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-16 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-17](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-17 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-18](#).

Table 5-18 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

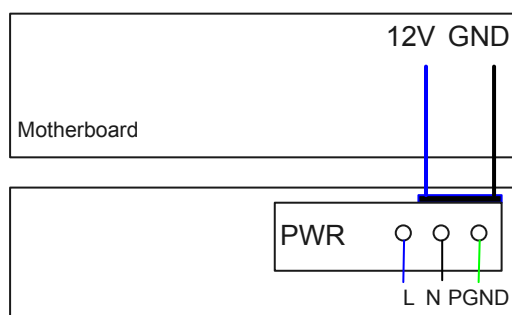
The S5700-28P-LI-AC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-28P-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-8 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-8 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-19 lists specifications of the S5700-28P-LI-AC.

Table 5-19 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> • V200R001: 64 MB • V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.17 lb)
Stack ports	<ul style="list-style-type: none"> • V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports • V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	24 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	19.3 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 45°C (32°F to 113°F) when it uses SFP optical modules with 80 km or longer transmission distances.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353173

5.4.4 S5700-28P-LI-DC

Version Mapping

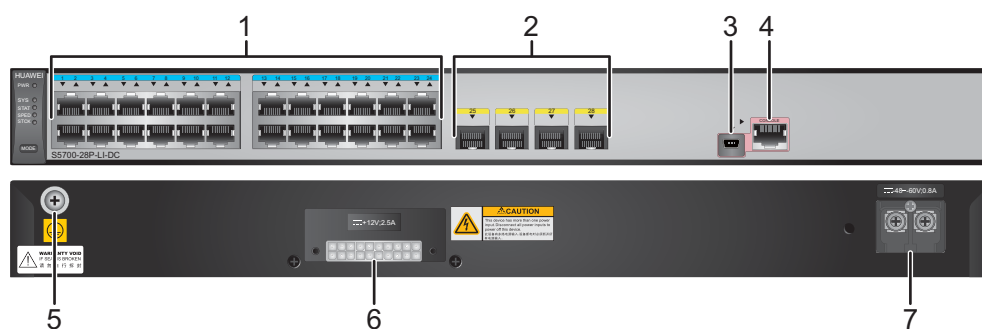
Table 5-20 lists the mapping between the S5700-28P-LI-DC chassis and software versions.

Table 5-20 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-LI-DC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-9 S5700-28P-LI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	DC power terminal NOTE It is used together with a DC Power Cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-21** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-21 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-22](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-22 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-23](#).

Table 5-23 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

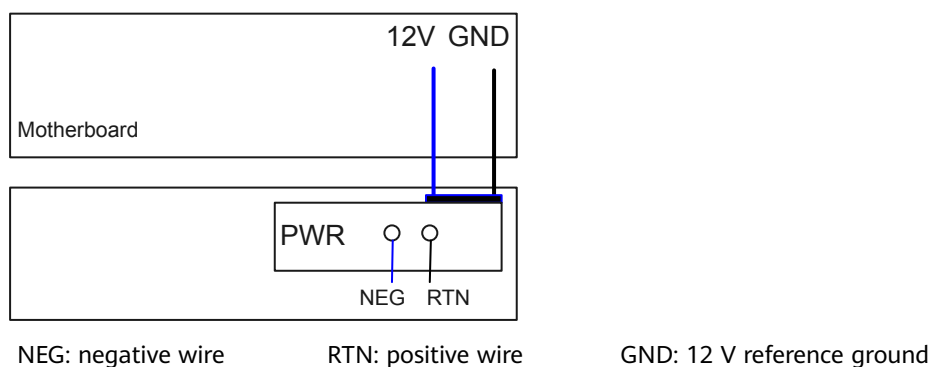
The S5700-28P-LI-DC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-28P-LI-DC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28P-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-10](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-10 Power supply by a single DC power module



Heat Dissipation

The S5700-28P-LI-DC has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-24](#) lists technical specifications of the S5700-28P-LI-DC.

Table 5-24 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> • V200R001: 64 MB • V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.18 lb)
Stack ports	<ul style="list-style-type: none"> • V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports • V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput)	24 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	17.6 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 45°C (32°F to 113°F) when it uses SFP optical modules with 80 km or longer transmission distances.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-3000 m (0-9483 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353831

5.4.5 S5700-28P-PWR-LI-AC

Version Mapping

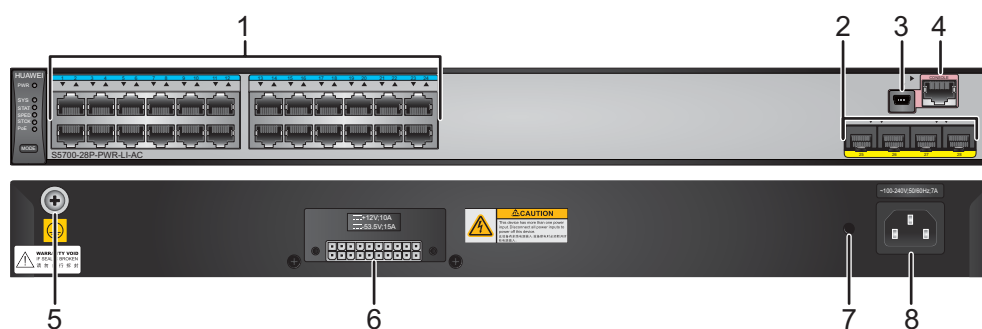
Table 5-25 lists the mapping between the S5700-28P-PWR-LI-AC chassis and software versions.

Table 5-25 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28P-PWR-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-11 S5700-28P-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)• Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions)• 1 m and 10 m SFP+ copper cables (only used for stack connection)• 3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE <ul style="list-style-type: none">• It is used with an RPS cable which is not hot swappable.• A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-26](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-26 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-27](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-27 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-28](#).

Table 5-28 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5700-28P-PWR-LI-AC has similar indicators to those on the S5700-28X-PWR-LI-AC, except that the S5700-28P-PWR-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules.

It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. [Table 5-29](#) lists its power supply configurations.

Table 5-29 Power supply configurations

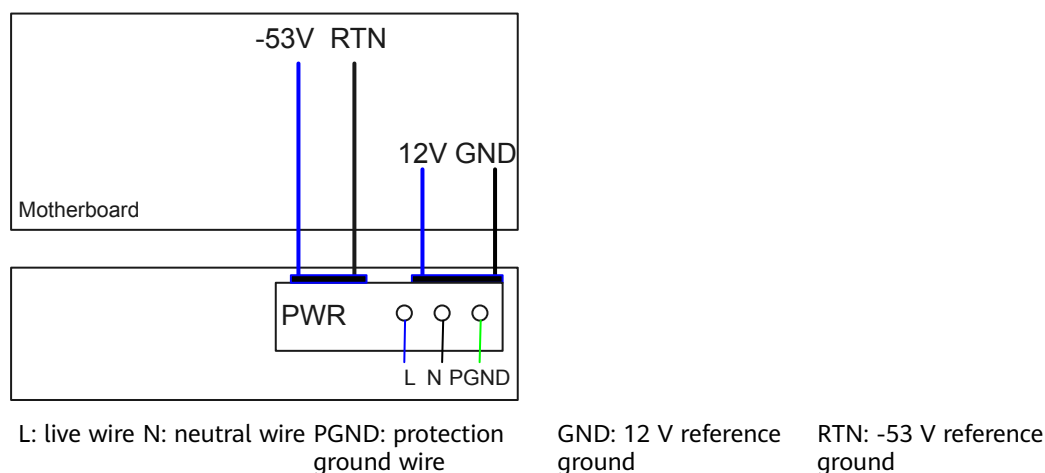
Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
RPS used	<ul style="list-style-type: none">V200R001: 369.6 WVersions later than V200R001: 800 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 24

NOTE

When an S5700-28P-PWR-LI-AC switch of V200R001 connects to an RPS1800, the RPS1800 only provides PoE power backup and does not increase the switch's PoE power.

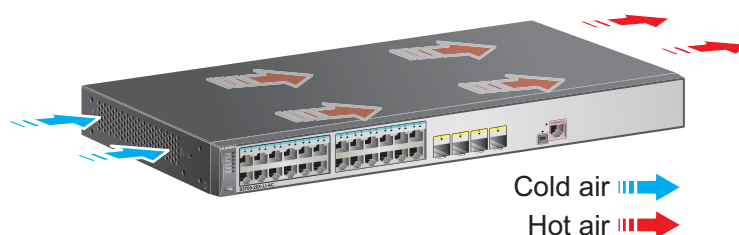
Figure 5-12 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-12 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5700-28P-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-30 lists technical specifications of the S5700-28P-PWR-LI-AC.

Table 5-30 Technical specifications

Item	Description
Memory (RAM)	256 MB

Item	Description
Flash	<ul style="list-style-type: none">• V200R001: 64 MB• V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	44.24 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	<ul style="list-style-type: none">• V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports• V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	436.5 W (system power consumption: 66.5 W, PoE: 370 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	29.2 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353175

5.4.6 S5700-52P-LI-AC

Version Mapping

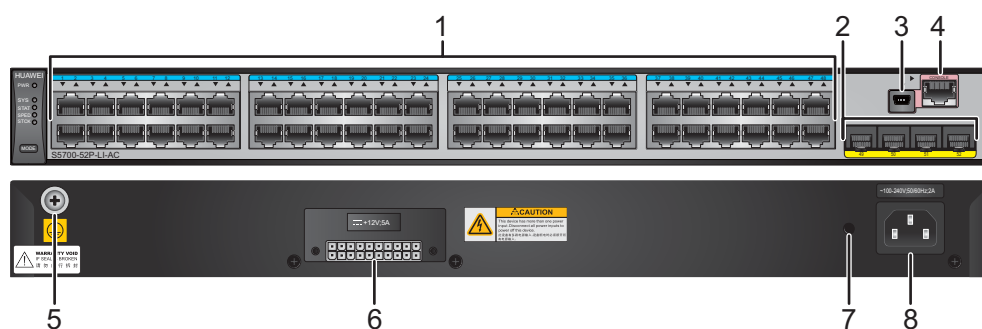
Table 5-31 lists the mapping between the S5700-52P-LI-AC chassis and software versions.

Table 5-31 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-13 S5700-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-32** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-32 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-33](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-33 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-34](#).

Table 5-34 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

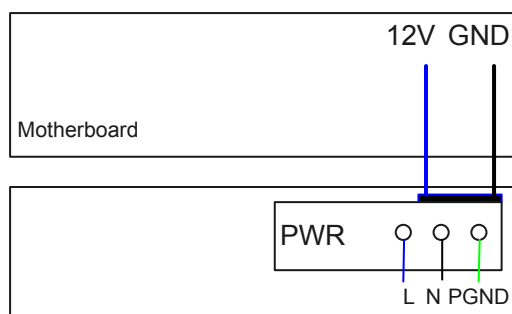
The S5700-52P-LI-AC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-52P-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-14 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

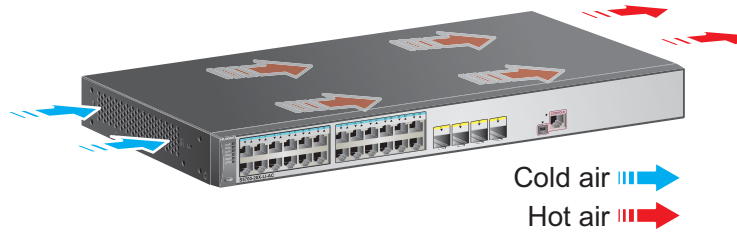
Figure 5-14 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-35 lists technical specifications of the S5700-52P-LI-AC.

Table 5-35 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	39.26 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	<ul style="list-style-type: none"> V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Not supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	48.4 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	32.5 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353174

5.4.7 S5700-52P-LI-DC

Version Mapping

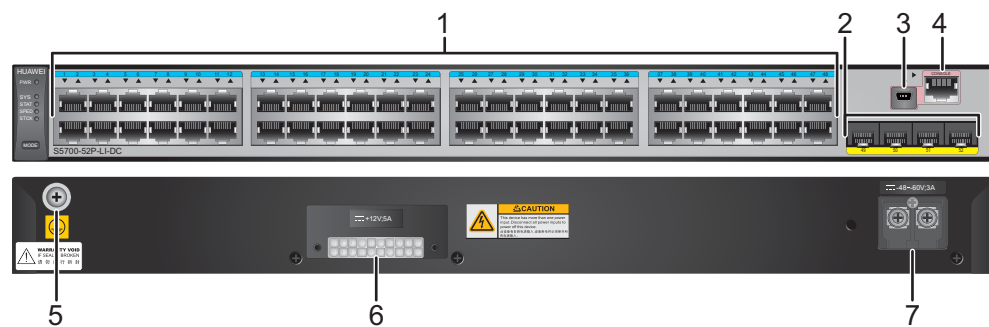
Table 5-36 lists the mapping between the S5700-52P-LI-DC chassis and software versions.

Table 5-36 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-LI-DC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-15 S5700-52P-LI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	DC power terminal NOTE It is used together with a DC Power Cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-37** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-37 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-38](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-38 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-39](#).

Table 5-39 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

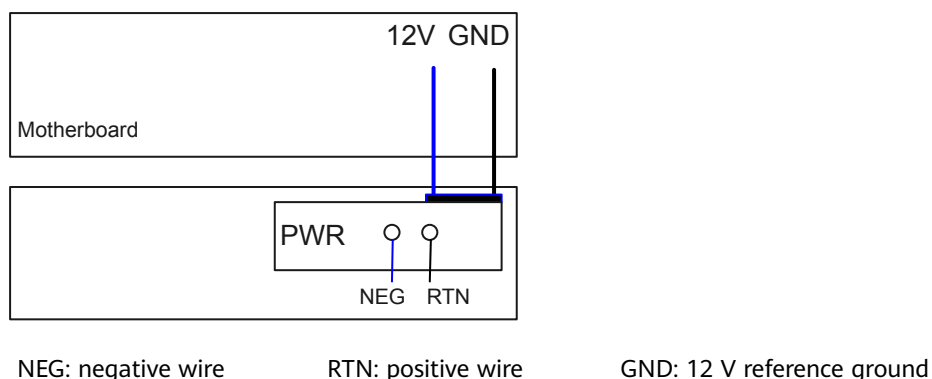
The S5700-52P-LI-DC has similar indicators to those on the S5700-28X-LI-AC, except that the S5700-52P-LI-DC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52P-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-16 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-16 Power supply by a single DC power module



Heat Dissipation

The S5700-52P-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-40 lists technical specifications of the S5700-52P-LI-DC.

Table 5-40 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	39.26 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack port	<ul style="list-style-type: none"> V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Not supported

Item	Description
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	48.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	30.3 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353830

5.4.8 S5700-52P-PWR-LI-AC

Version Mapping

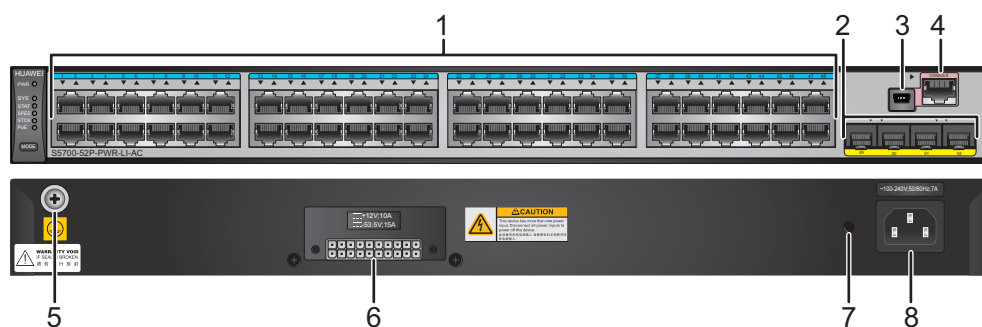
Table 5-41 lists the mapping between the S5700-52P-PWR-LI-AC chassis and software versions.

Table 5-41 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52P-PWR-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-17 S5700-52P-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection, applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	6	<p>RPS socket</p> <p>NOTE</p> <ul style="list-style-type: none"> • It is used with an RPS cable which is not hot swappable. • A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-42](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-42 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-43](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-43 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-44](#).

Table 5-44 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5700-52P-PWR-LI-AC has similar indicators to those on the S5700-28X-PWR-LI-AC, except that the S5700-52P-PWR-LI-AC does not have an RPS indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules.

It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. [Table 5-45](#) lists its power supply configurations.

Table 5-45 Power supply configurations

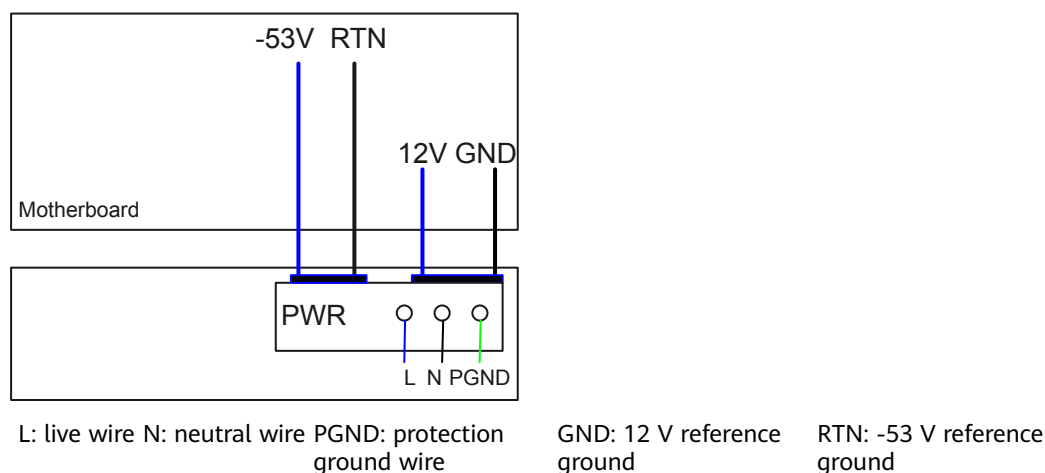
Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
RPS used	<ul style="list-style-type: none"> V200R001: 369.6 W Versions later than V200R001: 800 W 	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26

NOTE

When an S5700-52P-PWR-LI-AC switch of V200R001 connects to an RPS1800, the RPS1800 only provides PoE power backup and does not increase the switch's PoE power.

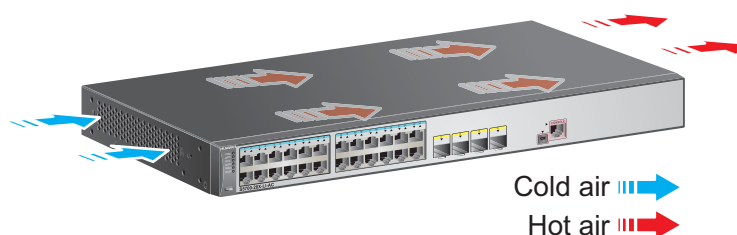
Figure 5-18 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-18 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5700-52P-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-46 lists technical specifications of the S5700-52P-PWR-LI-AC.

Table 5-46 Technical specifications

Item	Description
Memory (RAM)	256 MB

Item	Description
Flash	<ul style="list-style-type: none"> • V200R001: 64 MB • V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	35.70 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	6 kg (13.23 lb)
Stack port	<ul style="list-style-type: none"> • V200R010 and earlier versions: the last two uplink 1000BASE-X optical ports • V200R011 and later versions: four uplink 1000BASE-X optical ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	464.5 W (system power consumption: 94.5 W, PoE: 370 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	41.2 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353176

5.4.9 S5700-28TP-LI-AC

Version Mapping

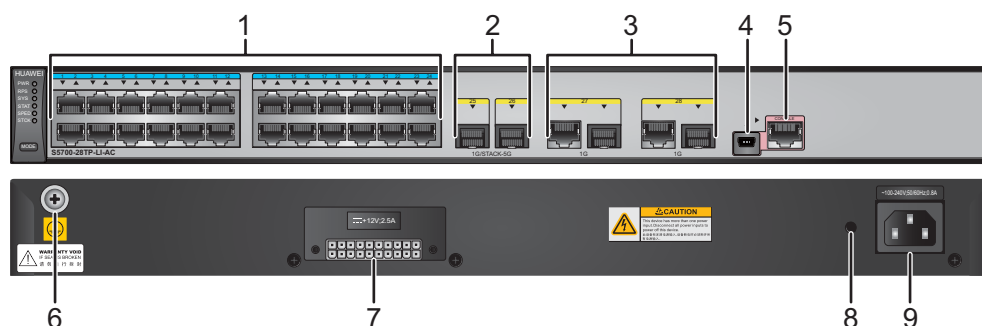
[Table 5-47](#) lists the mapping between the S5700-28TP-LI-AC chassis and software versions.

Table 5-47 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28TP-LI-AC	V200R003C10 to V200R012C00 versions NOTE This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-19 S5700-28TP-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Two 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module 	4	<p>One mini USB port</p>
5	<p>One console port</p>	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-48](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-48 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-49](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-49 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-50](#).

Table 5-50 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

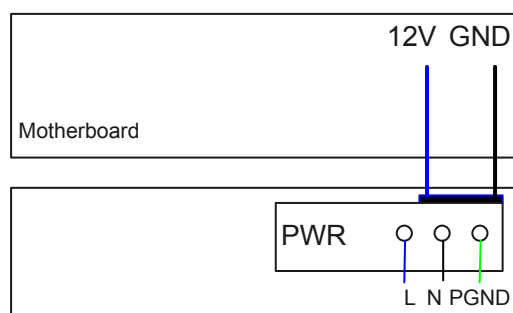
The S5700-28TP-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28TP-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-20 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

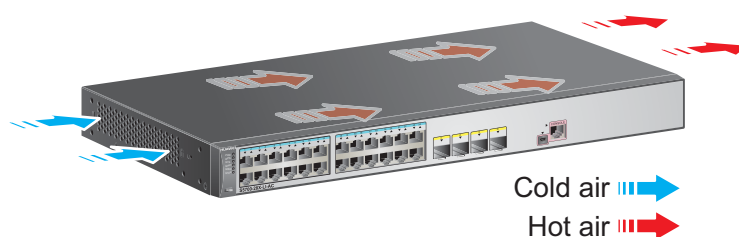
Figure 5-20 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28TP-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-51 lists technical specifications of the S5700-28TP-LI-AC.

Table 5-51 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB

Item	Description
Mean time between failures (MTBF)	65.66 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	26.4 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	23.4 W

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 39.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010536

5.4.10 S5700-28TP-PWR-LI-AC

Version Mapping

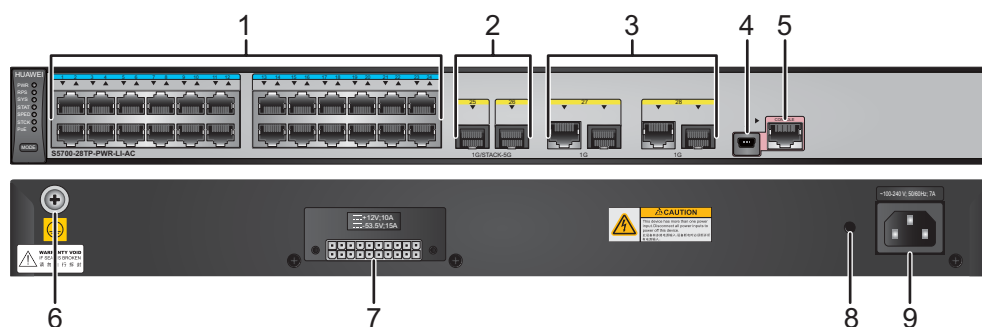
Table 5-52 lists the mapping between the S5700-28TP-PWR-LI-AC chassis and software versions.

Table 5-52 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28TP-PWR-LI-AC	V200R003C10 to V200R012C00 versions NOTE This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-21 S5700-28TP-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2 Two 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
---	---	---

3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module 	4	One mini USB port
5	One console port	6	Ground screw NOTE It is used with a ground cable .
7	RPS socket NOTE <ul style="list-style-type: none"> • It is used with an RPS cable which is not hot swappable. • A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power. 	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-53** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-53 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-54](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-54 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-55](#).

Table 5-55 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5700-28TP-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

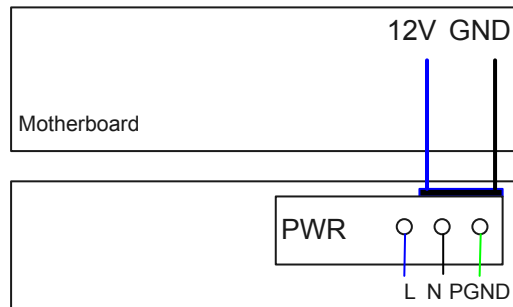
The S5700-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. [Table 5-56](#) lists its power supply configurations.

Table 5-56 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
RPS used	800 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

[Figure 5-22](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-22 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-57 lists technical specifications of the S5700-28TP-PWR-LI-AC.

Table 5-57 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	46.2 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.8 kg (12.79 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	469.7 W (system power consumption: 99.7 W, PoE: 370 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	32 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010537

5.4.11 S5701-28TP-PWR-LI-AC

Version Mapping

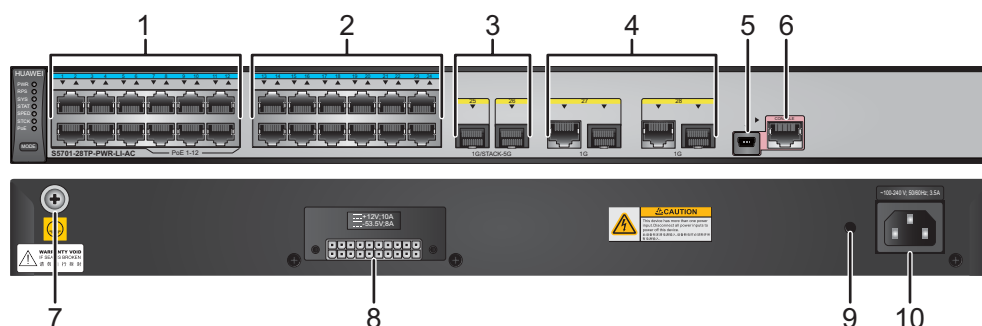
Table 5-58 lists the mapping between the S5701-28TP-PWR-LI-AC chassis and software versions.

Table 5-58 Version mapping

Series	Model	Software Version
S5700-LI	S5701-28TP-PWR-LI-AC	V200R003C10 to V200R012C00 versions NOTE This model does not match V200R005C00, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-23 S5701-28TP-PWR-LI-AC appearance



1	Twelve PoE+ 10/100/1000BASE-T ports	2	Twelve 10/100/1000BASE-T ports
---	-------------------------------------	---	--------------------------------

3	<p>Two 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection, applicable in V200R007C00 and later versions) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) 	4	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
5	One mini USB port	6	One console port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>RPS socket</p> <p>NOTE</p> <ul style="list-style-type: none"> • It is used with an RPS cable which is not hot swappable. • A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
9	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-59](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-59 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-60](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-60 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-61](#).

Table 5-61 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5701-28TP-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

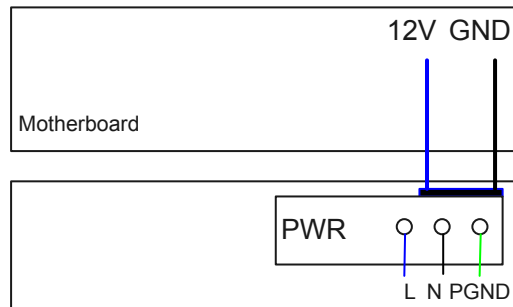
The S5701-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. [Table 5-62](#) lists its power supply configurations.

Table 5-62 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	184.8 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 12 802.3at (30 W per port): 6
RPS used	184.8 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 12 802.3at (30 W per port): 6

[Figure 5-24](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-24 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5701-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



Cold air
 Hot air

 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-63 lists technical specifications of the S5701-28TP-PWR-LI-AC.

Table 5-63 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	45.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.7 kg (12.57 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	238.7 W (system power consumption: 53.9 W, PoE: 184.8 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	29 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010538

5.4.12 S5700-28X-LI-AC

Version Mapping

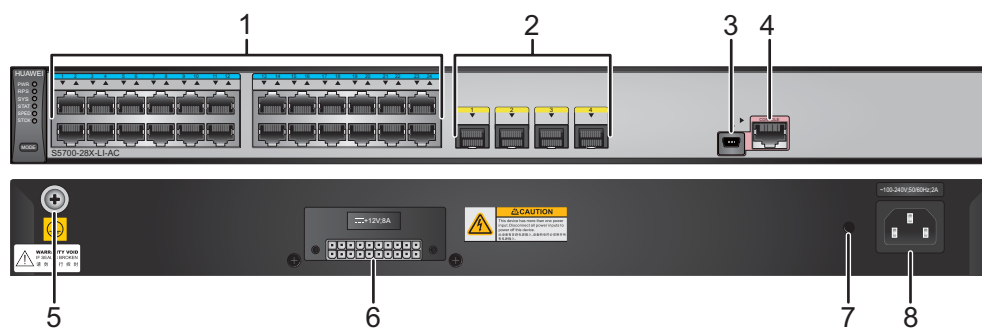
[Table 5-64](#) lists the mapping between the S5700-28X-LI-AC chassis and software versions.

Table 5-64 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-25 S5700-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (only 1000 Mbit/s supported)• 10GE SFP+ optical module• 10GE-CWDM optical module (applicable in V200R005C00 and later versions)• 1 m, 3 m, and 10 m SFP+ high-speed copper cables• 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)• 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-65](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-65 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-66](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-66 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-67](#).

Table 5-67 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-26 Indicators on the S5700-28X-LI-AC

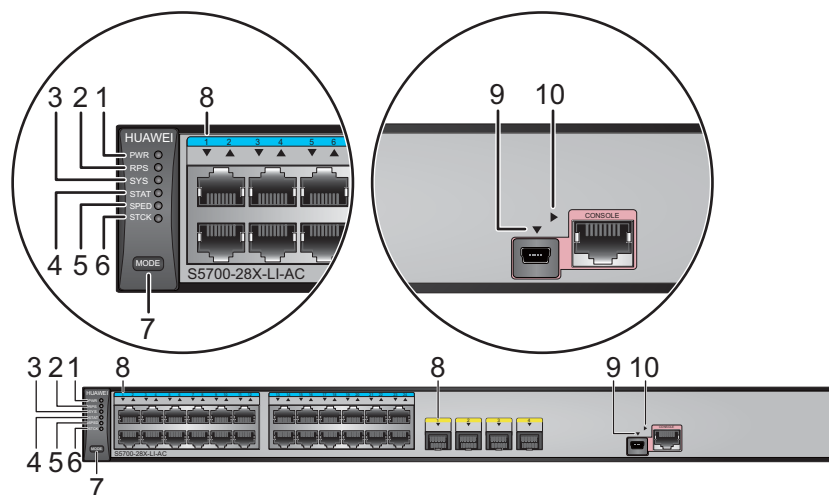


Table 5-68 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state. Blinking: The RPS is providing power for another device.
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	Fast blinking: <ul style="list-style-type: none"> The system is starting. The system is copying the system software and configuration file from a USB flash drive during a USB-based upgrade (only applicable to S5701-28X-LI-AC). Slow blinking: The system is running normally.
		Yellow	Blinking: <ul style="list-style-type: none"> The switch is in sleeping mode. During a USB-based upgrade, this indicator blinks after the switch downloads required files and restarts. At this time, the upgrade is successful and you can remove the USB flash drive (only applicable to S5701-28X-LI-AC). NOTE The system can wake from the sleeping state if you press the MODE button. The S5700-10P-LI-AC does not support the sleeping function.

Number	Indicator/Button	Color	Description
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed (only applicable to S5701-28X-LI-AC).
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode. Blinking: The switch is the master switch in a stack or a standalone switch.

Number	Indicator/ Button	Color	Description
	<p>STCK: stack indicator</p> <p>NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.</p>	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> • Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. • Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled. <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> • Off: The stack mode is not selected. • Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. • Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

Number	Indicator/Button	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none">When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator <ul style="list-style-type: none">GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.SFP/SFP+ optical ports: Each port has an indicator above it.		Meanings of service port indicators vary in different modes. For details, see Table 5-69 .

Number	Indicator/Button	Color	Description
9	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. When this indicator is on, the console indicator is off.
10	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. When this LED is on, the Mini USB port indicator is off.

Table 5-69 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.

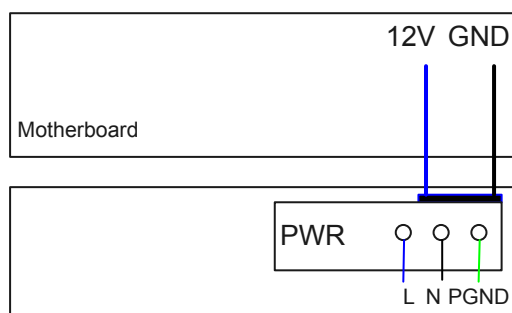
Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-27 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

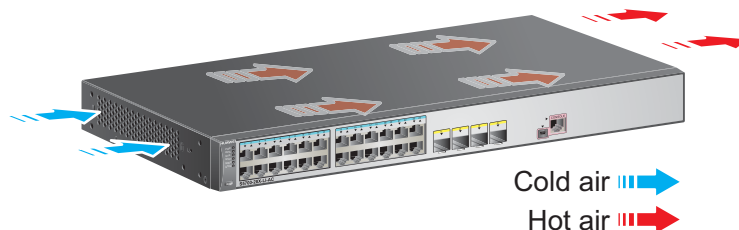
Figure 5-27 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-70 lists technical specifications of the S5700-28X-LI-AC.

Table 5-70 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	68.95 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	41 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	29.7 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354215

5.4.13 S5700-28X-LI-DC

Version Mapping

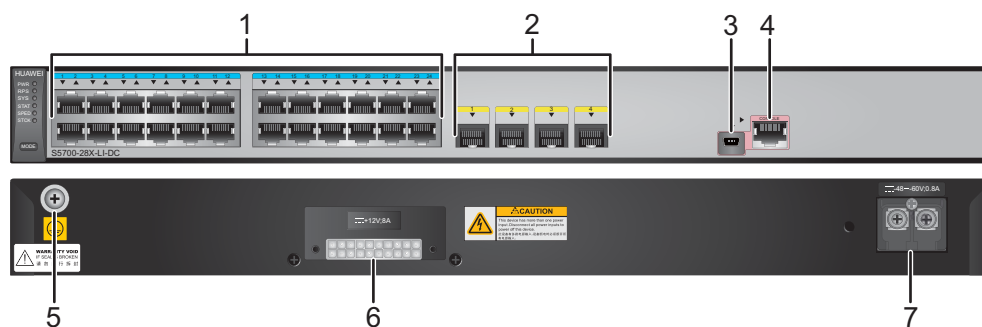
Table 5-71 lists the mapping between the S5700-28X-LI-DC chassis and software versions.

Table 5-71 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-DC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-28 S5700-28X-LI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	DC power terminal NOTE It is used together with a DC Power Cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-72** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-72 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-73](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-73 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-74](#).

Table 5-74 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

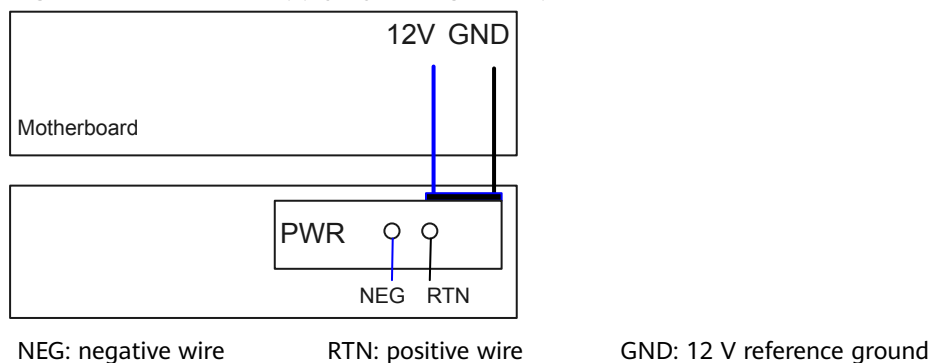
The S5700-28X-LI-DC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-29](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-29 Power supply by a single DC power module



Heat Dissipation

The S5700-28X-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-75 lists technical specifications of the S5700-28X-LI-DC.

Table 5-75 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	68.95 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.3 kg (7.28 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	42 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	30.7 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354234

5.4.14 S5700-28X-PWR-LI-AC

Version Mapping

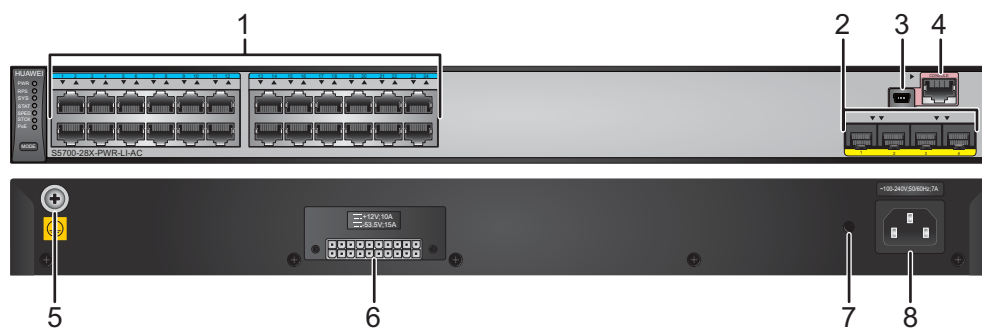
Table 5-76 lists the mapping between the S5700-28X-PWR-LI-AC chassis and software versions.

Table 5-76 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-PWR-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-30 S5700-28X-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	6	<p>RPS socket</p> <p>NOTE</p> <ul style="list-style-type: none"> • It is used with an RPS cable which is not hot swappable. • A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-77](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-77 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-78](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-78 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-79](#).

Table 5-79 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-31 Indicators on the S5700-28X-PWR-LI-AC

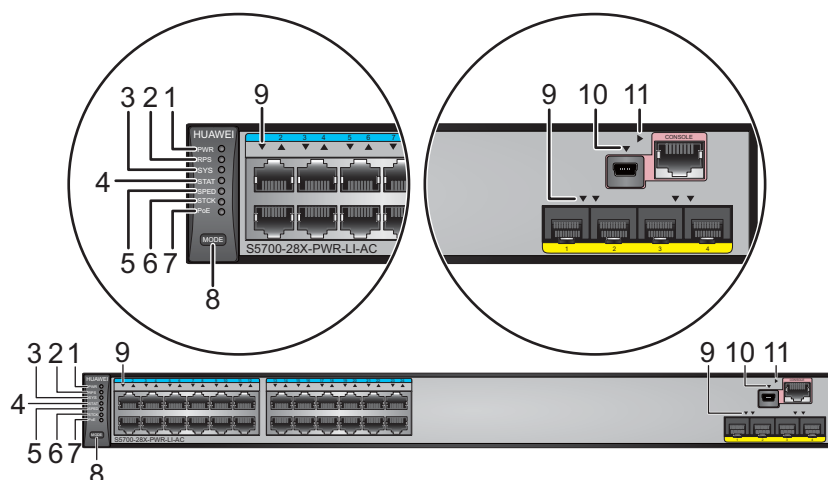


Table 5-80 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state or forced power-on state. Blinking: The RPS is providing power for another device.
		Yellow	<ul style="list-style-type: none"> Steady on: The RPS is in alarm state. (No 870 W PoE power module is available in the RPS1800 or the RPS1800 cannot provide power supply to the local switch at this time.) Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.

Number	Indicator/ Button	Color	Description
4	STAT: status indicator	Green	<ul style="list-style-type: none"> ● Off: The status mode is not selected. ● Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> ● Off: The speed mode is not selected. ● Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> ● Off: The stack mode is not selected. ● Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode. ● Blinking: The switch is the master switch in a stack or a standalone switch.
	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.	Green	If you are not changing the indicator mode (default): <ul style="list-style-type: none"> ● Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. ● Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled.

Number	Indicator/ Button	Color	Description
			<p>If you are changing the indicator mode:</p> <ul style="list-style-type: none">• Off: The stack mode is not selected.• Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.• Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE: PoE indicator	Green	<ul style="list-style-type: none">• Off: The PoE mode is not selected.• Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/ Button	Color	Description
8	MODE: mode switch button	-	<ul style="list-style-type: none"> • When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. • When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. • When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports. • When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>NOTE On the S5700-52P-PWR-LI-AC and S5700-28P-PWR-LI-AC of the V200R001 version, the indicator switching sequence is Speed -> PoE -> Stack.</p> <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>

Number	Indicator/ Button	Color	Description
9	Service port indicator <ul style="list-style-type: none"> • GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1. • 10GE optical ports: Each port has an indicator above it. 		Meanings of service port indicators vary in different modes. For details, see Table 5-81 .
10	Mini USB indicator	Green	<ul style="list-style-type: none"> • Off: The Mini USB port is not active, and the console port is active. • Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>
11	Console indicator	Green	<ul style="list-style-type: none"> • Off: The console port is not active, and the Mini USB port is active. • Steady on (default): The console port is active. <p>When this LED is on, the Mini USB port indicator is off.</p>

Table 5-81 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> • If the indicator of a port is blinking, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

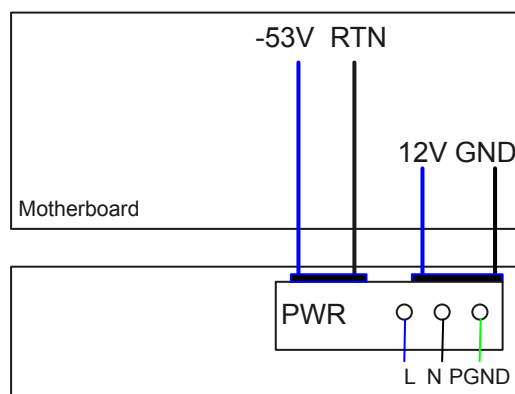
The S5700-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. [Table 5-82](#) lists its power supply configurations.

Table 5-82 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
RPS used	800 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24

[Figure 5-32](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-32 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-28X-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-83 lists technical specifications of the S5700-28X-PWR-LI-AC.

Table 5-83 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	61.53 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	448.8 W (system power consumption: 78.8 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	39.4 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354217

5.4.15 S5700-28X-LI-24S-AC

Version Mapping

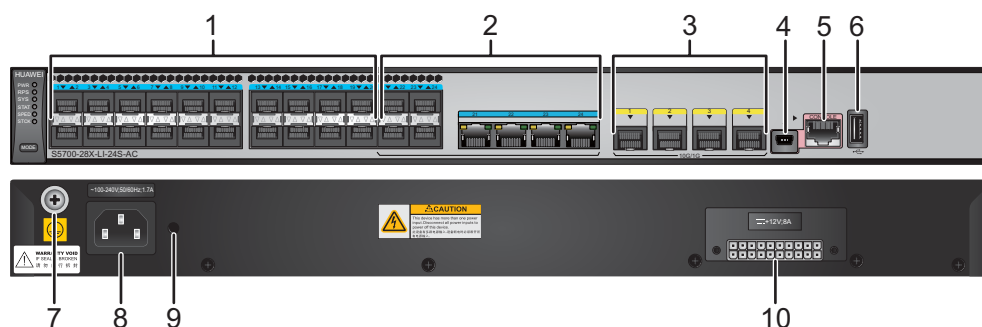
Table 5-84 lists the mapping between the S5700-28X-LI-24S-AC chassis and software versions.

Table 5-84 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-24S-AC	V200R003C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-33 S5700-28X-LI-24S-AC appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	<p>2</p> <p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
---	--	--

3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) 	4	One mini USB port
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	10	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-85](#) describes the attributes of a 100/1000BASE-X port.

Table 5-85 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-86](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-86 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-87](#).

Table 5-87 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

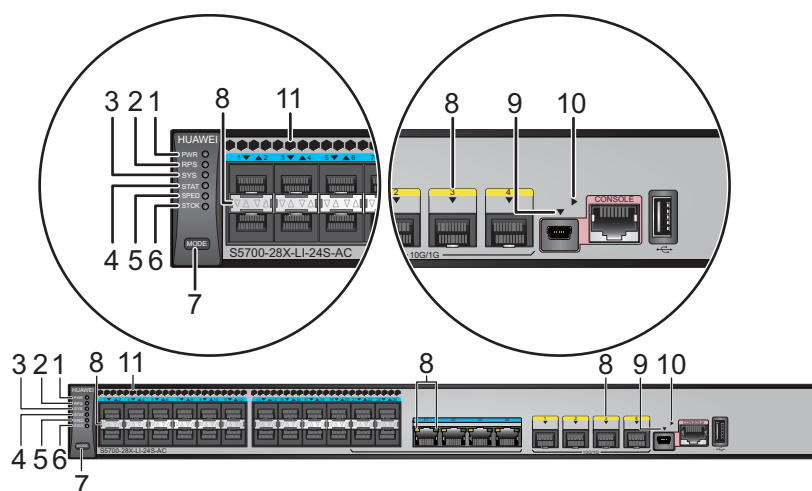
Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-34 Indicators on the S5700-28X-LI-24S-AC



NOTE

The S5701-28X-LI-24S-AC, S5700-28X-LI-24S-AC, and S5700-28X-LI-24S-DC have air holes above the 24 optical ports for heat dissipation (numbered 11 in [Figure 5-34](#)). The indicators for the service ports are numbered 8 in [Figure 5-34](#).

Table 5-88 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.

Number	Indicator/ Button	Color	Description
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none">Steady on: The RPS is in cold backup state.Blinking: The RPS is providing power for another device.
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none">Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.Slow blinking: The system is running normally.
		Yellow	Blinking: The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none">Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
4	STAT: status indicator	Green	<ul style="list-style-type: none">Off: The status mode is not selected.Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.

Number	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> • Off: The speed mode is not selected. • Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> • Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. • Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled. <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> • Off: The stack mode is not selected. • Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. • Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

Number	Indicator/ Button	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none"> • When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. • When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. • When you press this button a third time, the service port indicators restore to the default mode, and the STAT mode turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator NOTE Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see Table 5-89 and Table 5-90 .
9	Mini USB indicator	Green	<ul style="list-style-type: none"> • Off: The Mini USB port is not active, and the console port is active. • Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>

Number	Indicator/Button	Color	Description
10	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. When this LED is on, the Mini USB port indicator is off.

Table 5-89 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green and yellow	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-90 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>
	Green	Blinking	<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 10 Gbit/s.</p>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

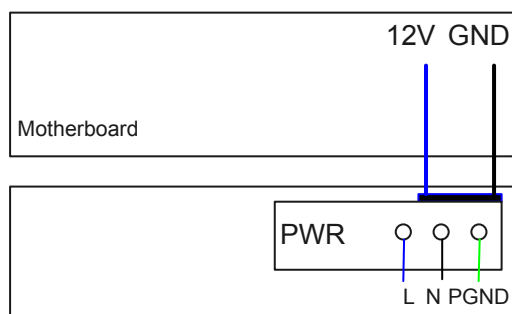
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-35 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

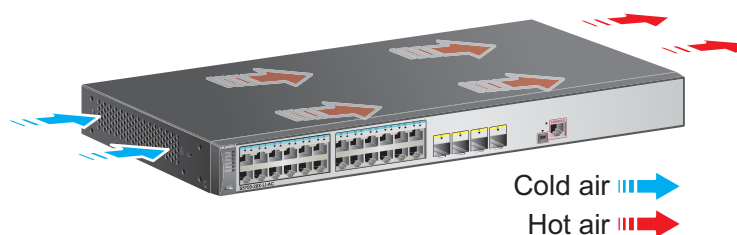
Figure 5-35 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28X-LI-24S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-91 lists specifications of the S5700-28X-LI-24S-AC.

Table 5-91 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	60 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	49.7 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02355271

5.4.16 S5700-28X-LI-24S-DC

Version Mapping

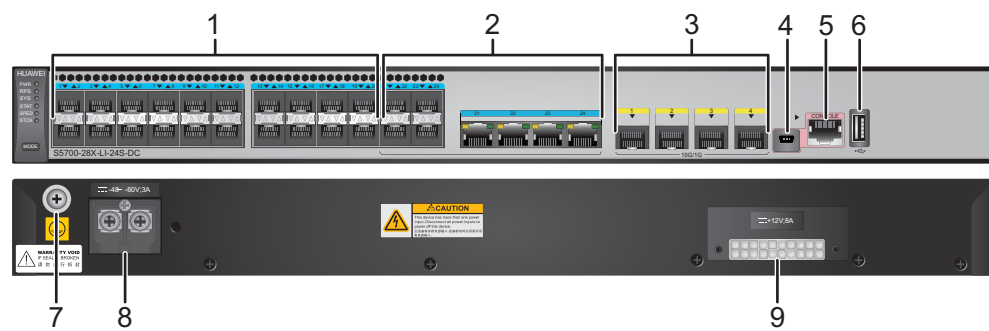
Table 5-92 lists the mapping between the S5700-28X-LI-24S-DC chassis and software versions.

Table 5-92 Version mapping

Series	Model	Software Version
S5700-LI	S5700-28X-LI-24S-DC	V200R003C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-36 S5700-28X-LI-24S-DC appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) 	4	One mini USB port
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>DC power terminal</p> <p>NOTE It is used together with a DC Power Cable.</p>
9	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-93](#) describes the attributes of a 100/1000BASE-X port.

Table 5-93 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-94](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-94 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-95](#).

Table 5-95 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

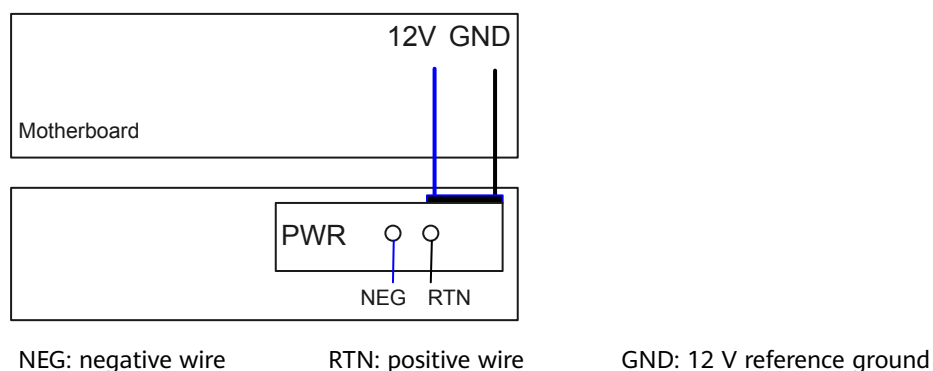
The S5700-28X-LI-24S-DC has the same types of indicators as the S5700-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28X-LI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

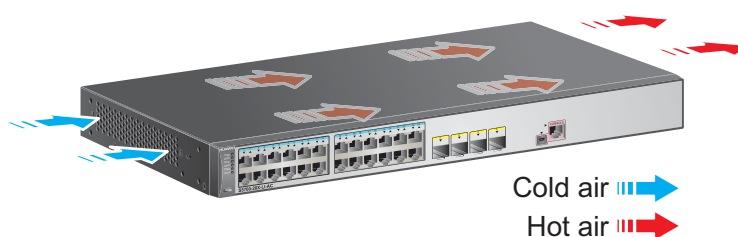
Figure 5-37 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-37 Power supply by a single DC power module



Heat Dissipation

The S5700-28X-LI-24S-DC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-96 lists technical specifications of the S5700-28X-LI-24S-DC.

Table 5-96 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB

Item	Description
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	57 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	46.9 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02355303

5.4.17 S5701-28X-LI-AC

Version Mapping

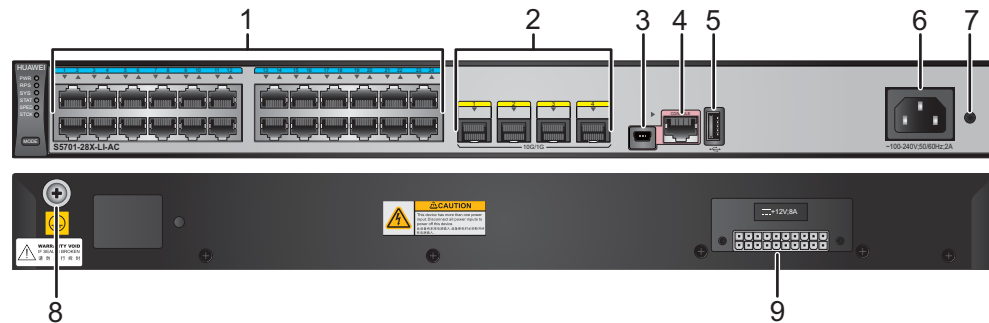
Table 5-97 lists the mapping between the S5701-28X-LI-AC chassis and software versions.

Table 5-97 Version mapping

Series	Model	Software Version
S5700-LI	S5701-28X-LI-AC	V200R003C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-38 S5701-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	One USB port	6	AC socket NOTE It is used with an AC power cable .

7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	Ground screw NOTE It is used with a ground cable .
9	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-98](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-98 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-99](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-99 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-100](#).

Table 5-100 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

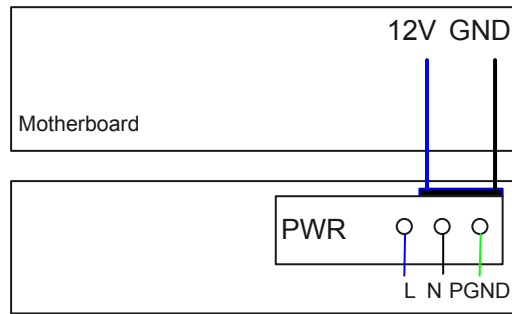
The S5701-28X-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5701-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-39](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

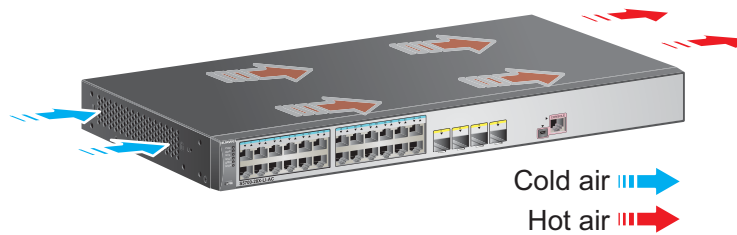
Figure 5-39 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5701-28X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-101 lists technical specifications of the S5701-28X-LI-AC.

Table 5-101 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	70.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV

Item	Description
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3 kg (11.02 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	29.7 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 45.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02357675

5.4.18 S5701-28X-LI-24S-AC

Version Mapping

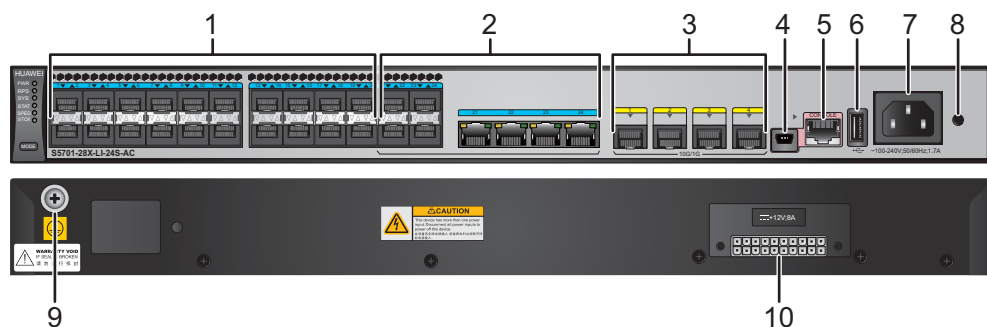
Table 5-102 lists the mapping between the S5701-28X-LI-24S-AC chassis and software versions.

Table 5-102 Version mapping

Series	Model	Software Version
S5700-LI	S5701-28X-LI-24S-AC	V200R003C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-40 S5701-28X-LI-24S-AC appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) 	4	<p>One mini USB port</p>
5	<p>One console port</p>	6	<p>One USB port</p>
7	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	10	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-103](#) describes the attributes of a 100/1000BASE-X port.

Table 5-103 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-104](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-104 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-105](#).

Table 5-105 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

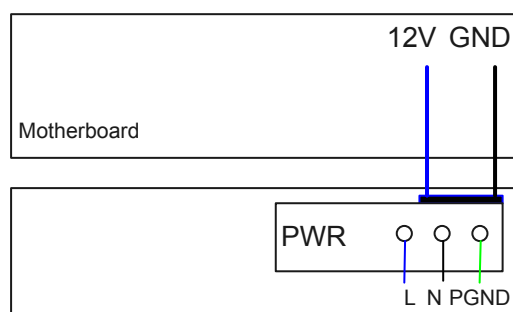
The S5701-28X-LI-24S-AC has the same types of indicators as the S5700-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5701-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-41 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-41 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5701-28X-LI-24S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-106 lists technical specifications of the S5701-28X-LI-24S-AC.

Table 5-106 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	89.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	60 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	49.7 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02357676

5.4.19 S5700-52X-LI-AC

Version Mapping

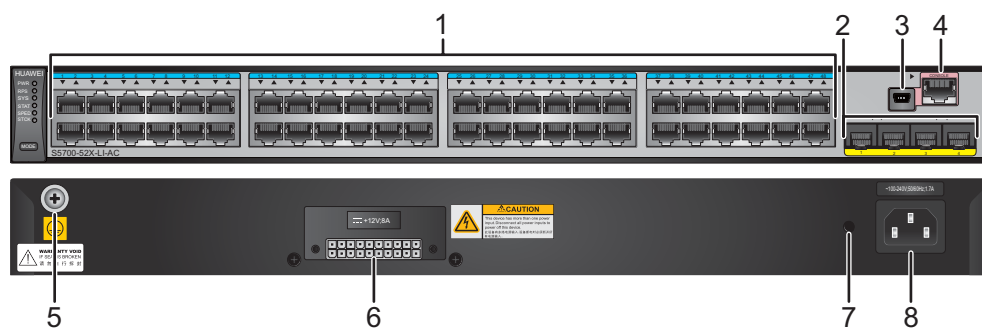
Table 5-107 lists the mapping between the S5700-52X-LI-AC chassis and software versions.

Table 5-107 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-42 S5700-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	6	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-108** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-108 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-109](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-109 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-110](#).

Table 5-110 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

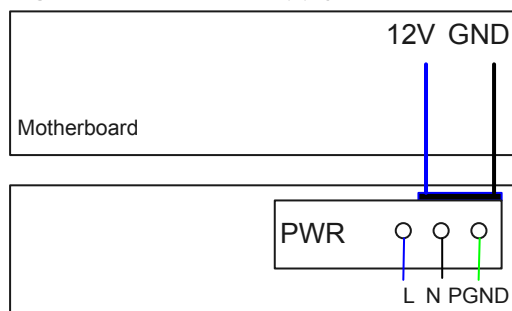
The S5700-52X-LI-AC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-43](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

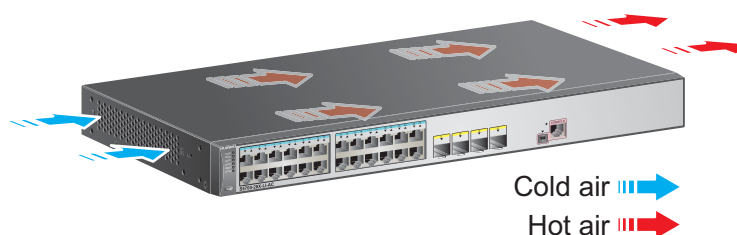
Figure 5-43 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-52X-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-111 lists technical specifications of the S5700-52X-LI-AC.

Table 5-111 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	61.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	61 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	45.5 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354216

5.4.20 S5700-52X-LI-DC

Version Mapping

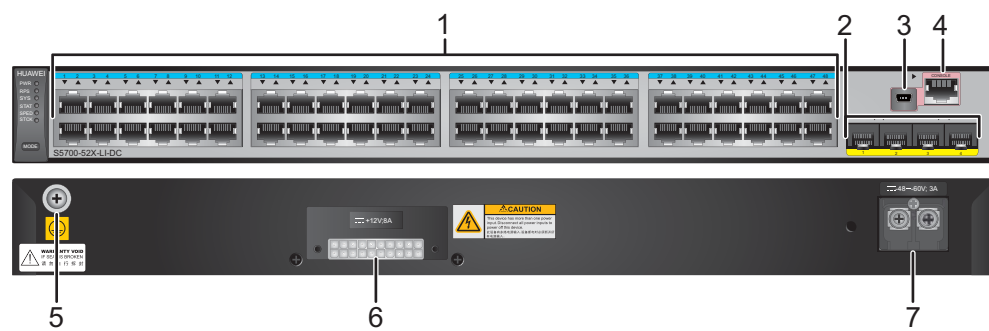
Table 5-112 lists the mapping between the S5700-52X-LI-DC chassis and software versions.

Table 5-112 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-DC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-44 S5700-52X-LI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	DC power terminal NOTE It is used together with a DC Power Cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-113** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-113 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-114](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-114 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-115](#).

Table 5-115 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

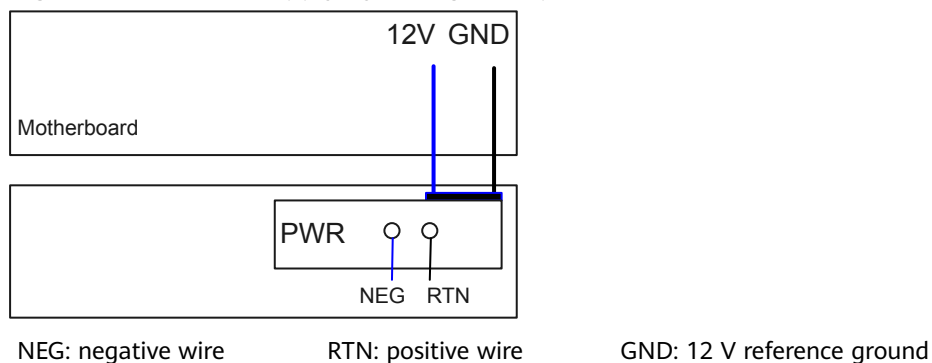
The S5700-52X-LI-DC has the same types of indicators as the S5700-28X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

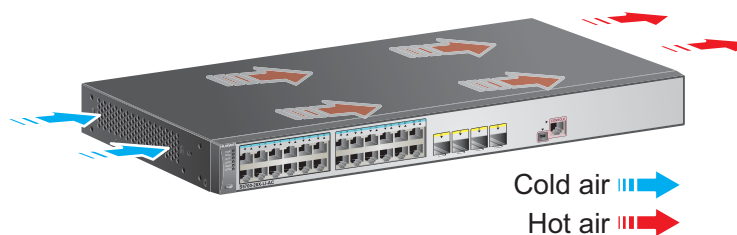
[Figure 5-45](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-45 Power supply by a single DC power module



Heat Dissipation

The S5700-52X-LI-DC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-116 lists technical specifications of the S5700-52X-LI-DC.

Table 5-116 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	61.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.3 kg (9.48 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	60 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	42.2 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354235

5.4.21 S5700-52X-PWR-LI-AC

Version Mapping

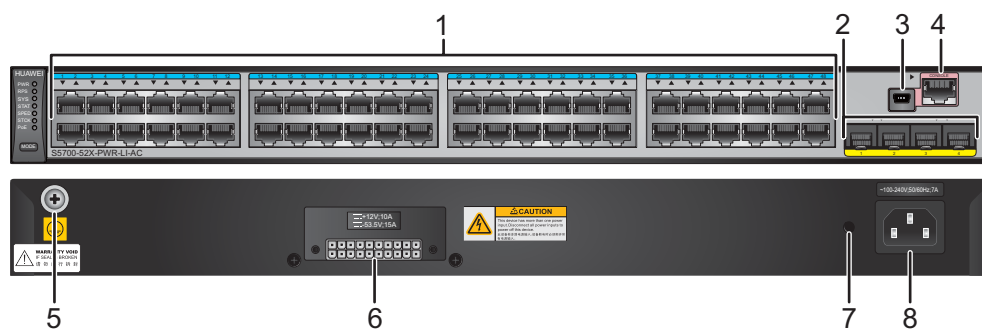
Table 5-117 lists the mapping between the S5700-52X-PWR-LI-AC chassis and software versions.

Table 5-117 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-PWR-LI-AC	V200R002C00 to V200R012C00 versions NOTE This model does not match V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-46 S5700-52X-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (only 1000 Mbit/s supported)• 10GE SFP+ optical module• 10GE-CWDM optical module (applicable in V200R005C00 and later versions)• 1 m, 3 m, and 10 m SFP+ high-speed copper cables• 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions)• 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE <ul style="list-style-type: none">• It is used with an RPS cable which is not hot swappable.• A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-118](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-118 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-119](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-119 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-120](#).

Table 5-120 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

The S5700-52X-PWR-LI-AC has the same types of indicators as the S5700-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

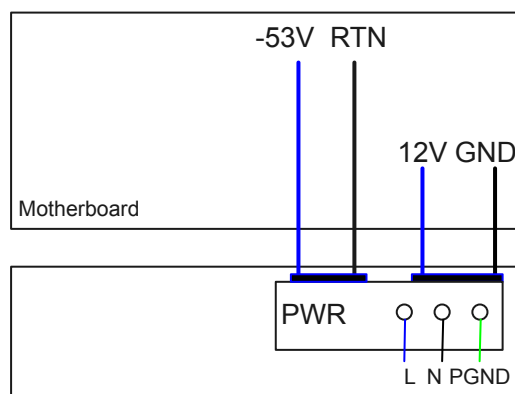
The S5700-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can provide PoE power supply and connect to an RPS1800 power supply for power redundancy. [Table 5-121](#) lists its power supply configurations.

Table 5-121 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 12
RPS used	800 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 48 ● 802.3at (30 W per port): 26

[Figure 5-47](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

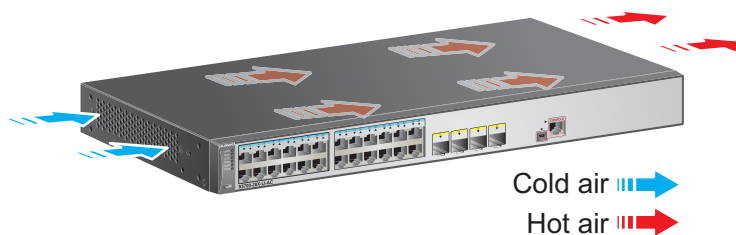
Figure 5-47 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-52X-PWR-LI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-122 lists technical specifications of the S5700-52X-PWR-LI-AC.

Table 5-122 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	40.72 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ±6 kV
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	479.3 W (system power consumption: 109.3 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	48.6 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354218

5.4.22 S5700-52X-LI-48CS-AC

Version Mapping

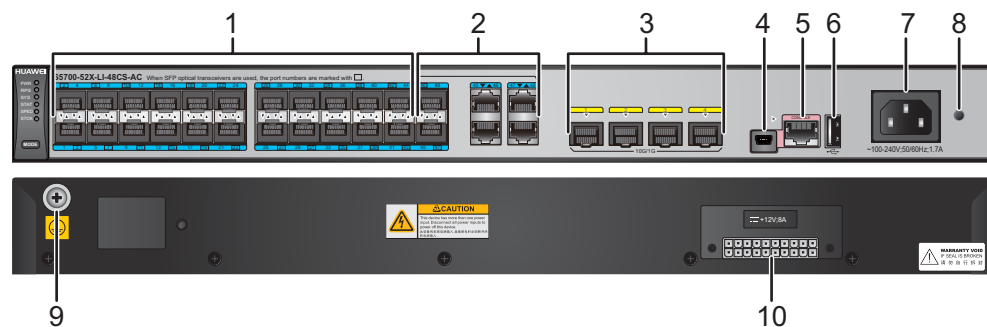
Table 5-123 lists the mapping between the S5700-52X-LI-48CS-AC chassis and software versions.

Table 5-123 Version mapping

Series	Model	Software Version
S5700-LI	S5700-52X-LI-48CS-AC	V200R003C02 to V200R012C00 versions NOTE This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-48 S5700-52X-LI-48CS-AC appearance



<p>1 Forty-four 100/1000BASE-X CSFP ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • CSFP optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) <p>NOTE</p> <ul style="list-style-type: none"> • When all the ports have CSFP optical modules installed, each port functions as two ports. The switch has a total of 44 ports in this case. • When all the ports have SFP optical modules installed, each port functions as one port. The switch has a total of 22 ports. 	<p>2 Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • CSFP optical module <p>NOTE</p> <p>The four combo ports (numbered 45, 46, 47, and 48) on a CSFP switch include four electrical ports and two optical ports. The two optical ports can function as four optical modules when they have Compact Small Form-Factor Pluggable (CSFP) optical modules installed. When the two optical ports have SFP optical modules installed, the electrical ports 45 and 48 can be used normally.</p>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) 	4	One mini USB port
5	One console port	6	One USB port
7	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	10	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X CSFP port

A 100/1000BASE-X CSFP port can send and receive data at 100 Mbit/s or 1000 Mbit/s. When using a CSFP optical module, each 100/1000BASE-X CSFP port works as two ports. When using an SFP optical module, each 100/1000BASE-X CSFP port works as one port. [Table 5-124](#) describes the attributes of a 100/1000BASE-X CSFP port.

Table 5-124 Attributes of a 100/1000BASE-X CSFP port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s

NOTE

CSFP ports using CSFP optical modules cannot connect to each other. A CSFP optical module must be connected to two BIDI SFP optical modules using two optical fibers. You can install an SFP optical module on a CSFP port and use it as a common SFP port.

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-125](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-125 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-126](#).

Table 5-126 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-49 Indicators on the S5700-52X-LI-48CS-AC

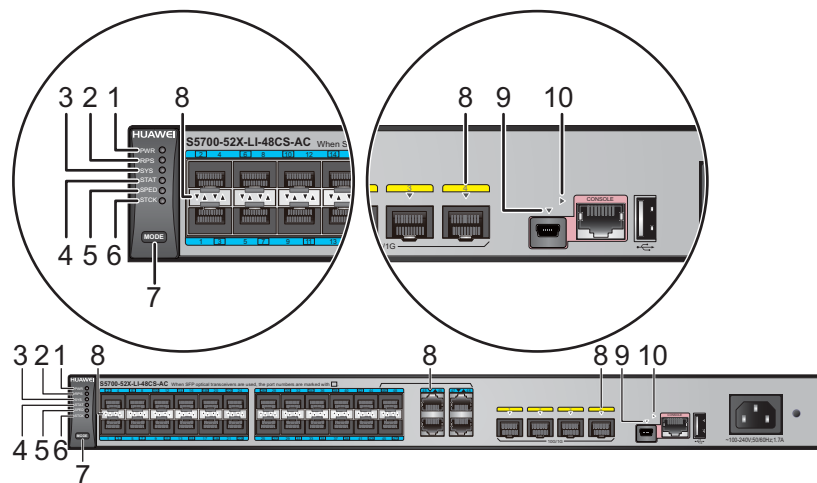


Table 5-127 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.

Number	Indicator/ Button	Color	Description
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state. Blinking: The RPS is providing power for another device.
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade. Slow blinking: The system is running normally.
		Yellow	Blinking: The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.

Number	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> • Off: The speed mode is not selected. • Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> • Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. • Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled. <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> • Off: The stack mode is not selected. • Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. • Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

Number	Indicator/ Button	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT mode turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator NOTE Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.		Meanings of service port indicators vary in different modes. For details, see Table 5-128 .
9	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>

Number	Indicator/Button	Color	Description
10	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. When this LED is on, the Mini USB port indicator is off.

Table 5-128 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

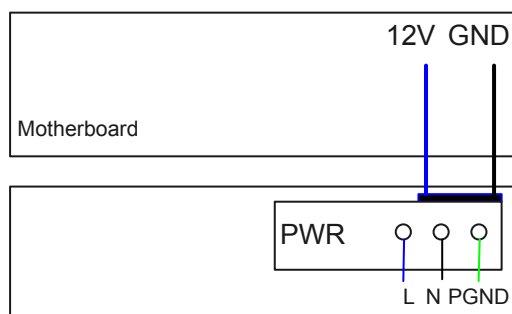
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-52X-LI-48CS-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-50 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-50 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-52X-LI-48CS-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-129 lists technical specifications of the S5700-52X-LI-48CS-AC.

Table 5-129 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	92.57 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Combo electrical port: ± 2 kV in common mode
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	79.93 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	69.17 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 67.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02357823

5.5 S5700S-LI

5.5.1 S5700S-28P-LI-AC

Version Mapping

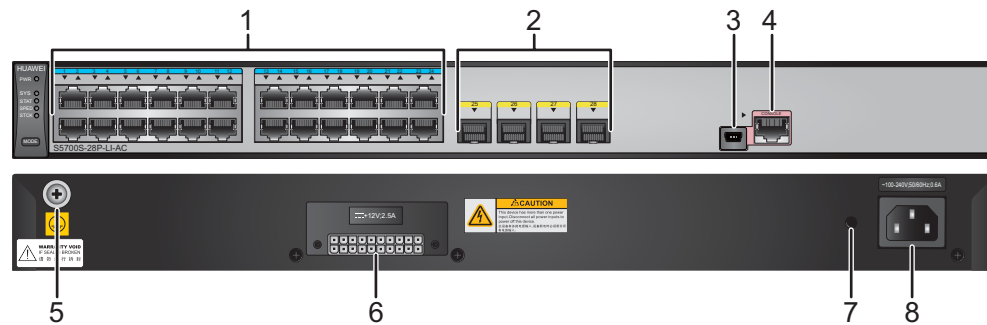
Table 5-130 lists the mapping between the S5700S-28P-LI-AC chassis and software versions.

Table 5-130 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28P-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-51 S5700S-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-131](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-131 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-132](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-132 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-133](#).

Table 5-133 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

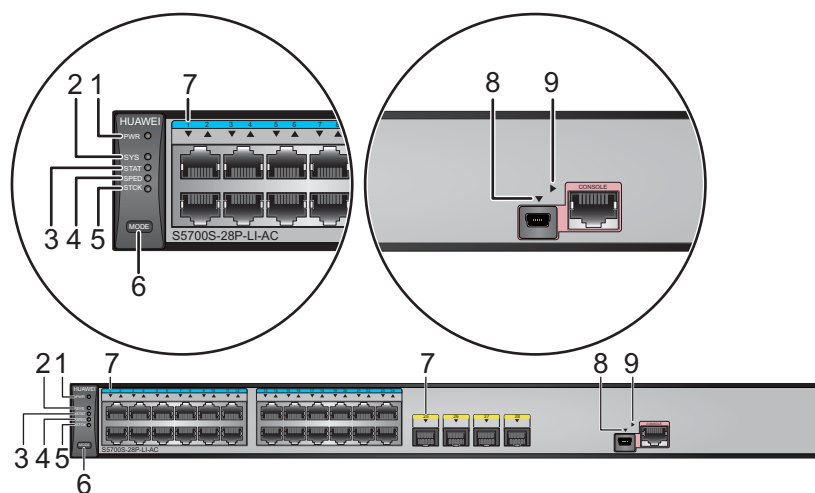
Figure 5-52 Indicators on the S5700S-28P-LI-AC

Table 5-134 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: built-in power module indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none">Fast blinking: The system is starting.Slow blinking: The system is operating properly.
		Yellow	Blinking: The system is in the sleep state. NOTE The system can wake from the sleeping state if you press the MODE button.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
3	STAT: status indicator	Green	<ul style="list-style-type: none">Off: The status mode is not selected.Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPED: speed indicator	Green	<ul style="list-style-type: none">Off: The speed mode is not selected.Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/ Button	Color	Description
5	STCK: stack indicator	-	Currently, the switch does not support stacking. This indicator is reserved for the stacking function.
6	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the SPED indicator turns green and the service port indicators show the speed of each service port. When you press the button a second time, the STAT indicator turns green. <p>If you do not press the button within 45 seconds, the indicators restore to the default states. That is, the STAT indicator turns green, and the SPED and STCK indicators are off.</p>
7	Service port indicator <ul style="list-style-type: none"> GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1. GE optical ports: Each port has an indicator above it. 		Meanings of service port indicators vary in different modes. For details, see Table 5-135 .
8	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>

Number	Indicator/Button	Color	Description
9	Console indicator	Green	<ul style="list-style-type: none">Off: The console port is not active, and the Mini USB port is active.Steady on (default): The console port is active. When this LED is on, the Mini USB port indicator is off.

Table 5-135 Description of service port indicators in different modes

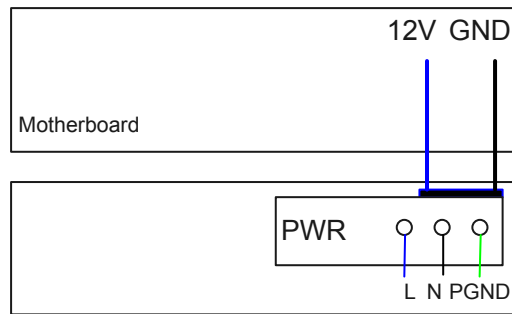
Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none">Off: The port is not connected or has been shut down.Steady on: The port is connected.Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none">Off: The port is not connected or has been shut down.Steady on:<ul style="list-style-type: none">10M/100M/1000M port: The port is operating at 10/100 Mbit/s.1000M/10GE port: The port is operating at 1000 Mbit/s.Blinking:<ul style="list-style-type: none">10M/100M/1000M port: The port is operating at 1000 Mbit/s.1000M/10GE port: The port is operating at 10 Gbit/s.

Power Supply Configuration

The S5700S-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-53 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-53 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700S-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-136 lists technical specifications of the S5700S-28P-LI-AC.

Table 5-136 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	49.69 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	2.8 kg (6.17 lb)
Stack ports	Not supported

Item	Description
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	24 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	19.3 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 45°C (32°F to 113°F) when it uses SFP optical modules with 80 km or longer transmission distances.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353836

5.5.2 S5700S-28P-PWR-LI-AC

Version Mapping

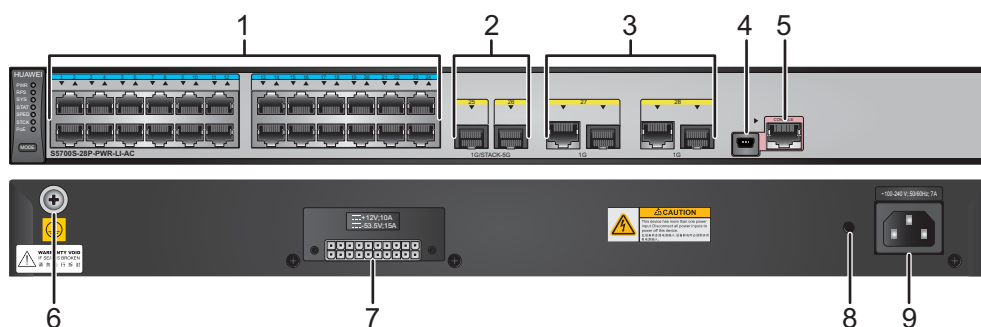
Table 5-137 lists the mapping between the S5700S-28P-PWR-LI-AC chassis and software versions.

Table 5-137 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28P-PWR-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 5-54 S5700S-28P-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Two 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m and 10 m SFP+ copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module 	4	One mini USB port
5	One console port	6	Ground screw NOTE It is used with a ground cable .

7	<p>RPS socket</p> <p>NOTE</p> <ul style="list-style-type: none"> It is used with an RPS cable which is not hot swappable. A PoE switch can have an RPS power supply connected to this socket to provide inputs for system power supply and PoE power supply. The two inputs are independent of each other. The RPS power supply can also be used as a backup of the system power supply when it does not provide PoE power. 	8	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE</p> <p>It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-138](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-138 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-139](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-139 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-140](#).

Table 5-140 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-55 Indicators on the S5700S-28P-PWR-LI-AC

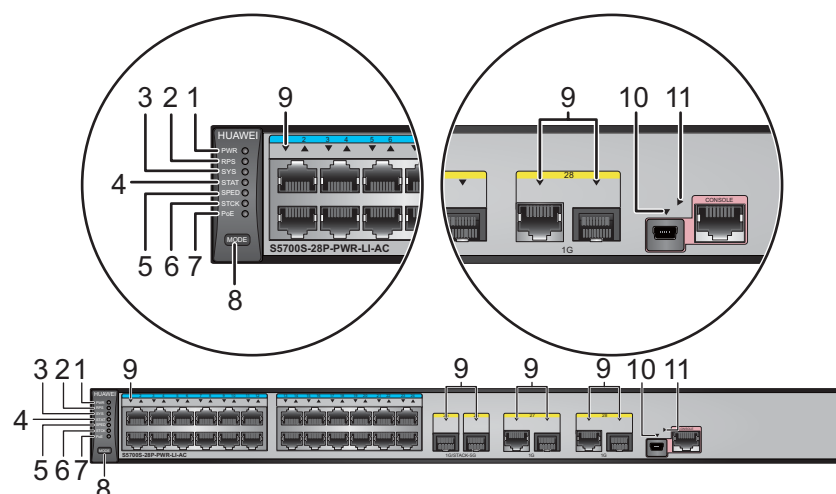


Table 5-141 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: internal power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state or forced power-on state. Blinking: The RPS is providing power for another device.
		Yellow	<ul style="list-style-type: none"> Steady on: The RPS is in alarm state. (No 870 W PoE power module is available in the RPS1800 or the RPS1800 cannot provide power supply to the local switch at this time.) Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.

Number	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none">Off: The speed mode is not selected.Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none">Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch.Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled. <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none">Off: The stack mode is not selected.Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE: PoE indicator	Green	<ul style="list-style-type: none">Off: The PoE mode is not selected.Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/ Button	Color	Description
8	MODE: mode switch button	-	<ul style="list-style-type: none">When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.When you press the button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.When you press the button a third time, the service port indicators change to PoE mode and show the PoE status of ports.When you press the button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	Service port indicator <ul style="list-style-type: none">GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.10GE optical ports: Each port has an indicator above it.		Meanings of service port indicators vary in different modes. For details, see Table 5-142 .

Number	Indicator/ Button	Color	Description
10	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>
11	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. <p>When this LED is on, the Mini USB port indicator is off.</p>

Table 5-142 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.

Display Mode	Color	Status	Description
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

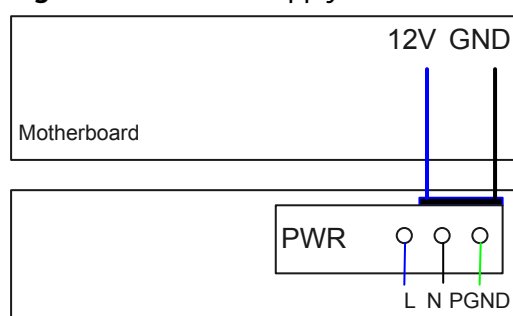
The S5700S-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy. [Table 5-143](#) lists its power supply configurations.

Table 5-143 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
No RPS used	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
RPS used	800 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

Figure 5-56 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-56 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700S-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-144 lists technical specifications of the S5700S-28P-PWR-LI-AC.

Table 5-144 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	46.2 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.8 kg (12.79 lb)
Stack ports	Two uplink 1000BASE-X optical ports (non-combo ports)
RTC	Supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 45.8 W• 100% PoE loads: 469.7 W (system power consumption: 100.1 W, PoE: 369.6 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	32 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010562

5.5.3 S5700S-52P-LI-AC

Version Mapping

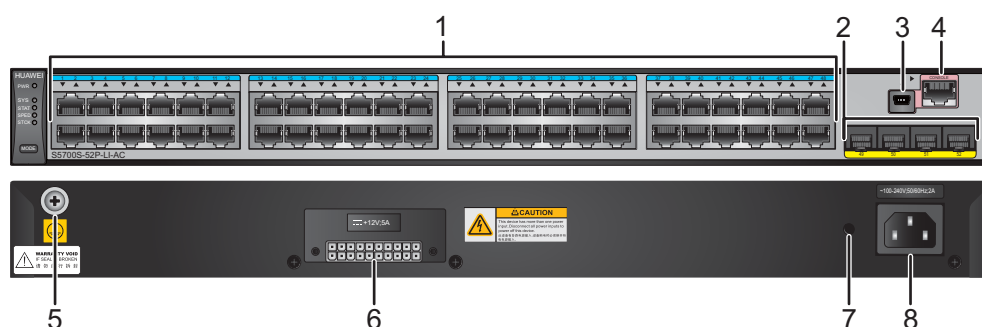
Table 5-145 lists the mapping between the S5700S-52P-LI-AC chassis and software versions.

Table 5-145 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-52P-LI-AC	V200R001C00 to V200R012C00 versions NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-57 S5700S-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (applicable in V200R002C00 and later versions, works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
3	One mini USB port	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	8	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-146](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-146 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-147](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-147 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-148](#).

Table 5-148 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

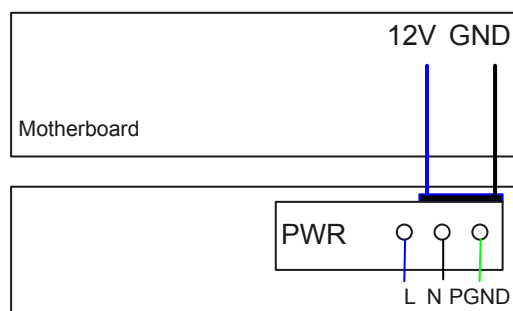
Indicator Description

The S5700S-52P-LI-AC has the same types of indicators as the S5700S-28P-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700S-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-58 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-58 Power supply mode of a built-in AC power module

L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700S-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-149 lists technical specifications of the S5700S-52P-LI-AC.

Table 5-149 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	39.26 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.5 kg (7.72 lb)
Stack ports	Not supported
RTC	Supported
RPS	Supported
PoE	Not supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	48.4 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	32.5 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353835

5.5.4 S5700S-28X-LI-AC

Version Mapping

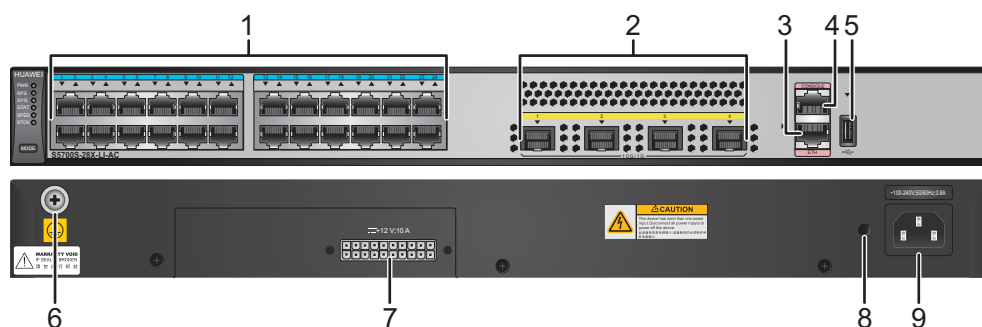
Table 5-150 lists the mapping between the S5700S-28X-LI-AC chassis and software versions.

Table 5-150 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-28X-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 5-59 S5700S-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (a maximum transmission distance of 10 km, OSXD22N00 not supported) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-151](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-151 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-152](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-152 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-153](#).

Table 5-153 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-154](#) describes the attributes of an ETH management port.

Table 5-154 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

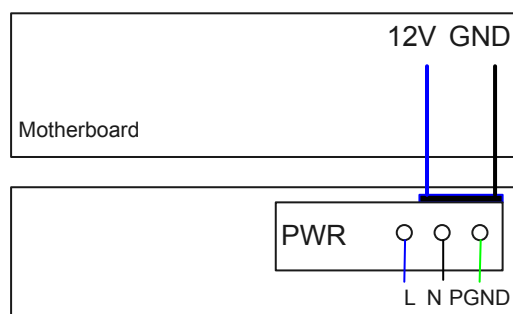
The S5700S-28X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700S-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-60 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-60 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700S-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-155 lists technical specifications of the S5700S-28X-LI-AC.

Table 5-155 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	32 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	22 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350HEC

5.5.5 S5700S-52X-LI-AC

Version Mapping

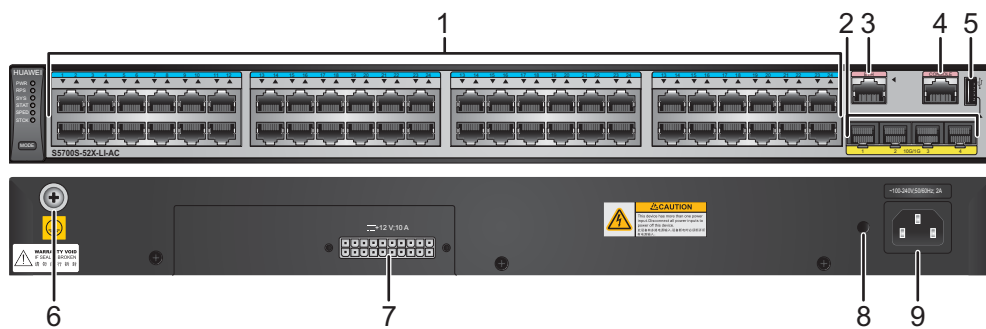
Table 5-156 lists the mapping between the S5700S-52X-LI-AC chassis and software versions.

Table 5-156 Version mapping

Series	Model	Software Version
S5700S-LI	S5700S-52X-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 5-61 S5700S-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket NOTE It is used with an AC power cable .	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-157](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-157 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-158](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-158 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-159](#).

Table 5-159 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-160](#) describes the attributes of an ETH management port.

Table 5-160 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

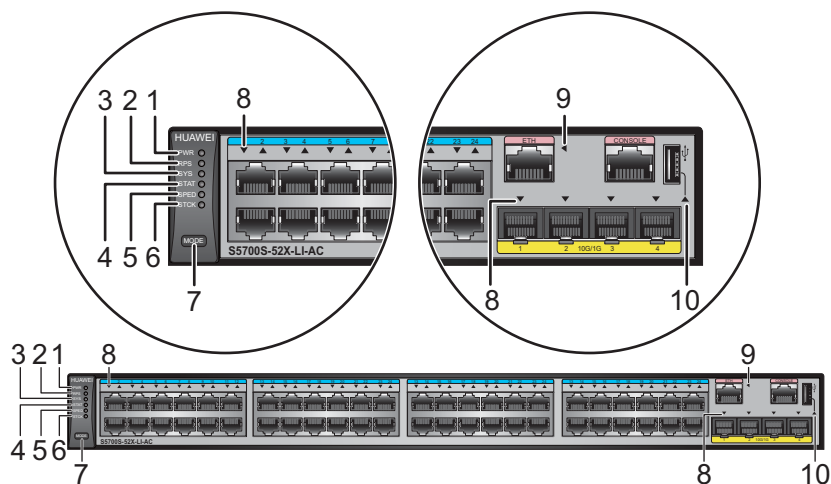
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-62 Indicators on the S5700S-52X-LI-AC

**NOTE**

The S5700S-52X-LI-AC provides a command that can turn on their fault indicators to help field maintenance personnel find a faulty switch.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5700S-52X-LI-AC switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-161 Indicator Description

No.	Indicator/ Button	Color	Description
1	PWR: built-in power module indicator	-	Off: The switch is not powered on.
		Green	Steady on: The power module is supplying power normally.
		Yellow	Steady on: The power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS: RPS indicator	-	Off: The switch is not connected to an RPS.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold standby state. Blinking: The RPS is supplying power to another switch.
		Yellow	Blinking: The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Yellow	Blinking: The system is in the sleep state. NOTE The system can wake from the sleeping state if you press the MODE button.
		Red	Steady on: The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. In this mode, service port indicators show the port link or activity state.

No.	Indicator/ Button	Color	Description
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> • Off: The speed mode is not selected. • Steady on: The speed mode is selected. In this mode, service port indicators show port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	Green	<p>If you are not changing the indicator mode (default state):</p> <ul style="list-style-type: none"> • Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled. • Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled. <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> • Off: The stack mode is not selected. • Steady on: The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. • Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator/ Button	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none">When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.When you press the button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.When you press the button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator (one indicator for each port)	Meanings of service port indicators vary in different modes. For details, see Table 5-162 .	
9	ETH port indicator	Green	<ul style="list-style-type: none">Off: The ETH management port is not connected.Steady on: The ETH management port is connected.Blinking: The port is sending or receiving data.
10	USB-based deployment indicator	-	<p>Off:</p> <ul style="list-style-type: none">No USB flash drive is connected to the switch.The USB port is damaged.The indicator is damaged.The USB flash drive does not have any configuration file and cannot be used for deployment.The switch has been upgraded using the USB flash drive and is restarting.

No.	Indicator/ Button	Color	Description
		Green	<ul style="list-style-type: none"> Steady on: A USB-based deployment has been completed. Blinking: The system is reading data from a USB flash drive.
		Yellow	Steady on: The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
		Red	Blinking: An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-162 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.

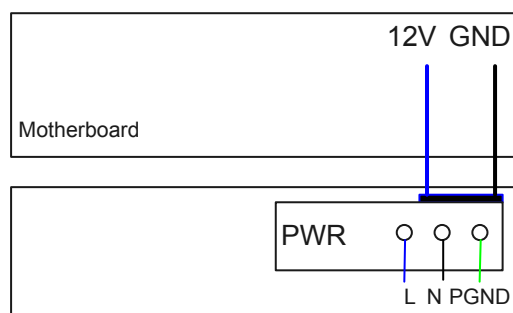
Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is steady on, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is blinking, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700S-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-63 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

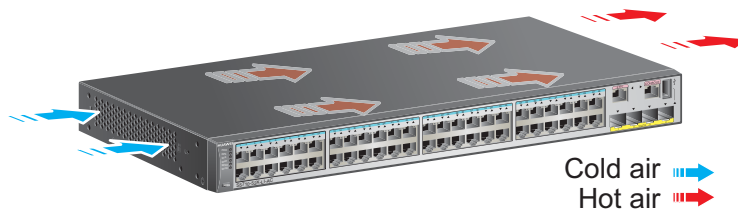
Figure 5-63 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700S-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-163 lists technical specifications of the S5700S-52X-LI-AC.

Table 5-163 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	54.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	34.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350HED

5.6 S5700-LI-BAT

NOTE

The S5700-28P-LI-BAT and S5700-28P-LI-24S-BAT support internal batteries. For details about the two models, see the *S5700-LI-BAT Hardware Installation and Maintenance Guide*.

5.6.1 S5700-28P-LI-BAT

Version Mapping

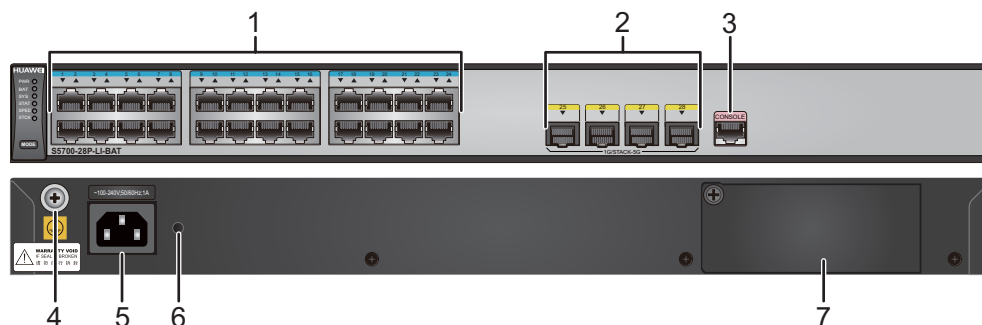
Table 5-164 lists the mapping between the S5700-28P-LI-BAT chassis and software versions.

Table 5-164 Version mapping

Series	Model	Software Version
S5700-LI-BAT	S5700-28P-LI-BAT	V200R003C02 to V200R012C00 versions NOTE This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-64 S5700-28P-LI-BAT appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
3	One console port	4	Ground screw NOTE It is used with a ground cable .

5	AC socket NOTE It is used with an AC power cable .	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	Battery slot NOTE Applicable battery modules or power modules: <ul style="list-style-type: none"> • BAT-4AHA rechargeable lithium ion battery module • BAT-8AHA rechargeable lithium ion battery module • PBB-12AHA lead-acid battery charger module (requiring external lead-acid batteries) • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-165](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-165 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-166](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-166 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-167](#).

Table 5-167 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-65 Indicators on the S5700-28P-LI-BAT

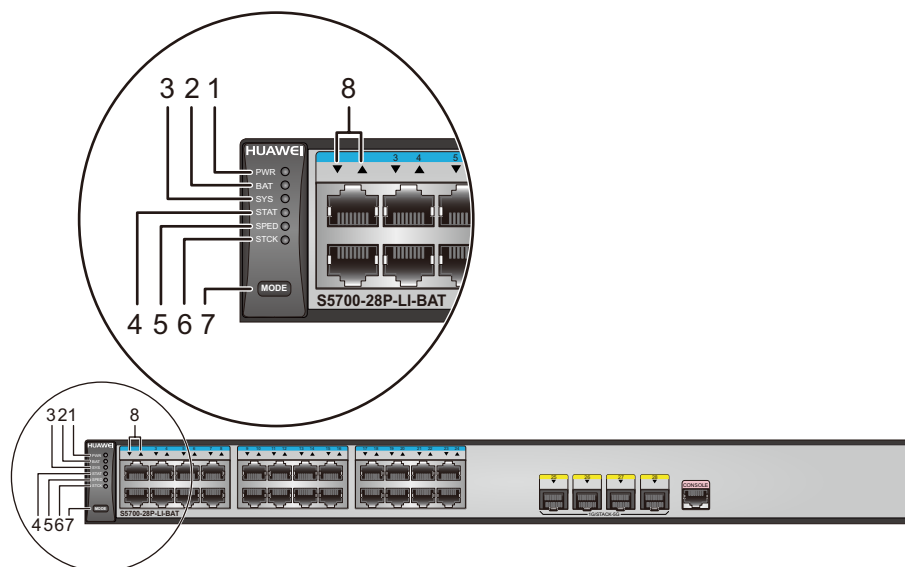


Table 5-168 Description of indicators on the S5700-28P-LI-BAT

No.	Indicator/ Button	Color	Description
1	PWR: power supply indicator	-	Off: The switch is not powered on.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power supply has failed, and the switch is powered by a backup power supply.
2	BAT: battery indicator	-	Off: <ul style="list-style-type: none"> No lithium battery is working. No lead-acid battery charger module is working. No power module is working.
		Green	<ul style="list-style-type: none"> Steady on: The lithium battery, lead-acid battery, or power module is working normally. Fast blinking: The lithium battery is supplying power to the switch. Slow blinking: The switch is charging the lithium battery.

No.	Indicator/ Button	Color	Description
		Yellow	Steady on: <ul style="list-style-type: none">• The lithium battery does not work normally.• The output of the lead-acid battery is abnormal.• No lead-acid battery is connected to the lead-acid battery charger module.• The power module does not work normally. Blinking: The lithium battery software is upgrading. (This indicator state is available in V200R005C00 and later versions.)
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none">• Fast blinking: The system is starting.• Slow blinking: The system is running normally.
		Red	Steady on: The system is not running normally or has generated a temperature or fan alarm.
4	STAT: status indicator	Green	<ul style="list-style-type: none">• Off: The status mode is not selected.• Steady on: The service port indicators are in the status mode (default).
5	SPED: speed indicator	Green	<ul style="list-style-type: none">• Off: The speed mode is not selected.• Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator	-	Off NOTE The S5700-LI-BAT series switches do not support the stacking feature. This indicator is reserved for future use.

No.	Indicator/ Button	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none">When you press this button once, the SPED indicator turns green, and the service port indicators show the speed of each service port.When you press the button a second time, the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and STCK indicator are off.</p>
8	Service port indicator <ul style="list-style-type: none">GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.GE optical ports: Each optical port has a corresponding indicator above it.	Meanings of service port indicators vary in different modes. For details, see Table 5-169 .	

Table 5-169 Description of service port indicators in different modes

Mode	Color	Description
Status mode	Green	<ul style="list-style-type: none">Off: The port is not connected or has been shut down.Steady on: The port is connected.Blinking: The port is sending or receiving data.

Mode	Color	Description
Speed mode	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is operating at 10/100 Mbit/s. Blinking: The port is operating at 1000 Mbit/s.

Power Supply Configuration

The S5700-28P-LI-BAT switch has a built-in AC power supply unit and can use a pluggable power module or battery for power redundancy. Power modules and batteries for the S5700-28P-LI-BAT switch are hot swappable.

Battery module configuration

The battery installed on an S5700-28P-LI-BAT switch can automatically supply power to the switch in case of a mains power outage, ensuring uninterrupted services. When the AC power supply recovers, the battery turns to the charging state.

The S5700-28P-LI-BAT switch supports the following batteries and battery charger module:

- BAT-4AHA (chargeable lithium battery)
- BAT-8AHA (chargeable lithium battery)
- PBB-12AHA (12AH lead-acid battery charger module)

NOTE

The PBB-12AHA module must connect to a lead-acid battery with 12AH of rated capacity.

The S5700-28P-LI-BAT switch can be configured with a battery to prevent service interruption caused by mains power outages. [Table 5-170](#) lists the power supply time of the batteries.

Table 5-170 Battery configuration

Battery	Power Supply Time
BAT-4AHA	<ul style="list-style-type: none"> • The switch works with the maximum power consumption and the battery is fully charged: 2.4 hours • The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic and has the EEE function enabled, and the battery is fully charged: 4.1 hours • The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 5.6 hours
BAT-8AHA	<ul style="list-style-type: none"> • The switch works with the maximum power consumption and the battery is fully charged: 4.8 hours • The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic and has the EEE function enabled, and the battery is fully charged: 8.2 hours • The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 11.2 hours

 **NOTE**

The power supply time shortens when a battery has been used for a long time.

Battery module configuration

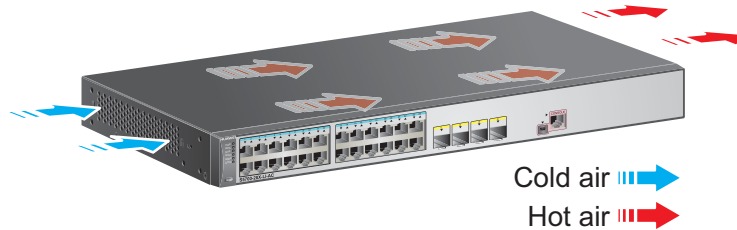
The S5700-28P-LI-BAT switch can be configured with a power module as a backup of the built-in power supply unit to improve power reliability.

The S5700-28P-LI-BAT switch supports the following power modules:

- 150 W AC power module
- 150 W DC power module

Heat Dissipation

The S5700-28P-LI-BAT has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-171 lists technical specifications of the S5700-28P-LI-BAT.

Table 5-171 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	57.9 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Built-in AC or using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.4 kg (7.5 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	23 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	22.7 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	<ul style="list-style-type: none"> • Pluggable modules not configured: -40°C to +70°C (-40°F to +158°F) • Power modules configured: -40°C to +70°C (-40°F to +158°F) • Lithium battery modules configured: -20°C to +60°C (-4°F to +140°F) • Lead-acid battery modules configured: The storage temperature is determined according to the storage environment of lead-acid batteries.
Noise under normal temperature (27°C, sound power)	< 43.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • DC power modules configured: 0-2000 m (0-6562 ft.) • AC power modules or battery modules configured: 0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010509

5.6.2 S5700-28P-LI-24S-BAT

Version Mapping

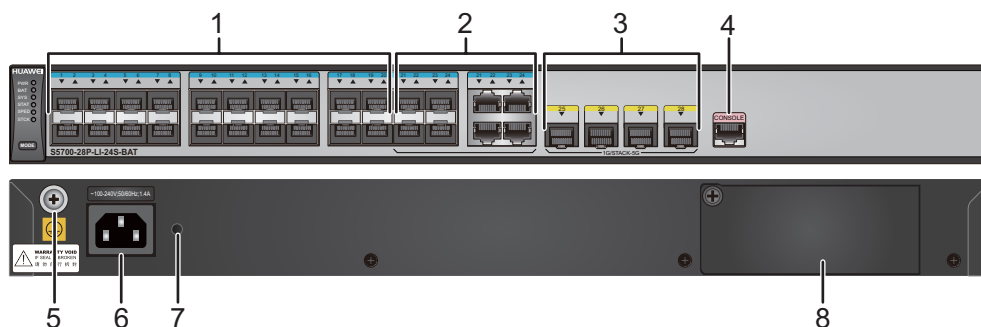
[Table 5-172](#) lists the mapping between the S5700-28P-LI-24S-BAT chassis and software versions.

Table 5-172 Version mapping

Series	Model	Software Version
S5700-LI-BAT	S5700-28P-LI-24S-BAT	V200R003C02 to V200R012C00 versions NOTE This model does not match V200R003C10, V200R005C00SPC500, V200R005C01, V200R005C02, V200R005C03, or V200R007C10.

Appearance and Structure

Figure 5-66 S5700-28P-LI-24S-BAT appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	6	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>Battery slot</p> <p>NOTE Applicable battery modules or power modules:</p> <ul style="list-style-type: none"> • BAT-4AHA rechargeable lithium ion battery module • BAT-8AHA rechargeable lithium ion battery module • PBB-12AHA lead-acid battery charger module (requiring external lead-acid batteries) • 150 W AC power module • 150 W DC power module

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s.

Table 5-173 describes the attributes of a 100/1000BASE-X port.

Table 5-173 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-174](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-174 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-175](#).

Table 5-175 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

The S5700-28P-LI-24S-BAT has the same types of indicators as the S5700-28P-LI-BAT. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28P-LI-24S-BAT switch has a built-in AC power supply unit and can use a pluggable power module or battery for power redundancy. Power modules and batteries for the S5700-28P-LI-24S-BAT switch are hot swappable.

Battery module configuration

The battery installed on an S5700-28P-LI-24S-BAT switch can automatically supply power to the switch in case of a mains power outage, ensuring uninterrupted services. When the AC power supply recovers, the battery turns to the charging state.

The S5700-28P-LI-24S-BAT switch supports the following batteries and battery charger module:

- BAT-4AHA (chargeable lithium battery)

- BAT-8AHA (chargeable lithium battery)
- PBB-12AHA (12AH lead-acid battery charger module)

 **NOTE**

The PBB-12AHA module must connect to a lead-acid battery with 12AH of rated capacity.

The S5700-28P-LI-24S-BAT switch can be configured with a battery to prevent service interruption caused by mains power outages. [Table 5-176](#) lists the power supply time of the batteries.

Table 5-176 Battery configuration

Battery	Power Supply Time
BAT-4AHA	<ul style="list-style-type: none"> • The switch works with the maximum power consumption and the battery is fully charged: 1.2 hours • The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic, and the battery is fully charged: 2.1 hours • The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 4.1 hours
BAT-8AHA	<ul style="list-style-type: none"> • The switch works with the maximum power consumption and the battery is fully charged: 2.3 hours • The switch has 70% of ports in Up state, each port transmits 10% of maximum traffic, and the battery is fully charged: 4.2 hours • The switch works with the minimum power consumption (no port is working) and the battery is fully charged: 8.3 hours

 **NOTE**

The power supply time shortens when a battery has been used for a long time.

Battery module configuration

The S5700-28P-LI-24S-BAT switch can be configured with a power module as a backup of the built-in power supply unit to improve power reliability.

The S5700-28P-LI-24S-BAT switch supports the following power modules:

- 150 W AC power module
- 150 W DC power module

Heat Dissipation

The S5700-28P-LI-24S-BAT has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-177](#) lists technical specifications of the S5700-28P-LI-24S-BAT.

Table 5-177 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	45
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Built-in AC or using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	3.6 kg (7.94 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	34.1 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	33.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	<ul style="list-style-type: none"> • Pluggable modules not configured: -40°C to +70°C (-40°F to +158°F) • Power modules configured: -40°C to +70°C (-40°F to +158°F) • Lithium battery modules configured: -20°C to +60°C (-4°F to +140°F) • Lead-acid battery modules configured: The storage temperature is determined according to the storage environment of lead-acid batteries.
Noise under normal temperature (27°C, sound power)	< 46.1 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	<ul style="list-style-type: none"> DC power modules configured: 0-2000 m (0-6562 ft.) AC power modules or battery modules configured: 0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010511

5.7 S5710-LI

5.7.1 S5710-28C-LI

Version Mapping

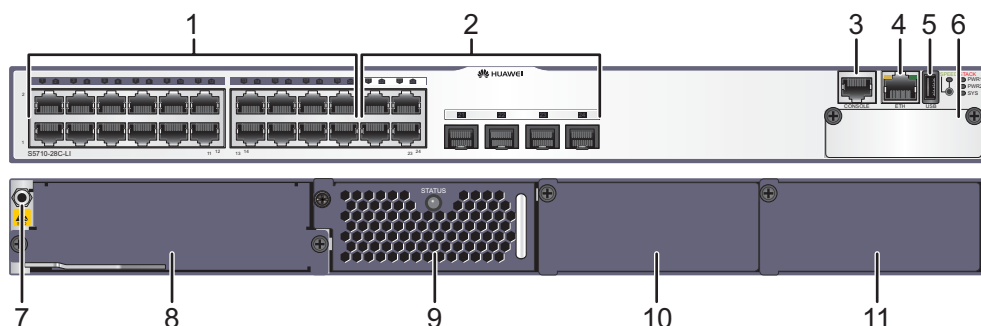
Table 5-178 lists the mapping between the S5710-28C-LI chassis and software versions.

Table 5-178 Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-28C-LI	V200R001C00 only

Appearance and Structure

Figure 5-67 S5710-28C-LI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) • 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
7	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) • 9.28 ES5D00ETPB00 (Extended Rear Card)
9	Fan slot NOTE Applicable fan module: CX7E1FANA fan module	10	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
11	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-179](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-179 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-180](#).

Table 5-180 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 5-181** describes the attributes of an ETH management port.

Table 5-181 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

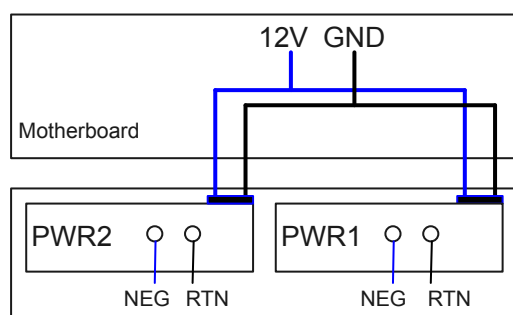
The S5710-28C-LI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-28C-LI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. The switch cannot use AC and DC power modules simultaneously.

Figure 5-68 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-68 Power supply connections of dual DC power modules



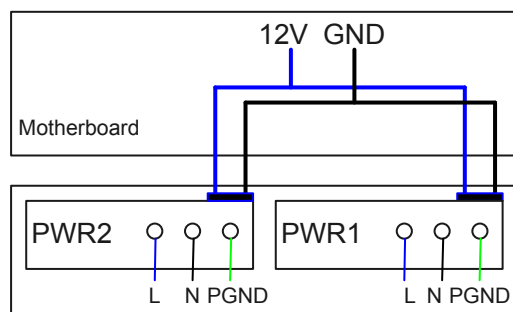
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-69 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-69 Power supply connections of dual AC power modules



L: Live wire

N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5710-28C-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

[Table 5-182](#) lists technical specifications of the S5710-28C-LI.

Table 5-182 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.7 years when a 2-port 10GE interface card is configured, 74.9 years when a 4-port GE front card is configured, 29.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02354139

5.7.2 S5710-28C-PWR-LI

Version Mapping

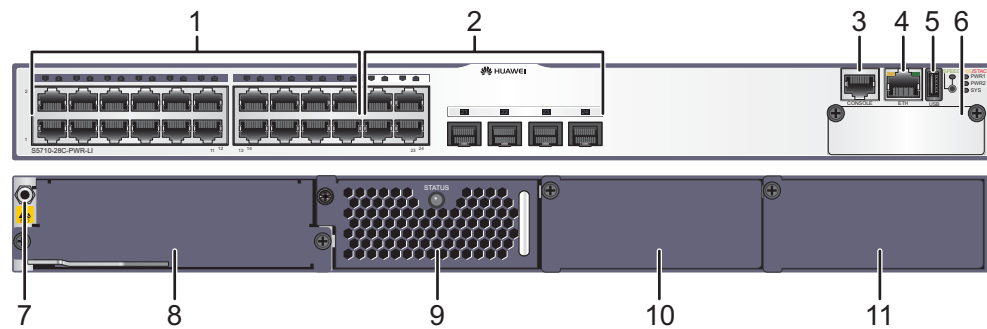
Table 5-183 lists the mapping between the S5710-28C-PWR-LI chassis and software versions.

Table 5-183 Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-28C-PWR-LI	V200R001C00 only

Appearance and Structure

Figure 5-70 S5710-28C-PWR-LI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) • 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
7	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) • 9.28 ES5D00ETPB00 (Extended Rear Card)
9	Fan slot NOTE Applicable fan module: CX7E1FANA fan module	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module
		11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module

1	Power module slot 1	-	-
1	NOTE Applicable power modules: <ul style="list-style-type: none">• 250 W AC PoE power module• 500 W AC PoE power module		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-184** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-184 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-185](#).

Table 5-185 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-186](#) describes the attributes of an ETH management port.

Table 5-186 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-28C-PWR-LI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-28C-PWR-LI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 5-187](#) lists its power supply configurations.

Table 5-187 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 8 ● 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 12

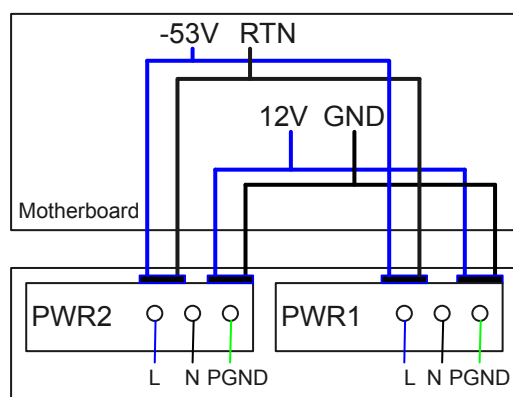
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-71 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-71 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5710-28C-PWR-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

Table 5-188 lists technical specifications of the S5710-28C-PWR-LI.

Table 5-188 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.6 years when a 2-port 10GE interface card is configured, 74.6 years when a 4-port GE front card is configured, 25.68 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	836 W (system power consumption: 96 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354136

5.7.3 S5710-52C-LI

Version Mapping

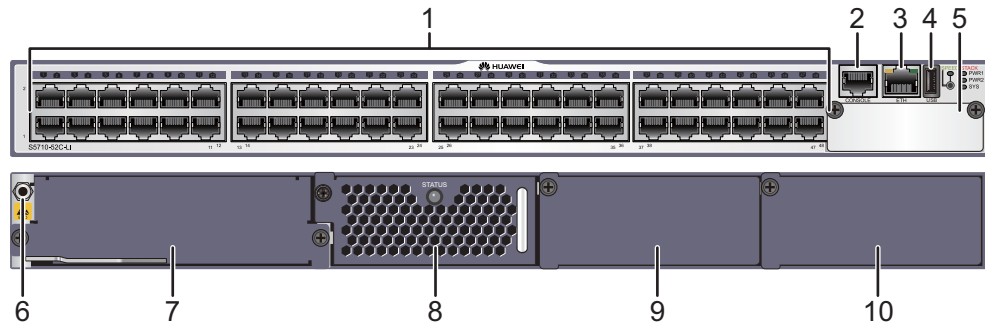
Table 5-189 lists the mapping between the S5710-52C-LI chassis and software versions.

Table 5-189 Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-52C-LI	V200R001C00 only

Appearance and Structure

Figure 5-72 S5710-52C-LI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 9.27 ES5D00ETPC00 (Stack Rear Card) 9.28 ES5D00ETPB00 (Extended Rear Card) 	8	Fan slot NOTE Applicable fan module: CX7E1FANA fan module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-190** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-190 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see **Table 5-191**.

Table 5-191 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 5-192** describes the attributes of an ETH management port.

Table 5-192 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-52C-LI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-LI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. The switch cannot use AC and DC power modules simultaneously.

[Figure 5-73](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-73 Power supply connections of dual DC power modules

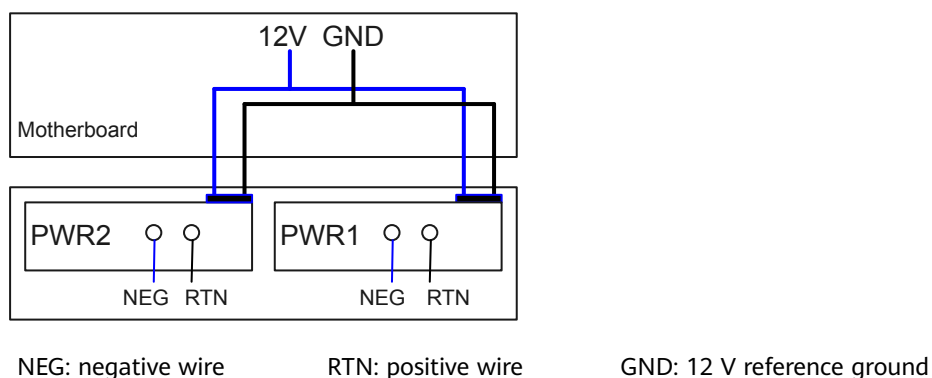
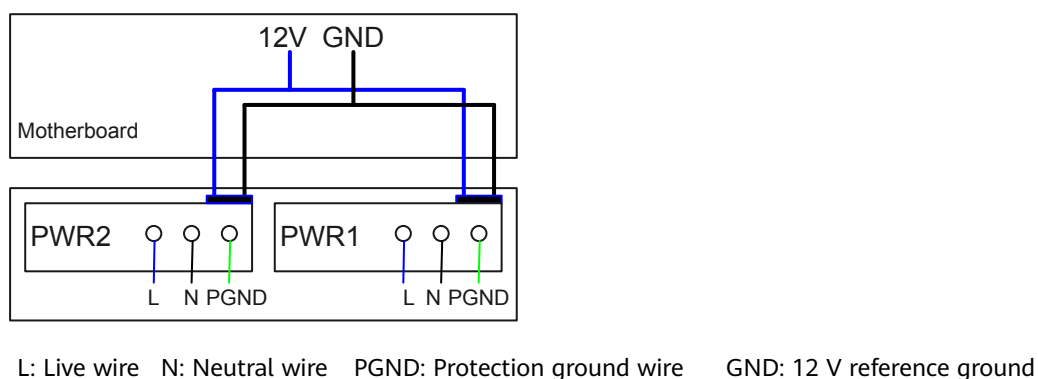


Figure 5-74 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-74 Power supply connections of dual AC power modules



Heat Dissipation

The S5710-52C-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-193 lists technical specifications of the S5710-52C-LI.

Table 5-193 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	51.3 years when a 2-port 10GE interface card is configured, 70.3 years when a 4-port GE front card is configured, 28.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W
Operating temperature	0°C to 50°C (32°F to 122°F)

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02354138

5.7.4 S5710-52C-PWR-LI

Version Mapping

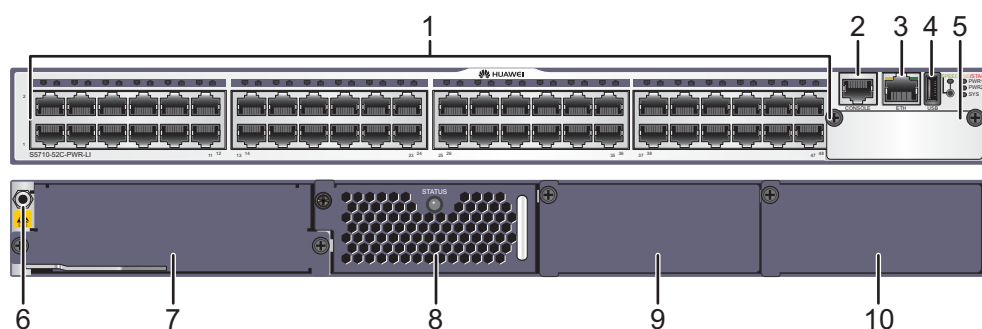
Table 5-194 lists the mapping between the S5710-52C-PWR-LI chassis and software versions.

Table 5-194 Version mapping

Series		Model	Software Version
S5710-LI	S5710-C-LI	S5710-52C-PWR-LI	V200R001C00 only

Appearance and Structure

Figure 5-75 S5710-52C-PWR-LI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) • 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) • 9.28 ES5D00ETPB00 (Extended Rear Card) 	8	Fan slot NOTE Applicable fan module: CX7E1FANA fan module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-195](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-195 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-196](#).

Table 5-196 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-197](#) describes the attributes of an ETH management port.

Table 5-197 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-52C-PWR-LI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-PWR-LI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 5-198](#) lists its power supply configurations.

Table 5-198 Power supply configurations

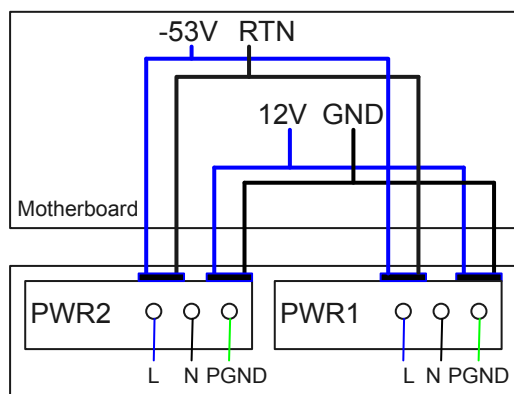
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-76](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-76 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5710-52C-PWR-LI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-199 lists technical specifications of the S5710-52C-PWR-LI.

Table 5-199 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	50.4 years when a 2-port 10GE interface card is configured, 68.6 years when a 4-port GE front card is configured, 35.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 5 kg (11.02 lb)• Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	917 W (system power consumption: 177 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification

Item	Description
Part number	02354134

5.7.5 S5710-28X-LI-AC

Version Mapping

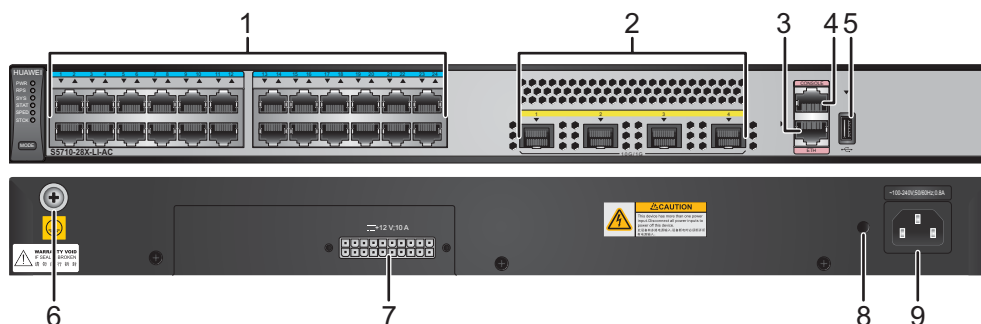
Table 5-200 lists the mapping between the S5710-28X-LI-AC chassis and software versions.

Table 5-200 Version mapping

Series		Model	Software Version
S5710-LI	S5710-X-LI	S5710-28X-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 5-77 S5710-28X-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (a maximum transmission distance of 10 km, OSXD22N00 not supported) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • GPON optical module (applicable in V200R012C00 version) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-201](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-201 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-202](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-202 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-203](#).

Table 5-203 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-204](#) describes the attributes of an ETH management port.

Table 5-204 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

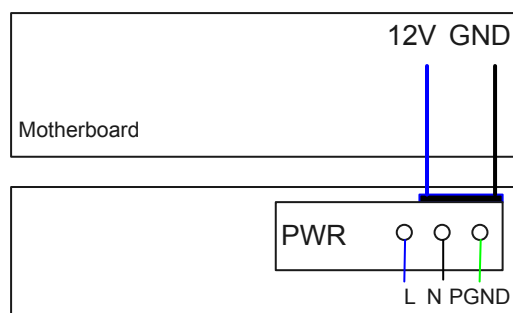
The S5710-28X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-78](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-78 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5710-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

**Technical Specifications**

[Table 5-205](#) lists technical specifications of the S5710-28X-LI-AC.

Table 5-205 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	32 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	22 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350GEM

5.7.6 S5710-52X-LI-AC

Version Mapping

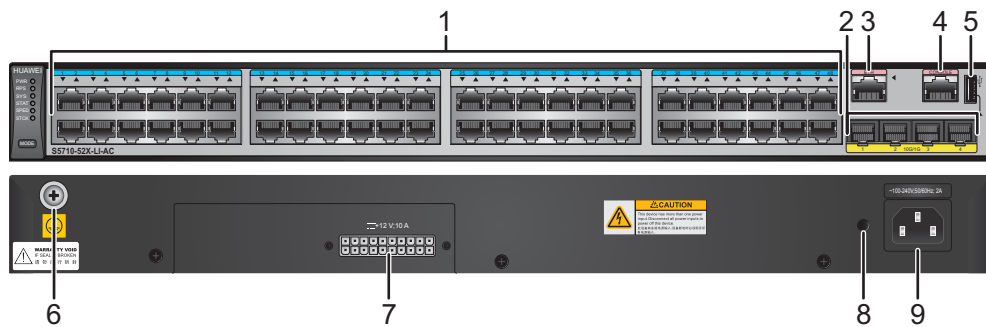
Table 5-206 lists the mapping between the S5710-52X-LI-AC chassis and software versions.

Table 5-206 Version mapping

Series		Model	Software Version
S5710-LI	S5710-X-LI	S5710-52X-LI-AC	V200R008C00 to V200R012C00 versions

Appearance and Structure

Figure 5-79 S5710-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • GPON optical module (applicable in V200R012C00 version) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-207](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-207 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-208](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-208 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-209](#).

Table 5-209 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-210** describes the attributes of an ETH management port.

Table 5-210 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

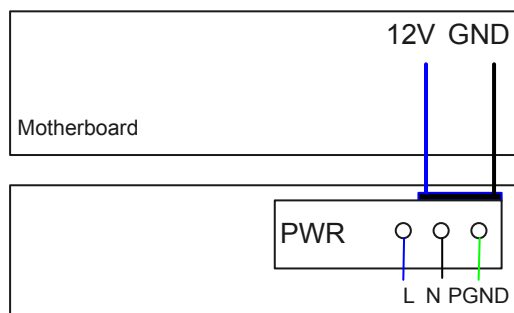
The S5710-52X-LI-AC has the same types of indicators as the S5700S-52X-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-80](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-80 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5710-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

[Table 5-211](#) lists technical specifications of the S5710-52X-LI-AC.

Table 5-211 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	Four uplink 10GE SFP+ ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	54.7 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	34.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350GEN

5.8 S5720-LI

5.8.1 S5720-12TP-LI-AC

Version Mapping

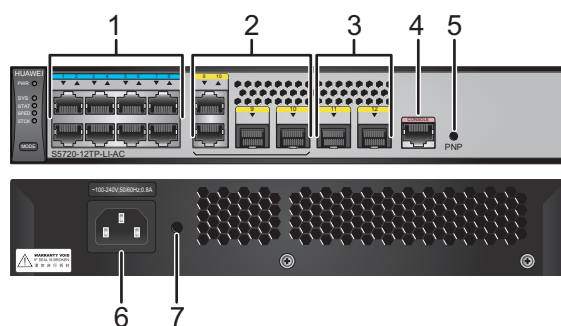
Table 5-212 lists the mapping between the S5720-12TP-LI-AC chassis and software versions.

Table 5-212 Version mapping

Series	Model	Software Version
S5720-LI	S5720-12TP-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-81 S5720-12TP-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module (the maximum transmission distance cannot exceed 40 km)
---	-------------------------------	---	---

3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module (the maximum transmission distance cannot exceed 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only applicable to stack ports) • 1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	One console port
5	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-213](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-213 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission

speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-214](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-214 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-215](#).

Table 5-215 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-82 Indicators on the S5720-12TP-LI-AC

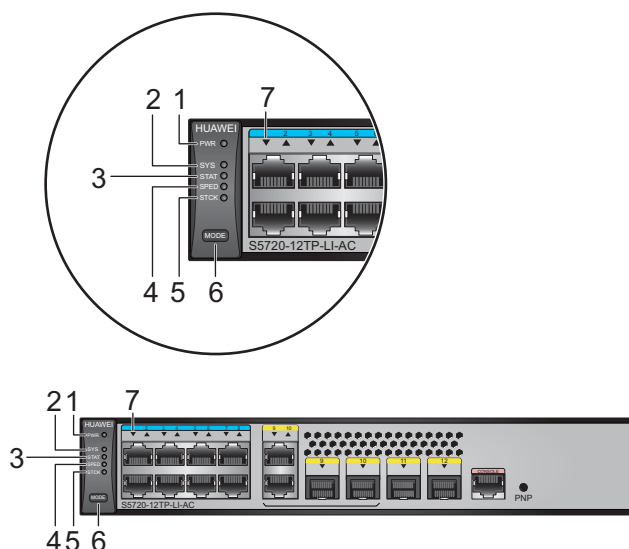


Table 5-216 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
7	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-217 .		

Table 5-217 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. Blinking: 10M/100M/1000M port: The port is operating at 1000 Mbit/s.

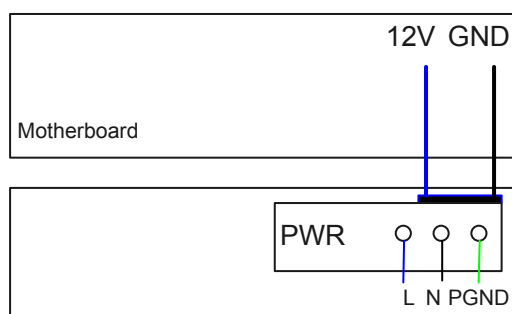
Display Mode	Color	Description
Stack	Green	<p>Off: Port indicators do not show the stack ID of the switch.</p> <p>If the indicator is steady on, the switch is not a master switch:</p> <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. <p>If the indicator is blinking, the switch is a master switch:</p> <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-12TP-LI-AC has a built-in power module and does not support pluggable power modules.

Figure 5-83 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-83 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-12TP-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-218 lists technical specifications of the S5720-12TP-LI-AC.

Table 5-218 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)
Weight (with packaging)	1.8 kg (3.97 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	12.85 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	10.39 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010567

5.8.2 S5720-12TP-PWR-LI-AC

Version Mapping

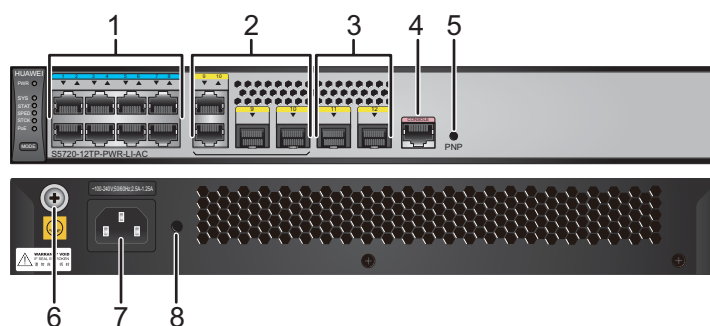
Table 5-219 lists the mapping between the S5720-12TP-PWR-LI-AC chassis and software versions.

Table 5-219 Version mapping

Series	Model	Software Version
S5720-LI	S5720-12TP-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-84 S5720-12TP-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module (the maximum transmission distance cannot exceed 40 km)
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module (the maximum transmission distance cannot exceed 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only applicable to stack ports) • 1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	One console port
5	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-220](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-220 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission

speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-221](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-221 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-222](#).

Table 5-222 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-85 Indicators on the S5720-12TP-PWR-LI-AC

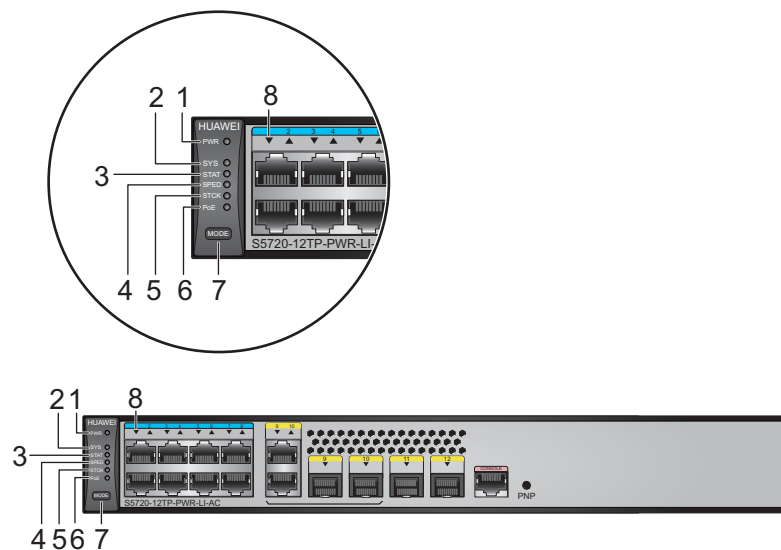


Table 5-223 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in PoE power module has failed.
2	SYS	System status	-	Off	The system is not running.

No.	Indicator	Name	Color	Status	Description
		indicator	Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-224 .		

Table 5-224 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.

Display Mode	Color	Status	Description
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> • The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. • The total power consumption of PDs has reached the maximum power of the switch. • The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

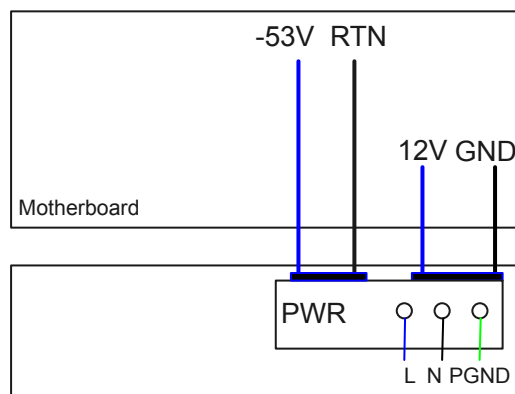
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-12TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 5-86 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-86 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-12TP-PWR-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-225 lists technical specifications of the S5720-12TP-PWR-LI-AC.

Table 5-225 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.)
Weight (with packaging)	3 kg (6.62 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">• Not providing the PoE function: 15.61 W• 100% PoE loads: 160.5 W (system power consumption: 37.3 W, PoE: 123.2 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	14.57 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010570

5.8.3 S5720-28TP-LI-AC

Version Mapping

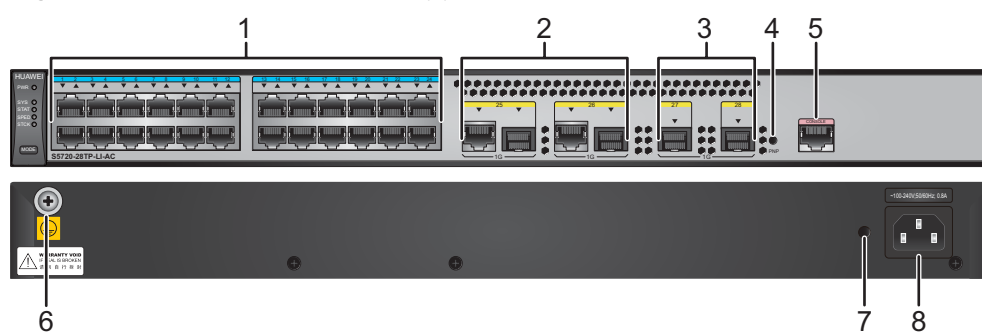
Table 5-226 lists the mapping between the S5720-28TP-LI-AC chassis and software versions.

Table 5-226 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-87 S5720-28TP-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module (maximum transmission distance ≤ 40 km)
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module (maximum transmission distance ≤ 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-227](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-227 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-228](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-228 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-229](#).

Table 5-229 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

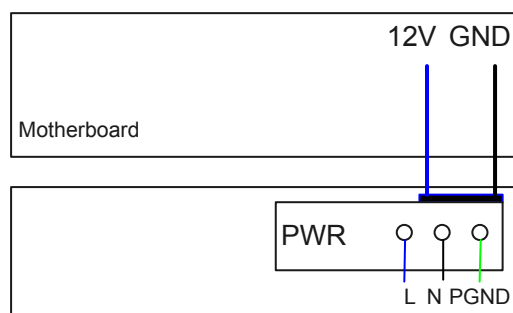
Indicator Description

The S5720-28TP-LI-AC has similar indicators to those of the S5720-28TP-PWR-LI-AC except that the S5720-28TP-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28TP-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-88](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-88 Power supply mode of a built-in AC power module

L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28TP-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-230 lists technical specifications of the S5720-28TP-LI-AC.

Table 5-230 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	43 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports

Item	Description
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	22.1 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	16.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010639

5.8.4 S5720-28TP-PWR-LI-AC

Version Mapping

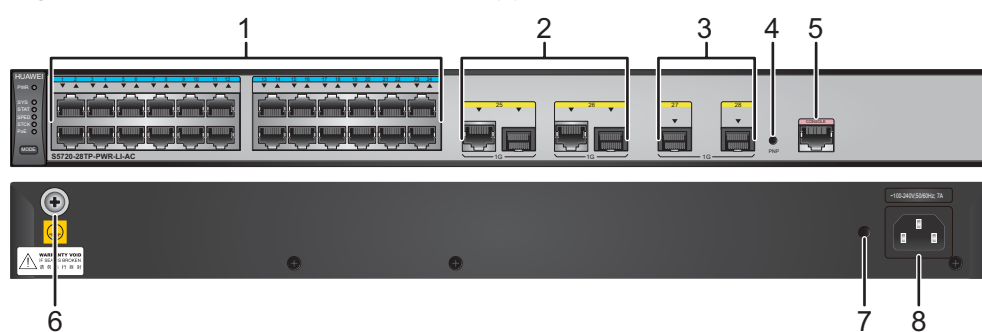
[Table 5-231](#) lists the mapping between the S5720-28TP-PWR-LI-AC chassis and software versions.

Table 5-231 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-89 S5720-28TP-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> ● FE optical module ● GE optical module ● GE-CWDM optical module ● GE-DWDM optical module
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	8	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-232](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-232 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-233](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-233 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-234](#).

Table 5-234 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

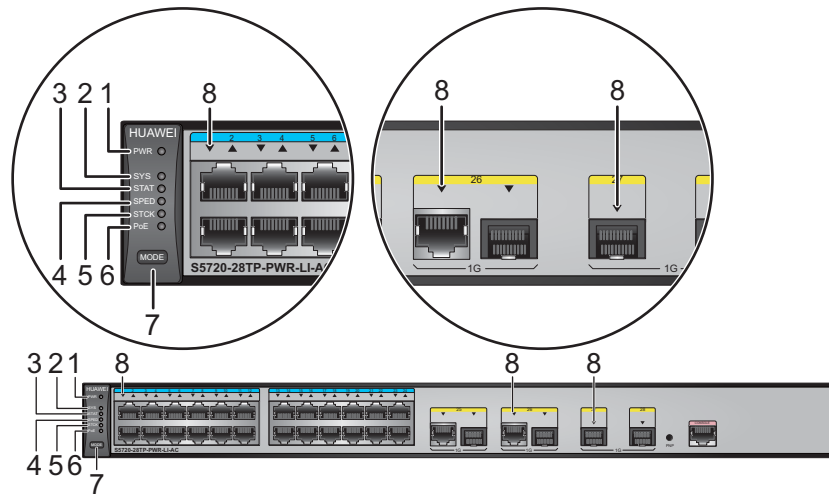
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-90 Indicators on the S5720-28TP-PWR-LI-AC



NOTE

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 5-235 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in PoE power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-236 .		

Table 5-236 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> • The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. • The total power consumption of PDs has reached the maximum power of the switch. • The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

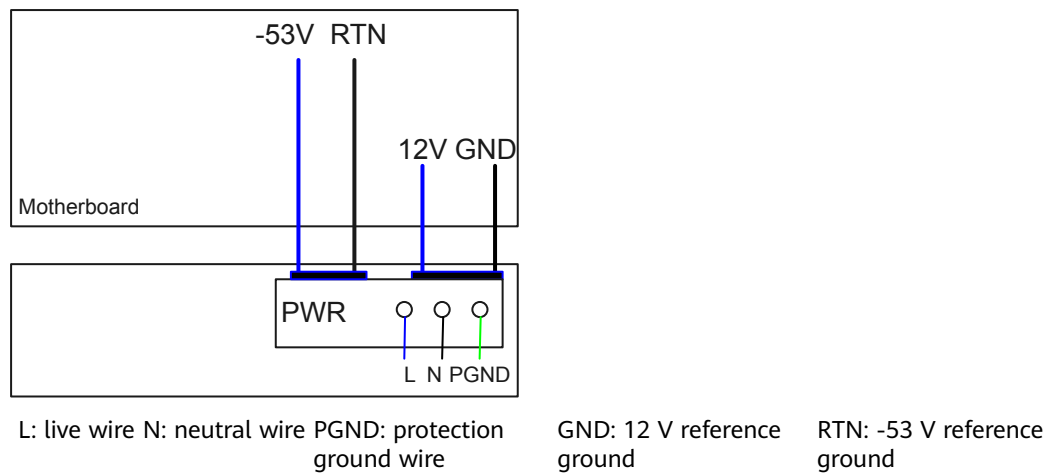
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-28TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

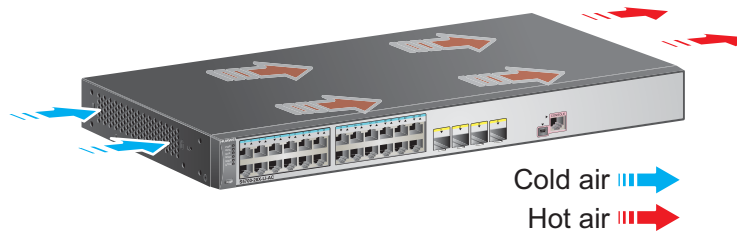
Figure 5-91 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-91 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720-28TP-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-237 lists technical specifications of the S5720-28TP-PWR-LI-AC.

Table 5-237 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	40 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.3 kg (11.69 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 38.8 W• 100% PoE loads: 444.8 W (system power consumption: 75.2 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	27.4 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 48.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010637

5.8.5 S5720-28TP-PWR-LI-ACL

Version Mapping

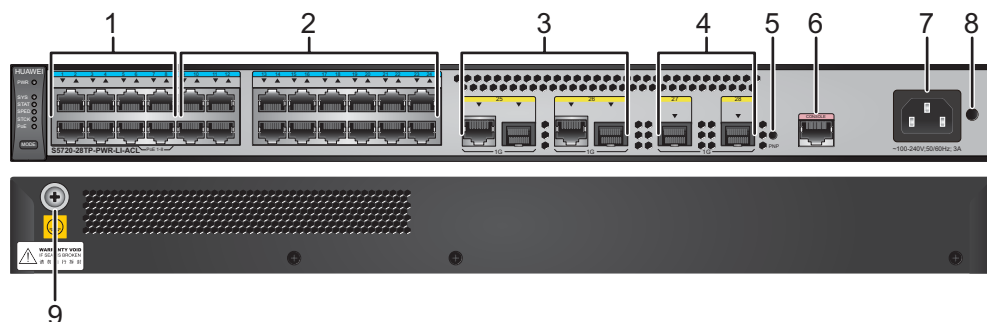
Table 5-238 lists the mapping between the S5720-28TP-PWR-LI-ACL chassis and software versions.

Table 5-238 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28TP-PWR-LI-ACL	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-92 S5720-28TP-PWR-LI-ACL appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Sixteen 10/100/1000BASE-T ports
3	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module (the maximum transmission distance cannot exceed 40 km) 	4	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module (the maximum transmission distance cannot exceed 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only applicable to stack ports) • 1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
5	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	One console port
7	<p>AC socket</p> <p>NOTE</p> <p>It is used with an AC power cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

9	Ground screw	-	-
	NOTE It is used with a ground cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-239](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-239 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-240](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-240 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-241](#).

Table 5-241 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

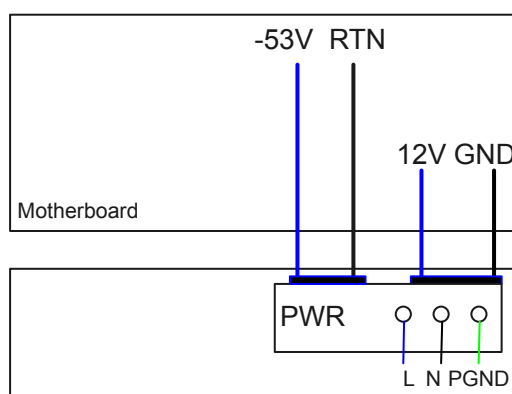
The S5720-28TP-PWR-LI-ACL has the same types of indicators as the S5720-28TP-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28TP-PWR-LI-ACL has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

Figure 5-93 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-93 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-28TP-PWR-LI-ACL has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-242 lists technical specifications of the S5720-28TP-PWR-LI-ACL.

Table 5-242 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">Not providing the PoE function: 24.4 W100% PoE loads: 165.6 W (system power consumption: 42.4 W, PoE: 123.2 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	19.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010634

5.8.6 S5720-28P-LI-AC

Version Mapping

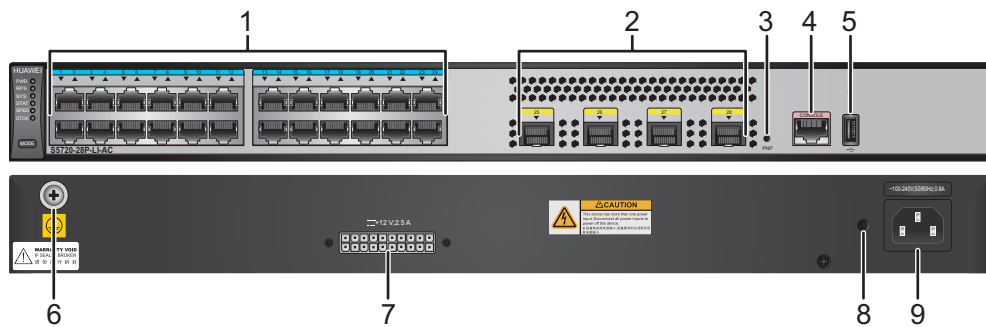
Table 5-243 lists the mapping between the S5720-28P-LI-AC chassis and software versions.

Table 5-243 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28P-LI-AC	V200R011C00 to V200R019C10 versions

Appearance and Structure

Figure 5-94 S5720-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2 Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)• Stack optical module (only used for stack connection)• 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)• 3 m and 10 m AOC cables (only used for stack connection)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)• H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s. Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (only 1000 Mbit/s supported)• 10GE SFP+ optical module (maximum transmission distance of 10 km, OSXD22N00 not supported)• 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables• 3 m and 10 m AOC cables• 0.5 m and 1.5 m SFP+ dedicated stack copper cables
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			<p>(used for zero-configuration stacking, supported in V200R011C10 and later versions)</p> <ul style="list-style-type: none"> H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-244](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-244 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-245](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-245 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-246](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-246 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-247](#).

Table 5-247 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

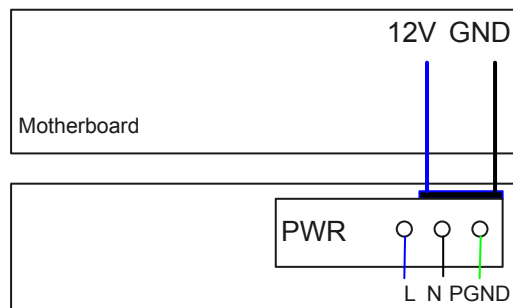
The S5720-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28P-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-95 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-95 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-248 lists technical specifications of the S5720-28P-LI-AC.

Table 5-248 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)

Item	Description
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	27.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	19.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distances.

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010768

5.8.7 S5720-28P-PWR-LI-AC

Version Mapping

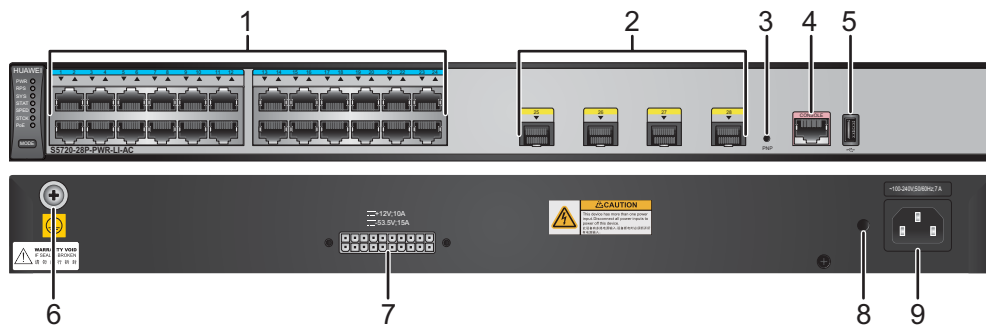
[Table 5-249](#) lists the mapping between the S5720-28P-PWR-LI-AC chassis and software versions.

Table 5-249 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28P-PWR-LI-AC	V200R011C00 to V200R019C10 versions

Appearance and Structure

Figure 5-96 S5720-28P-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	<p>2 Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s.</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables
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			<p>(used for zero-configuration stacking, supported in V200R011C10 and later versions)</p> <ul style="list-style-type: none"> • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-250](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-250 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-251](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-251 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-252](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-252 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-253](#).

Table 5-253 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

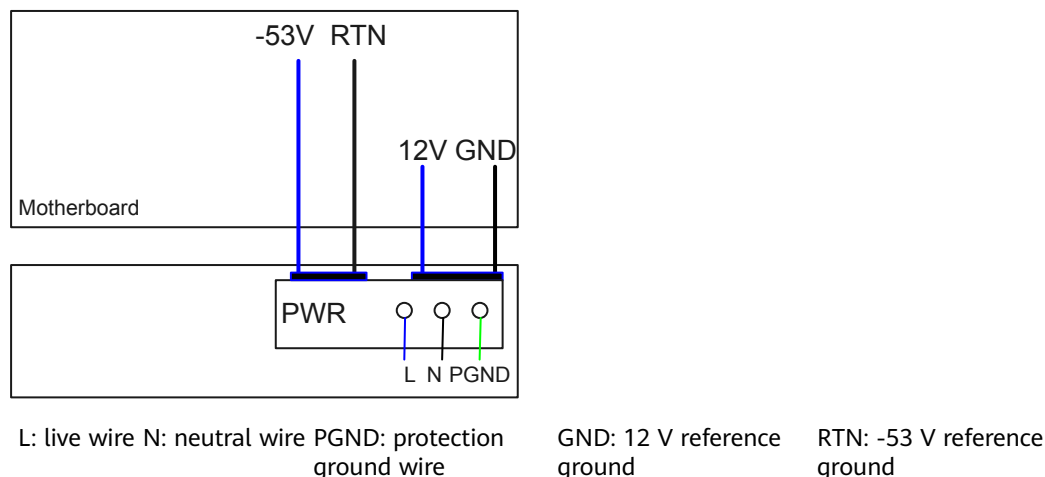
The S5720-28P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 5-97 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-97 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-254 lists technical specifications of the S5720-28P-PWR-LI-AC.

Table 5-254 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 42.7 W• 100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	29.5 W

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010769

5.8.8 S5720-52P-LI-AC

Version Mapping

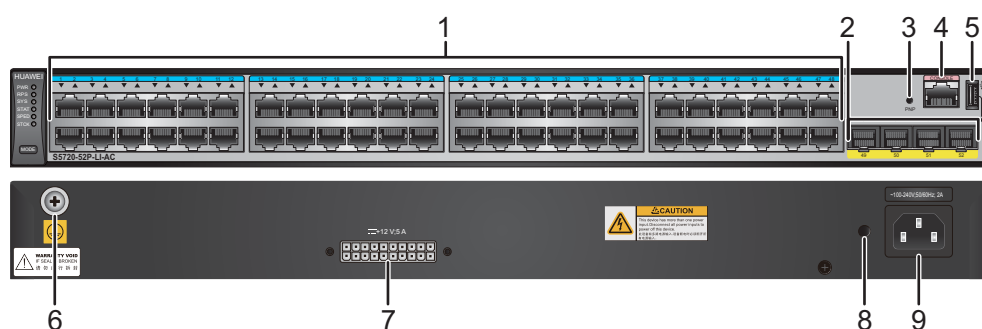
Table 5-255 lists the mapping between the S5720-52P-LI-AC chassis and software versions.

Table 5-255 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52P-LI-AC	V200R011C00 to V200R019C10 versions

Appearance and Structure

Figure 5-98 S5720-52P-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2 Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)• Stack optical module (only used for stack connection)• 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection)• 3 m and 10 m AOC cables (only used for stack connection)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)• H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s. Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (only 1000 Mbit/s supported)• 10GE SFP+ optical module (OSXD22N00 not supported)• 10GE-CWDM optical module• 10GE-DWDM optical module• 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables• 3 m and 10 m AOC cables• 0.5 m and 1.5 m SFP+ dedicated stack copper cables
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			<p>(used for zero-configuration stacking, supported in V200R011C10 and later versions)</p> <ul style="list-style-type: none"> H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-256](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-256 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-257](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-257 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-258](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-258 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-259](#).

Table 5-259 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

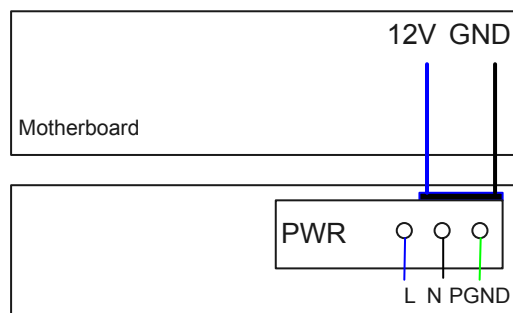
The S5720-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52P-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52P-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-99](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-99 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-260 lists technical specifications of the S5720-52P-LI-AC.

Table 5-260 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	31.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010774

5.8.9 S5720-52P-PWR-LI-AC

Version Mapping

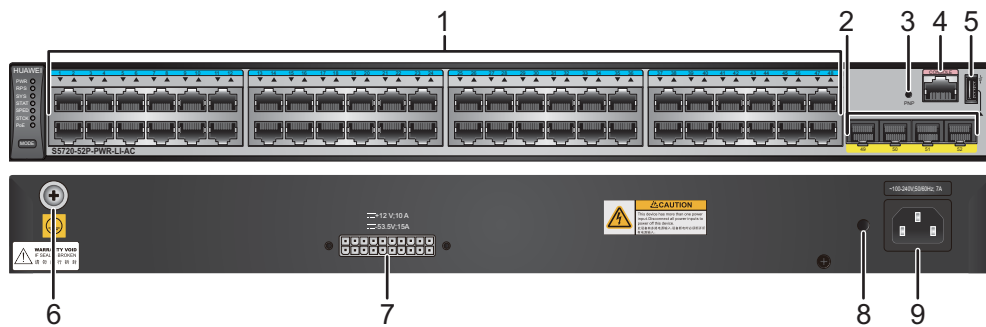
[Table 5-261](#) lists the mapping between the S5720-52P-PWR-LI-AC chassis and software versions.

Table 5-261 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52P-PWR-LI-AC	V200R011C00 to V200R019C10 versions

Appearance and Structure

Figure 5-100 S5720-52P-PWR-LI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	<p>2</p> <p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>A license can be activated on the switch to increase the speed of the four optical ports to 10 Gbit/s.</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables
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			<p>(used for zero-configuration stacking, supported in V200R011C10 and later versions)</p> <ul style="list-style-type: none"> H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-262](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-262 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-263](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-263 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-264](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-264 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-265](#).

Table 5-265 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

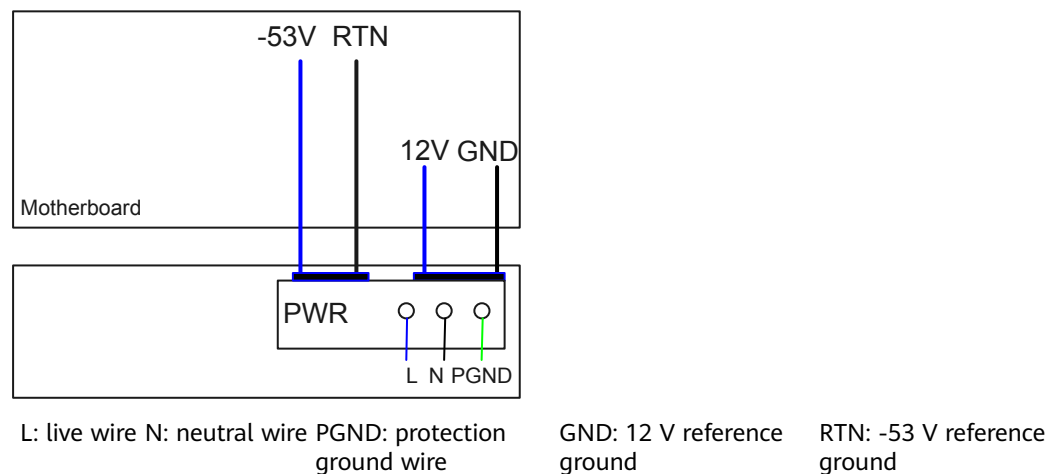
The S5720-52P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

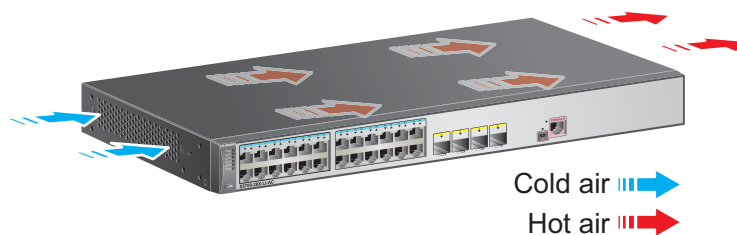
[Figure 5-101](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-101 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720-52P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-266](#) lists technical specifications of the S5720-52P-PWR-LI-AC.

Table 5-266 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 63.5 W • 100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	42.2 W
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010776

5.8.10 S5720-16X-PWH-LI-AC

Version Mapping

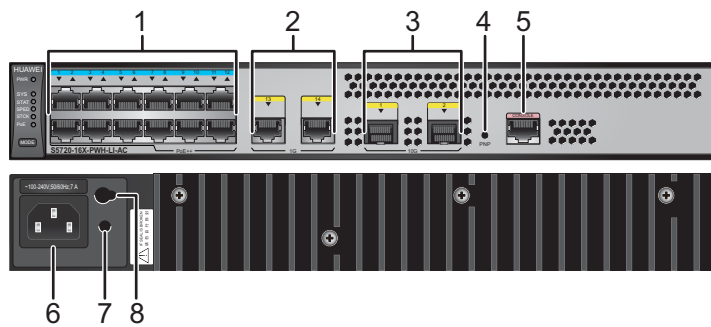
[Table 5-267](#) lists the mapping between the S5720-16X-PWH-LI-AC chassis and software versions.

Table 5-267 Version mapping

Series	Model	Software Version
S5720-LI	S5720-16X-PWH-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-102 S5720-16X-PWH-LI-AC appearance



1	Twelve PoE++ 10/100/1000BASE-T ports	2	Two 10/100/1000BASE-T ports
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3	<p>Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • 11.17 Industrial Optical Modules • GE copper module (only 1000 Mbit/s supported) • 1 m, 3 m, 5 m SFP+ high-speed copper cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTICE</p> <p>The switch cannot enter the standby mode if it has optical modules installed on its optical ports.</p> <p>If the switch is in the standby mode, installing optical modules on its optical interface will cause the switch to exit from the standby mode.</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	<p>AC socket</p> <p>NOTE</p> <p>It is used with an AC power cable.</p>
7	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>	8	Jack for a connection box adapter plate

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-268** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-268 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-269](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-269 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-270](#).

Table 5-270 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

The S5720-16X-PWH-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-16X-PWH-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-16X-PWH-LI-AC has a built-in power module and does not support pluggable power modules. The S5720-16X-PWH-LI-AC is a PoE switch and its built-in power module is a PoE power module.

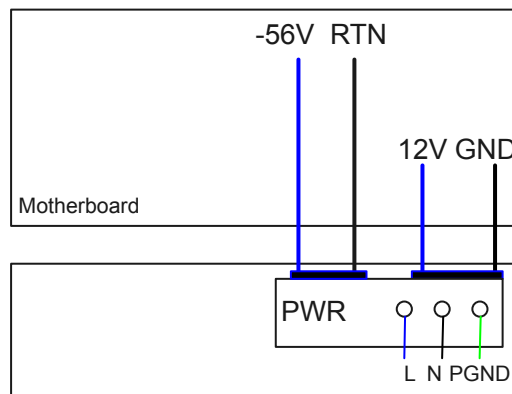
Table 5-271 PoE power supply capacity of the built-in power module

Available PoE Power	Maximum Number of Ports (Fully Loaded)
360 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 12802.3at (30 W per port): 12802.3bt (60 W per port): 6

The S5720-16X-PWH-LI-AC supports the standby mode. In this mode, the switch does not provide PoE power supply and works in low-power state. All ports of the switch, except GE0/0/13 and GE0/0/14, are shut down in the standby mode.

[Figure 5-103](#) shows the power supply mode of the power module in the S5720-16X-PWH-LI-AC switch. The power module receives AC power from an external power source and provides two outputs: 12 V and -56 V. By default, the -56 V output voltage is provided to the switch and powered devices (PDs) connected to the switch. After the switch enters the standby mode, only the 12 V output voltage is provided for power supply of the switch.

Figure 5-103 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -56 V reference ground

Heat Dissipation

The S5720-16X-PWH-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-272](#) lists technical specifications of the S5720-16X-PWH-LI-AC.

Table 5-272 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	9.3 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 320.0 mm x 263.0 mm (1.72 in. x 12.6 in. x 10.4 in.)

Item	Description
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	All electrical ports and optical ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> • Not providing the PoE function: 31.5 W • 100% PoE loads: 437.5 W (system power consumption: 77.5 W, PoE: 360 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	30.9 W
Operating temperature	0°C to 55°C (32°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature range for the switch is 0°C to 45°C (32°F to 113°F) if the switch uses optical modules.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010657

5.8.11 S5720-28X-LI-AC

Version Mapping

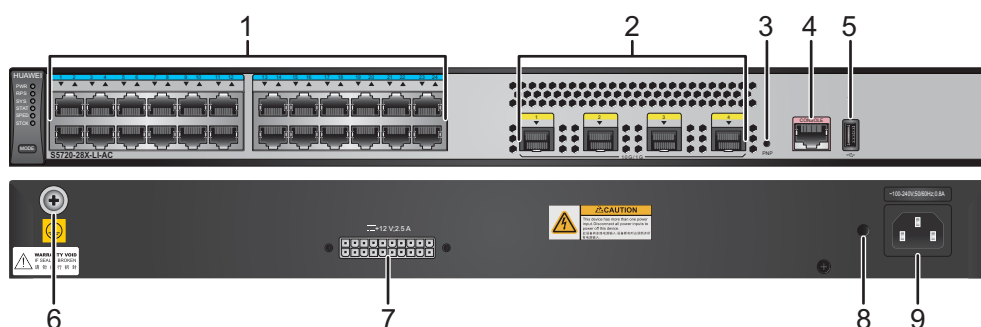
Table 5-273 lists the mapping between the S5720-28X-LI-AC chassis and software versions.

Table 5-273 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-104 S5720-28X-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances.</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-274** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-274 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 5-275** describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-275 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-276](#).

Table 5-276 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

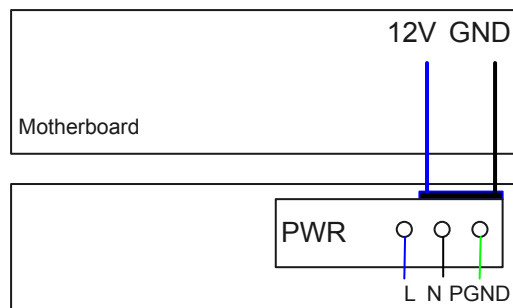
The S5720-28X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28X-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-105 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-105 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-277 lists technical specifications of the S5720-28X-LI-AC.

Table 5-277 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	29.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	21.4 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010581

5.8.12 S5720-28X-LI-DC

Version Mapping

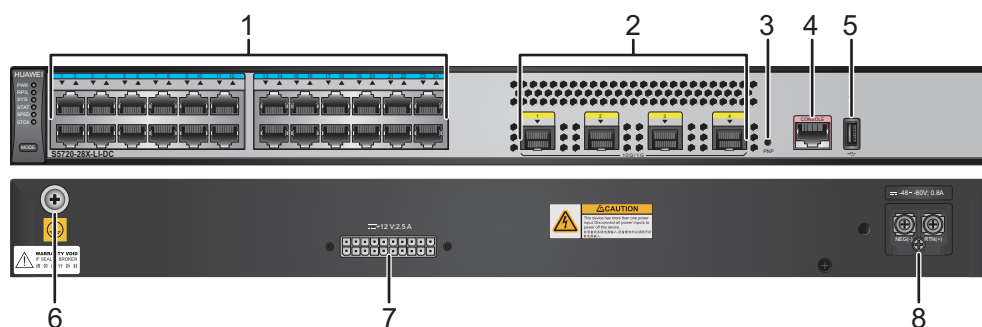
Table 5-278 lists the mapping between the S5720-28X-LI-DC chassis and software versions.

Table 5-278 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-DC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-106 S5720-28X-LI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (only 1000 Mbit/s supported)• 10GE SFP+ optical module (OSXD22N00 not supported)• 10GE-CWDM optical module• 10GE-DWDM optical module• 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables• 3 m and 10 m AOC cables• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)• H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) NOTE A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances. If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port
5	One USB port	6	Ground screw NOTE It is used with a ground cable .

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	DC power terminal NOTE It is used together with a DC Power Cable .
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-279** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-279 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 5-280** describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-280 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-281](#).

Table 5-281 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

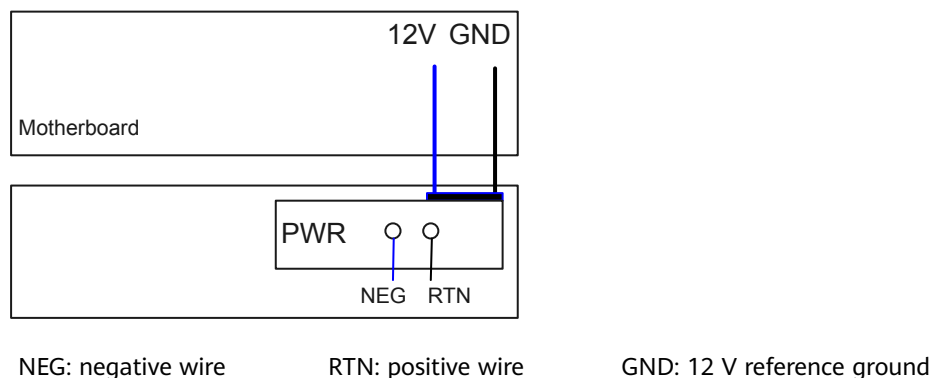
The S5720-28X-LI-DC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-28X-LI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-107](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-107 Power supply by a single DC power module



Heat Dissipation

The S5720-28X-LI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-282](#) lists technical specifications of the S5720-28X-LI-DC.

Table 5-282 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	31 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	19.8 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-3000 m (0-9483 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010582

5.8.13 S5720-28X-LI-24S-AC

Version Mapping

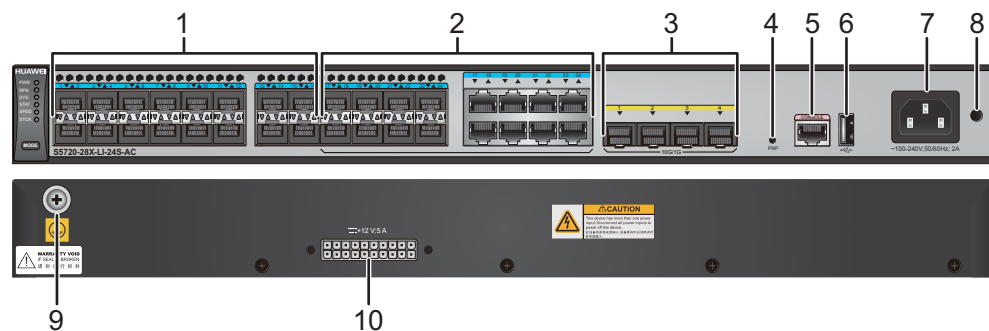
[Table 5-283](#) lists the mapping between the S5720-28X-LI-24S-AC chassis and software versions.

Table 5-283 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-24S-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-108 S5720-28X-LI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> ● FE optical module ● GE optical module ● GE-CWDM optical module ● GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) ● GE-DWDM optical module ● GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> ● FE optical module ● GE optical module ● GE-CWDM optical module ● GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) ● GE-DWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
9	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	10	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-284](#) describes the attributes of a 100/1000BASE-X port.

Table 5-284 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-285](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-285 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-286](#).

Table 5-286 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

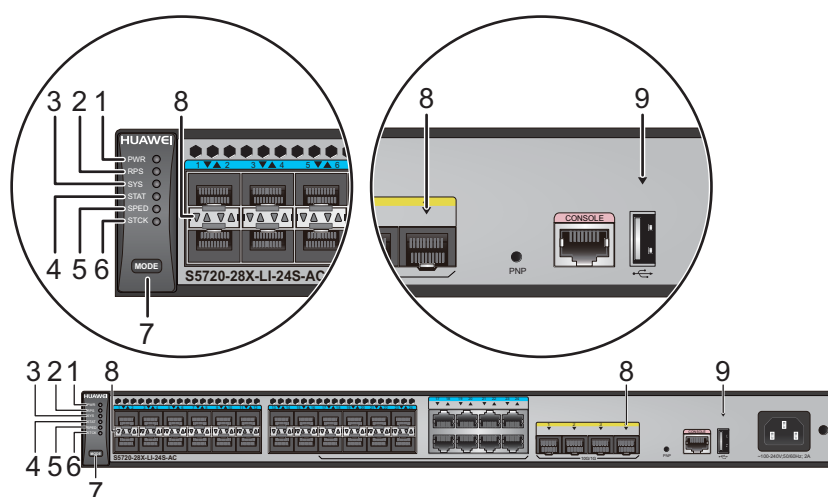
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-109 Indicators on the S5720-28X-LI-24S-AC



NOTE

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 5-287 Description of indicators on the switch

No.	Indicator/ Button	Name	Color	Status	Description
1	PWR	Power module	-	Off	The switch is powered off.

No.	Indicator/ Button	Name	Color	Status	Description
		indicator	Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator/ Button	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>

No.	Indicator/ Button	Name	Color	Status	Description
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-288 and Table 5-289 .		
9	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-288 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-289 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

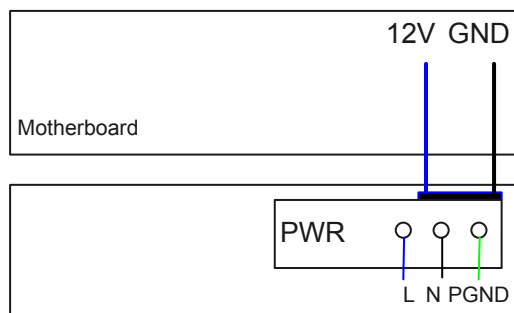
Display Mode	Color	Status	Description
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-110 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

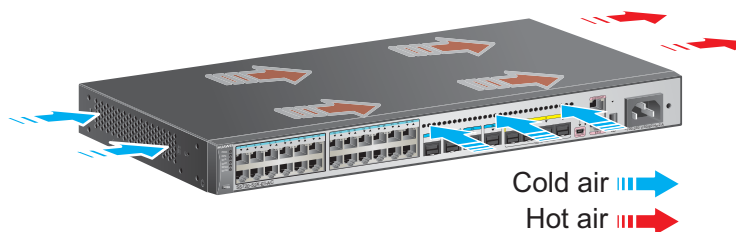
Figure 5-110 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28X-LI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-290 lists technical specifications of the S5720-28X-LI-24S-AC.

Table 5-290 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports except combo ports and 10GE SFP+ optical ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	28.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010629

5.8.14 S5720-28X-LI-24S-DC

Version Mapping

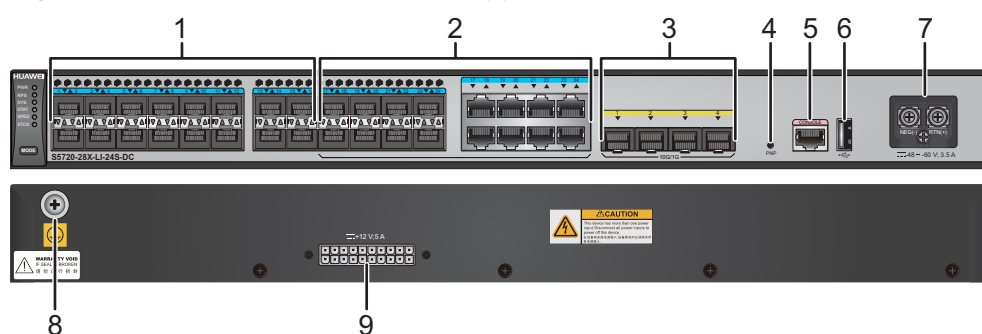
[Table 5-291](#) lists the mapping between the S5720-28X-LI-24S-DC chassis and software versions.

Table 5-291 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-LI-24S-DC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-111 S5720-28X-LI-24S-DC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module
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<p>3 Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	<p>4 One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
<p>5 One console port</p>	<p>6 One USB port</p>
<p>7 DC power terminal</p> <p>NOTE It is used together with a DC Power Cable.</p>	<p>8 Ground screw</p> <p>NOTE It is used with a ground cable.</p>
<p>9 RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	<p>- -</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-292](#) describes the attributes of a 100/1000BASE-X port.

Table 5-292 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-293](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-293 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-294](#).

Table 5-294 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

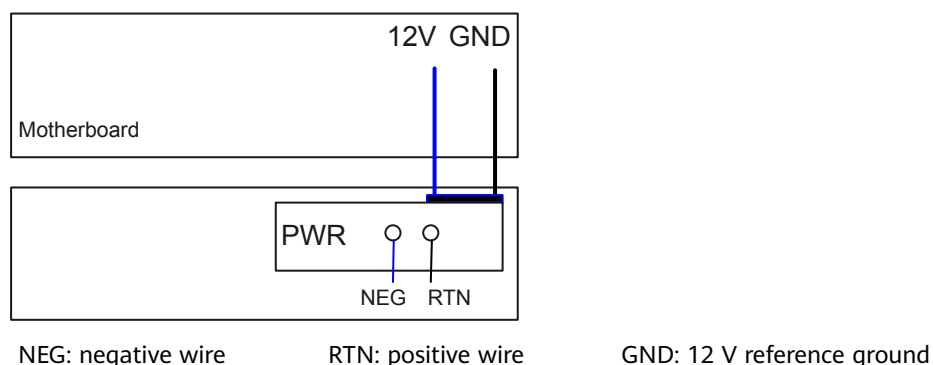
The S5720-28X-LI-24S-DC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-LI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

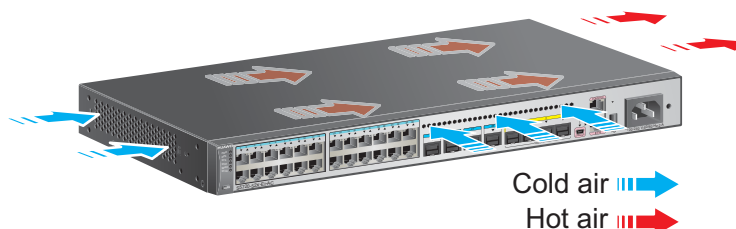
Figure 5-112 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-112 Power supply by a single DC power module



Heat Dissipation

The S5720-28X-LI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-295 lists technical specifications of the S5720-28X-LI-24S-DC.

Table 5-295 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports except combo ports and 10GE SFP+ optical ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	42.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	30.3 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010631

5.8.15 S5720-28X-PWR-LI-AC

Version Mapping

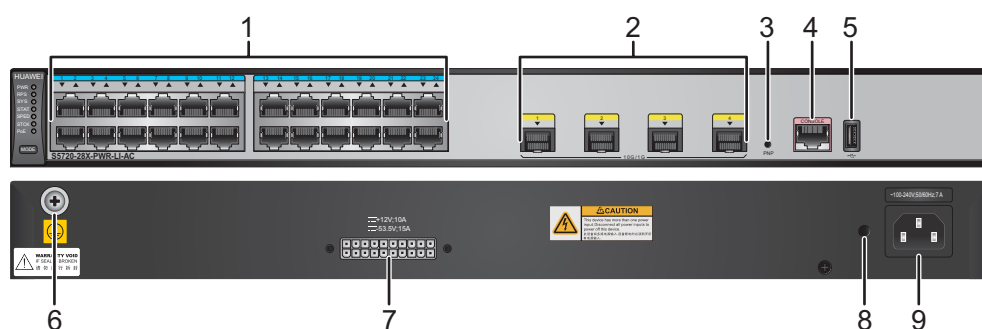
Table 5-296 lists the mapping between the S5720-28X-PWR-LI-AC chassis and software versions.

Table 5-296 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-113 S5720-28X-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port
5	One USB port	6	Ground screw NOTE It is used with a ground cable .

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-297** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-297 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 5-298** describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-298 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-299](#).

Table 5-299 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

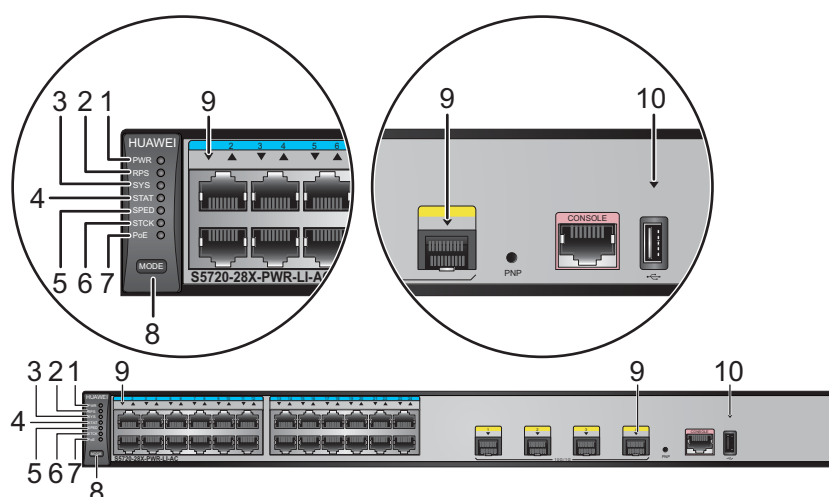
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-114 Indicators on the S5720-28X-PWR-LI-AC



NOTE

The S5720-LI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 5-300 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<ul style="list-style-type: none"> The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS). The built-in PoE power module has failed.
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>

No.	Indicator	Name	Color	Status	Description
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-301 .		
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-301 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> • The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. • The total power consumption of PDs has reached the maximum power of the switch. • The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

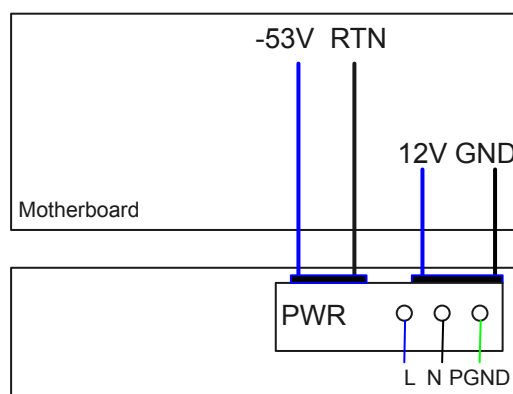
Display Mode	Color	Status	Description
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 5-115 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-115 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-28X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-302 lists technical specifications of the S5720-28X-PWR-LI-AC.

Table 5-302 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 42.7 W• 100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	29.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010593

5.8.16 S5720-28X-PWR-LI-ACF

Version Mapping

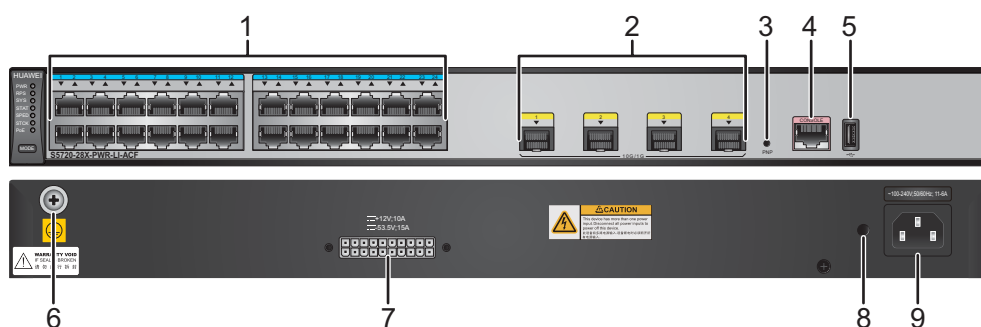
Table 5-303 lists the mapping between the S5720-28X-PWR-LI-ACF chassis and software versions.

Table 5-303 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWR-LI-ACF	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-116 S5720-28X-PWR-LI-ACF appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking) • H87MMA5671A2 GPON optical module NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port
5	One USB port	6	Ground screw NOTE It is used with a ground cable .
7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-304](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-304 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-305](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-305 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-306](#).

Table 5-306 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

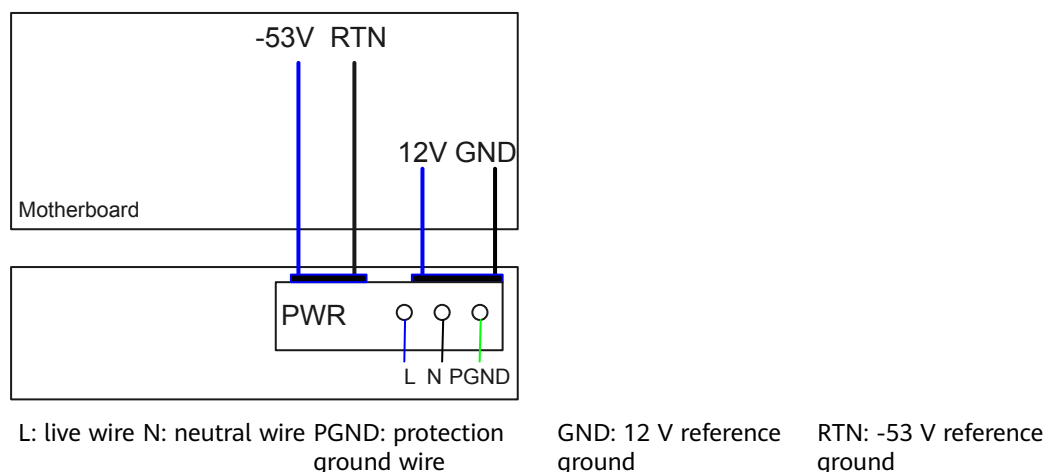
The S5720-28X-PWR-LI-ACF has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-PWR-LI-ACF has a built-in power module and does not support pluggable power modules. The built-in power module can provide 740 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

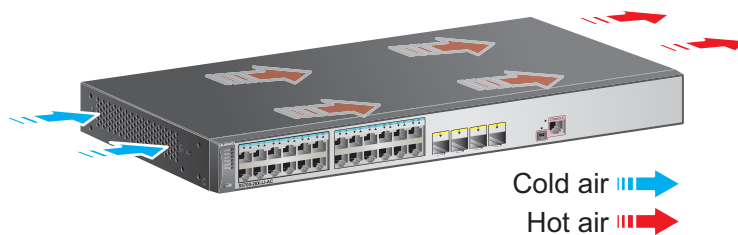
[Figure 5-117](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-117 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720-28X-PWR-LI-ACF has one built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-307 lists technical specifications of the S5720-28X-PWR-LI-ACF.

Table 5-307 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.9 kg (13.01 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 45 W 100% PoE loads: 984 W (PoE: 739.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	33 W
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010595

5.8.17 S5720-28X-PWH-LI-AC

Version Mapping

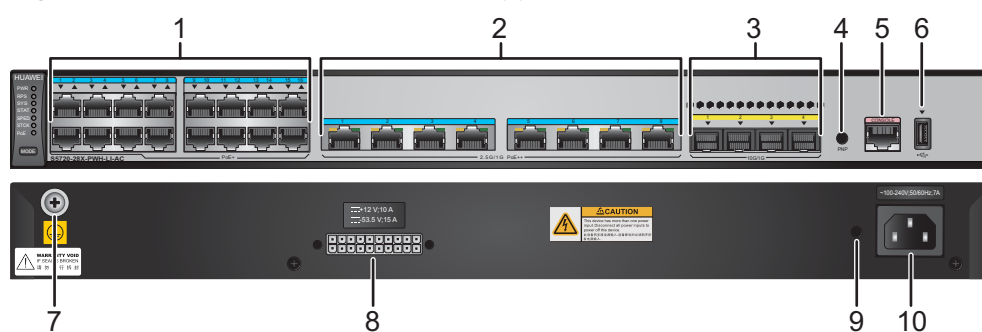
[Table 5-308](#) lists the mapping between the S5720-28X-PWH-LI-AC chassis and software versions.

Table 5-308 Version mapping

Series	Model	Software Version
S5720-LI	S5720-28X-PWH-LI-AC	V200R011C00 to V200R019C10 versions

Appearance and Structure

Figure 5-118 S5720-28X-PWH-LI-AC appearance



1	Sixteen PoE+ 10/100/1000BASE-T ports	2	Eight PoE++ 100M/1000M/2.5G BASE-T ports (MultiGE port)
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-309](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-309 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100M/1000M/2.5G BASE-T port

A 100M/1000M/2.5G BASE-T port (MultiGE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, or 2.5 Gbit/s, and must use an **Ethernet cable**. If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. [Table 5-310](#) describes the attributes of a 100M/1000M/2.5G BASE-T port.

Table 5-310 Attributes of a 100M/1000M/2.5G BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, mgbase-t
Working Mode	100/1000/2500 Mbit/s auto-sensing

A 100M/1000M/2.5G BASE-T port supports the connection with the following devices:

- All switches providing FE electrical interfaces or GE electrical interfaces
- All devices providing MultiGE interfaces defined by the NBASE-T Alliance
- All devices providing MultiGE interfaces that comply with the 802.3bz standard

[Table 5-311](#) lists the maximum transmission distances of different cables on MultiGE ports.

Table 5-311 Maximum transmission distances of different cables on MultiGE ports

Cable Type (6-a-1 Bundle)	MultiGE Port (Different Rates)	
	100M/1000M	2.5GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m
Category 5e shielded twisted pair (Cat5e STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> • AP7052DN/ AP7152DN • AP6052DN • AP8082DN/ AP8182DN • AP7052DE • AP7060DN
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m
Category 6 shielded twisted pair (Cat6 STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none"> • AP7052DN/ AP7152DN • AP6052DN • AP8082DN/ AP8182DN • AP7052DE • AP7060DN
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m

Cable Type (6-a-1 Bundle)	MultiGE Port (Different Rates)	
	100M/1000M	2.5GE
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none">• AP7052DN/ AP7152DN• AP6052DN• AP8082DN/ AP8182DN• AP7052DE• AP7060DN
Category 6A shielded twisted pair (Cat6A STP)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none">• AP7052DN/ AP7152DN• AP6052DN• AP8082DN/ AP8182DN• AP7052DE• AP7060DN
Category 7 shielded twisted pair (Cat7)	100 m	200 m Only the APs listed below are supported if the transmission distance is longer than 100 m: <ul style="list-style-type: none">• AP7052DN/ AP7152DN• AP6052DN• AP8082DN/ AP8182DN• AP7052DE• AP7060DN

NOTE

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-312](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-312 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-313](#).

Table 5-313 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-PWH-LI-AC has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

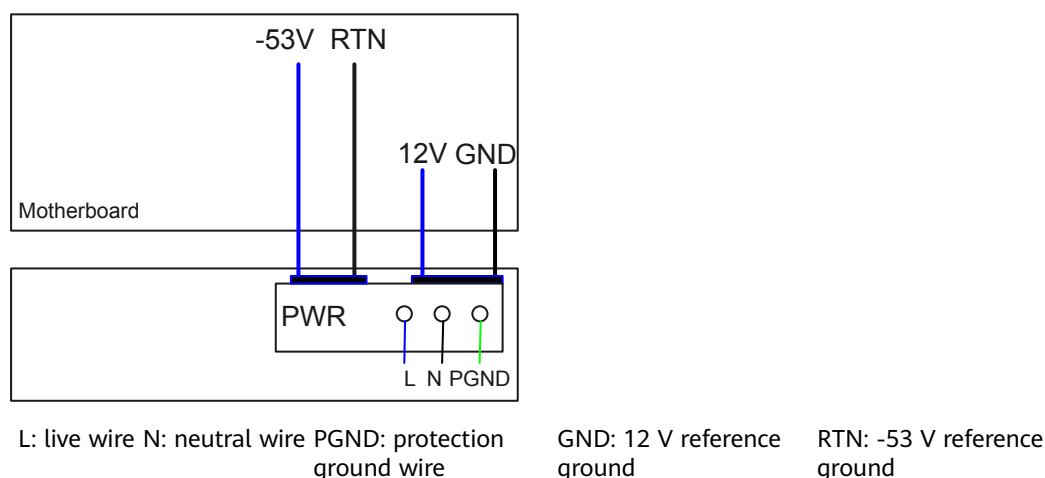
The S5720-28X-PWH-LI-AC has a built-in power module and does not support pluggable power modules. It is a PoE switch. In addition to the built-in PoE power module, the switch can also connect to an RPS1800 for power redundancy.

Table 5-314 PoE power supply capacity of the built-in power module

Available PoE Power	Maximum Number of Ports (Fully Loaded)
360 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 23 802.3at (30 W per port): 12 802.3bt (60 W per port): 6 (only PoE++ ports)

Figure 5-119 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-119 Power supply by a built-in AC PoE power module



Heat dissipation

The S5720-28X-PWH-LI-AC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-315 lists technical specifications of the S5720-28X-PWH-LI-AC.

Table 5-315 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.6 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.9 kg (13.01 lb)
Stack ports	Sixteen 10/100/1000BASE-T ports and four 10GE SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> • Not providing the PoE function: 67.3 W • 100% PoE loads: 473 W (system power consumption: 113 W, PoE: 360 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	51.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 55.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010659

5.8.18 S5720-52X-LI-AC

Version Mapping

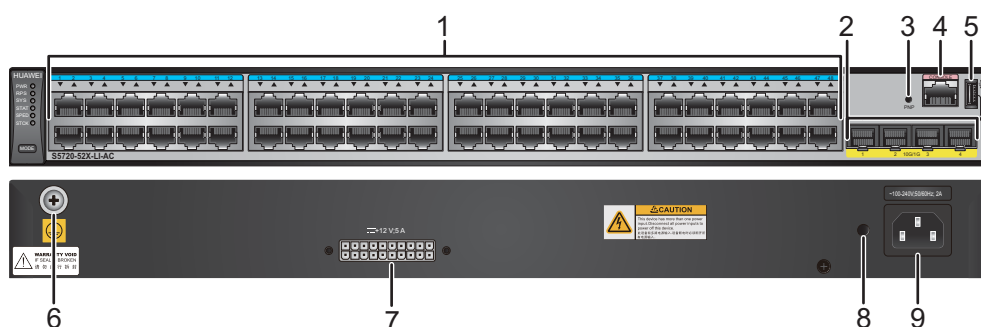
Table 5-316 lists the mapping between the S5720-52X-LI-AC chassis and software versions.

Table 5-316 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-120 S5720-52X-LI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	One console port
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-317** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-317 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 5-318** describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-318 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-319](#).

Table 5-319 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

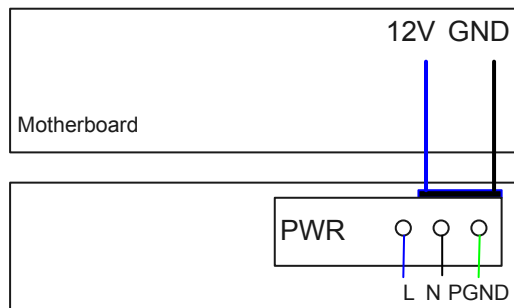
The S5720-52X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52X-LI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-LI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-121 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-121 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-320 lists technical specifications of the S5720-52X-LI-AC.

Table 5-320 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	31.6 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010606

5.8.19 S5720-52X-LI-DC

Version Mapping

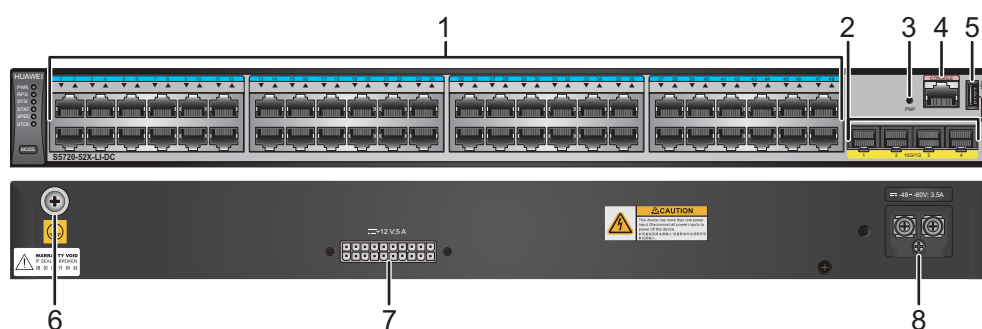
Table 5-321 lists the mapping between the S5720-52X-LI-DC chassis and software versions.

Table 5-321 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-DC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-122 S5720-52X-LI-DC appearance



1	<p>Forty-eight 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	DC power terminal NOTE It is used together with a DC Power Cable .
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-322](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-322 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-323](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-323 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-324](#).

Table 5-324 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

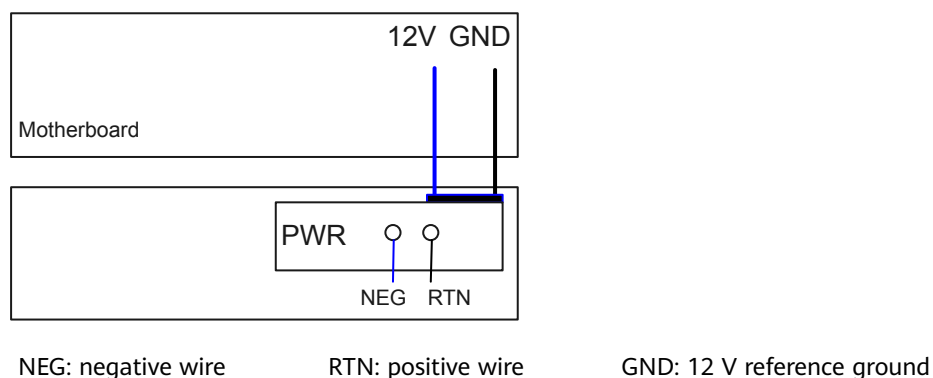
The S5720-52X-LI-DC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720-52X-LI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-LI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

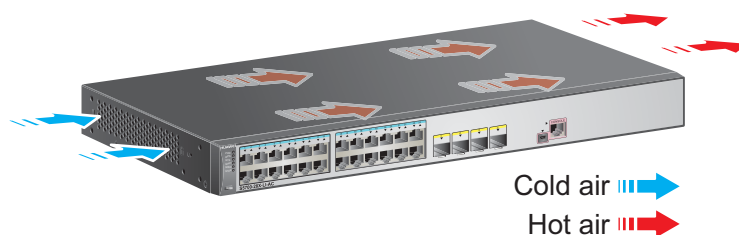
[Figure 5-123](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-123 Power supply by a single DC power module



Heat Dissipation

The S5720-52X-LI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-325](#) lists technical specifications of the S5720-52X-LI-DC.

Table 5-325 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	51.6 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	33.1 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010607

5.8.20 S5720-52X-PWR-LI-AC

Version Mapping

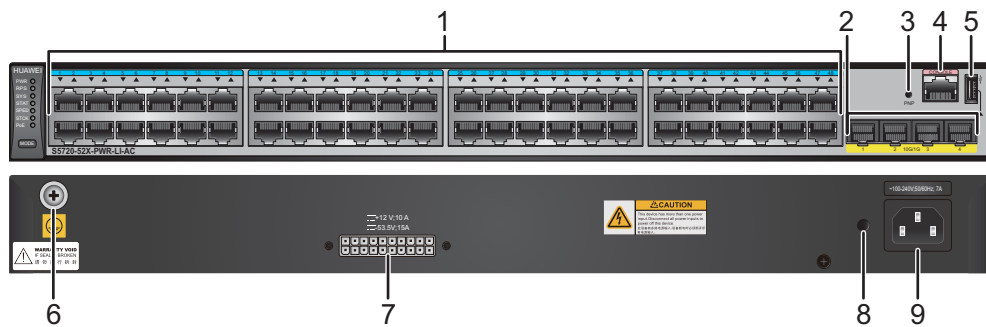
[Table 5-326](#) lists the mapping between the S5720-52X-PWR-LI-AC chassis and software versions.

Table 5-326 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-124 S5720-52X-PWR-LI-AC appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-327](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-327 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-328](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-328 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-329](#).

Table 5-329 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

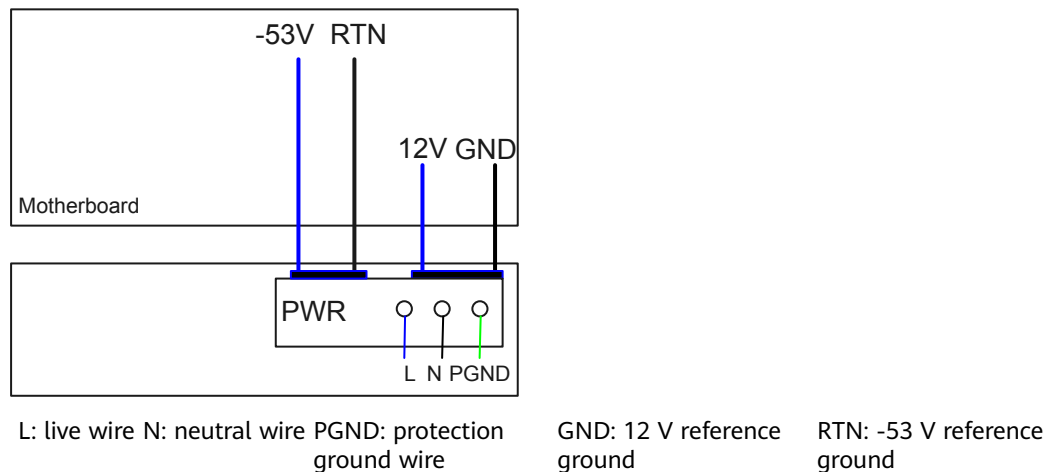
The S5720-52X-PWR-LI-AC has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

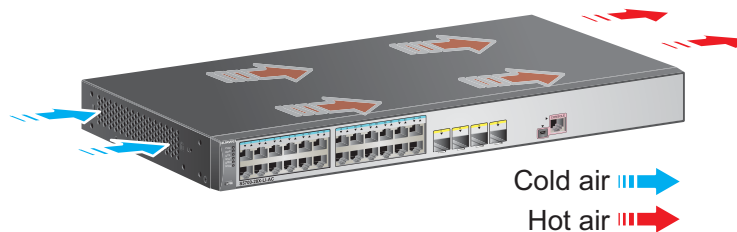
[Figure 5-125](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-125 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720-52X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-330 lists technical specifications of the S5720-52X-PWR-LI-AC.

Table 5-330 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 63.5 W• 100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	42.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010619

5.8.21 S5720-52X-PWR-LI-ACF

Version Mapping

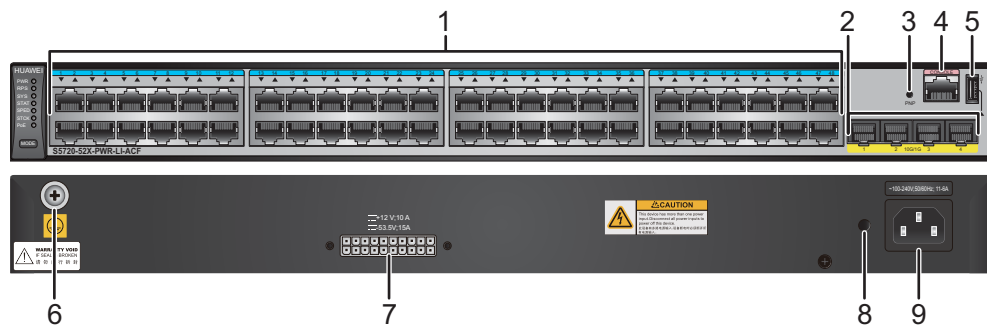
Table 5-331 lists the mapping between the S5720-52X-PWR-LI-ACF chassis and software versions.

Table 5-331 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-PWR-LI-ACF	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-126 S5720-52X-PWR-LI-ACF appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>One USB port</p>	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-332** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-332 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 5-333** describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-333 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-334](#).

Table 5-334 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

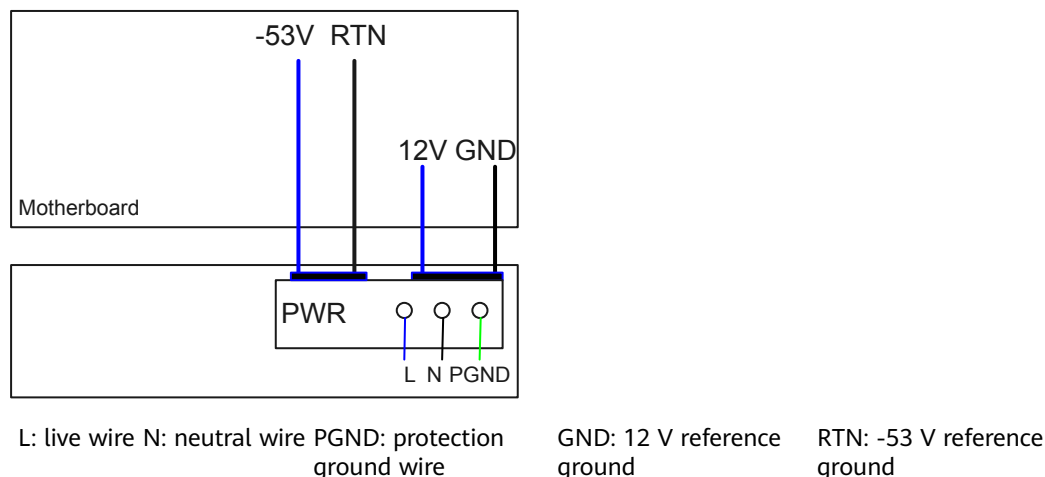
The S5720-52X-PWR-LI-ACF has the same types of indicators as the S5720-28X-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-PWR-LI-ACF has a built-in power module and does not support pluggable power modules. The built-in power module can provide 740 W PoE power, which ensures full PoE power on 48 ports in compliance with 802.3af or on 24 ports in compliance with 802.3at. The switch can connect to an RPS1800 power supply. The RPS1800 only provides system power redundancy and does not increase the PoE capacity of the switch.

Figure 5-127 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-127 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720-52X-PWR-LI-ACF have two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-335 lists technical specifications of the S5720-52X-PWR-LI-ACF.

Table 5-335 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	6.6 kg (14.55 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 52.1 W • 100% PoE loads: 977 W (system power consumption: 237.8 W, PoE: 739.2 W)
Typical power consumption (30% of traffic load)	<p>42.9 W</p> <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010621

5.8.22 S5720-52X-LI-48S-AC

Version Mapping

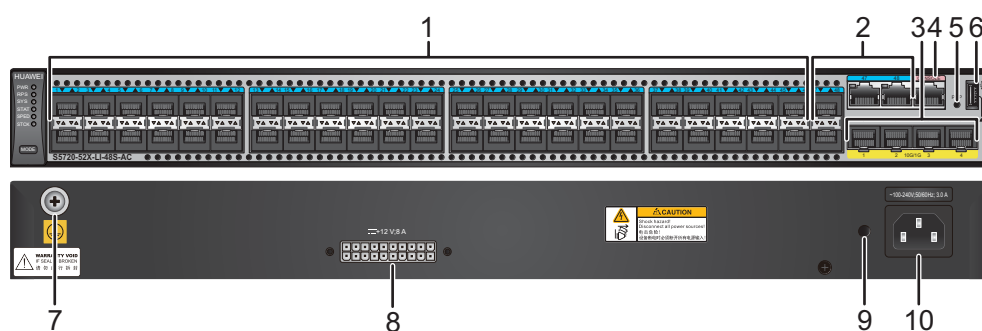
Table 5-336 lists the mapping between the S5720-52X-LI-48S-AC chassis and software versions.

Table 5-336 Version mapping

Series	Model	Software Version
S5720-LI	S5720-52X-LI-48S-AC	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-128 S5720-52X-LI-48S-AC appearance



1	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (for OADM scenarios only) • GE-DWDM optical module • GE copper module (10M/100M/1000M auto-sensing) 	2	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario)
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ stack cables (only applicable to zero-configuration stacking) • H87MMA5671A2 GPON optical module <p>NOTE If one port uses a GPON optical module, other ports cannot be used.</p>	4	One console port
5	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-337](#) describes the attributes of a 100/1000BASE-X port.

Table 5-337 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-338](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-338 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-339](#).

Table 5-339 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

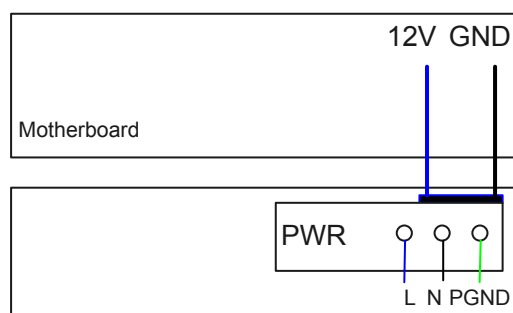
The S5720-52X-LI-48S-AC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-LI-48S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-129 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

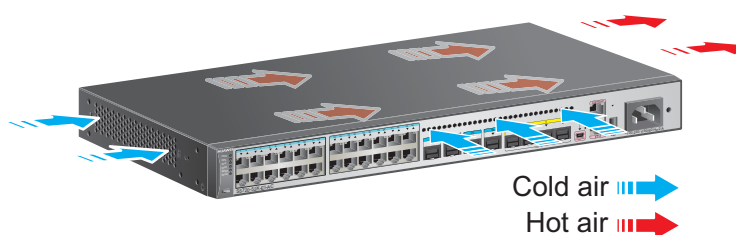
Figure 5-129 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52X-LI-48S-AC has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-340 lists technical specifications of the S5720-52X-LI-48S-AC.

Table 5-340 Technical specifications

Item	Description
Memory (RAM)	512 MB

Item	Description
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	34.91 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5.25 kg (11.57 lb)
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	83 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	68 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010813

5.9 S5720S-LI

5.9.1 S5720S-12TP-LI-AC

Version Mapping

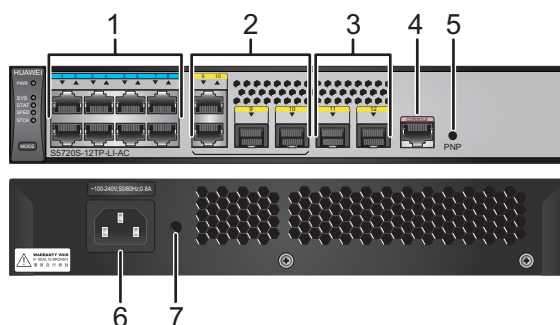
Table 5-341 lists the mapping between the S5720S-12TP-LI-AC chassis and software versions.

Table 5-341 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-12TP-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-130 S5720S-12TP-LI-AC appearance



1	Eight 10/100/1000BASE-T ports	2	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module (the maximum transmission distance cannot exceed 40 km)
3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module (the maximum transmission distance cannot exceed 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only applicable to stack ports) • 1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	One console port

5	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	6	AC socket NOTE It is used with an AC power cable .
7	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-342](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-342 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-343](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-343 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-344](#).

Table 5-344 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

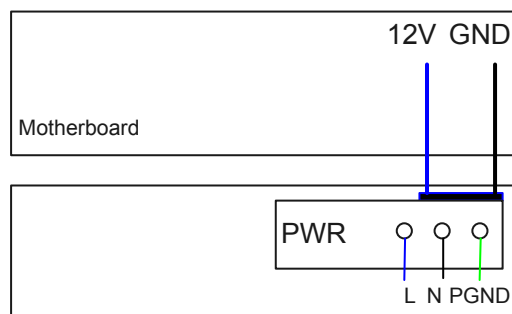
The S5720S-12TP-LI-AC has the same types of indicators as the S5720-12TP-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-12TP-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-131](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-131 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-12TP-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-345](#) lists technical specifications of the S5720S-12TP-LI-AC.

Table 5-345 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.8 in. x 7.1 in.)
Weight (with packaging)	1.8 kg (3.97 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	12.85 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	10.39 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010568

5.9.2 S5720S-12TP-PWR-LI-AC

Version Mapping

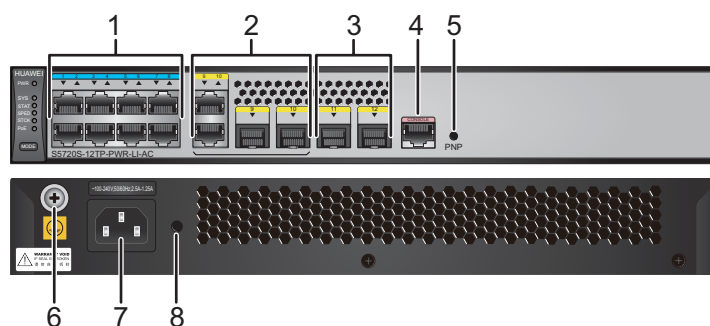
[Table 5-346](#) lists the mapping between the S5720S-12TP-PWR-LI-AC chassis and software versions.

Table 5-346 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-12TP-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-132 S5720S-12TP-PWR-LI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Two combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module (the maximum transmission distance cannot exceed 40 km)
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3	<p>Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module (the maximum transmission distance cannot exceed 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only applicable to stack ports) • 1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	One console port
5	<p>One PNP button</p> <p>NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-347](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-347 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission

speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-348](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-348 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-349](#).

Table 5-349 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

The S5720S-12TP-PWR-LI-AC has the same types of indicators as the S5720-12TP-PWR-LI-AC. For details, see [Indicator Description](#).

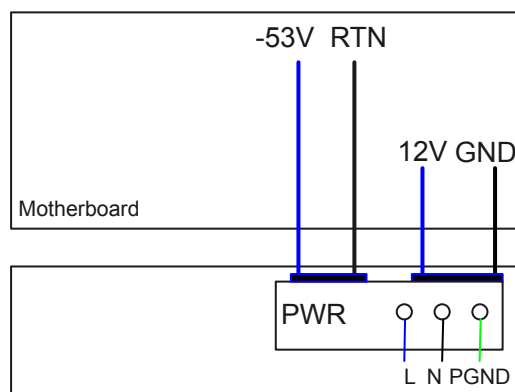
Power Supply Configuration

The S5720S-12TP-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

[Figure 5-133](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and

provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-133 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720S-12TP-PWR-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-350 lists technical specifications of the S5720S-12TP-PWR-LI-AC.

Table 5-350 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	23.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode

Item	Description
Dimensions (H x W x D)	43.6 mm x 320.0 mm x 220.0 mm (1.72 in. x 12.6 in. x 8.7 in.)
Weight (with packaging)	3 kg (6.62 lb)
Stack ports	Eight 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> • Not providing the PoE function: 15.61 W • 100% PoE loads: 160.5 W (system power consumption: 37.3 W, PoE: 123.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	14.57 W
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010571

5.9.3 S5720S-28TP-PWR-LI-ACL

Version Mapping

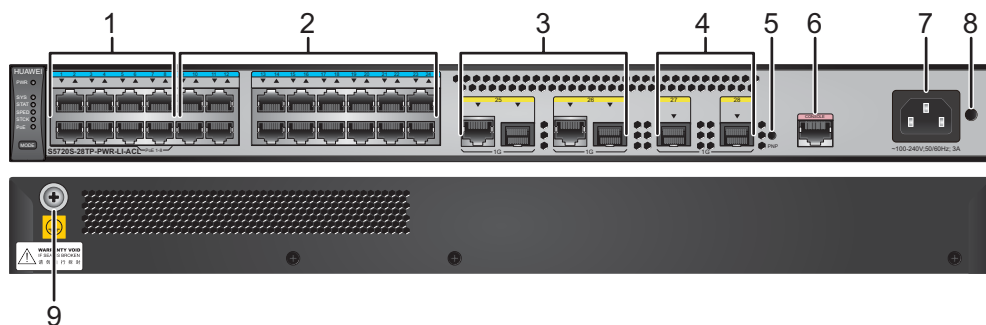
Table 5-351 lists the mapping between the S5720S-28TP-PWR-LI-ACL chassis and software versions.

Table 5-351 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28TP-PWR-LI-ACL	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-134 S5720S-28TP-PWR-LI-ACL appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Sixteen 10/100/1000BASE-T ports
---	------------------------------------	---	---------------------------------

3	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module (the maximum transmission distance cannot exceed 40 km) 	<p>4 Two 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module (the maximum transmission distance cannot exceed 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only applicable to stack ports) • 1 m, 3 m, 5 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
5	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>6 One console port</p>
7	<p>AC socket</p> <p>NOTE</p> <p>It is used with an AC power cable.</p>	<p>8 Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

9	Ground screw	-	-
	NOTE It is used with a ground cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-352](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-352 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-353](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-353 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-354](#).

Table 5-354 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

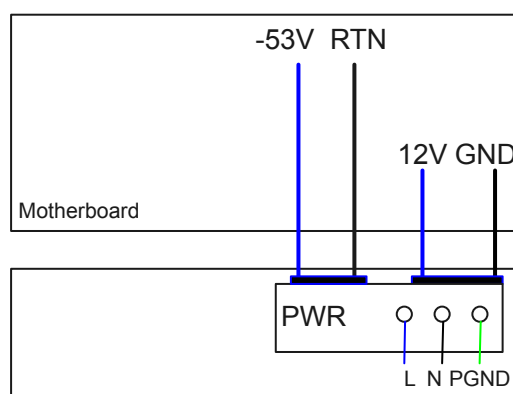
The S5720S-28TP-PWR-LI-ACL has the same types of indicators as the S5720-28TP-PWR-LI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28TP-PWR-LI-ACL has a built-in power module and does not support pluggable power modules. The built-in power module can provide 124 W PoE power, which ensures full PoE power on 8 ports in compliance with 802.3af or on 4 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

[Figure 5-135](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-135 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720S-28TP-PWR-LI-ACL has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-355 lists technical specifications of the S5720S-28TP-PWR-LI-ACL.

Table 5-355 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and two 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">Not providing the PoE function: 24.4 W100% PoE loads: 165.6 W (system power consumption: 42.4 W, PoE: 123.2 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	19.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km transmission distance.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010635

5.9.4 S5720S-28P-LI-AC

Version Mapping

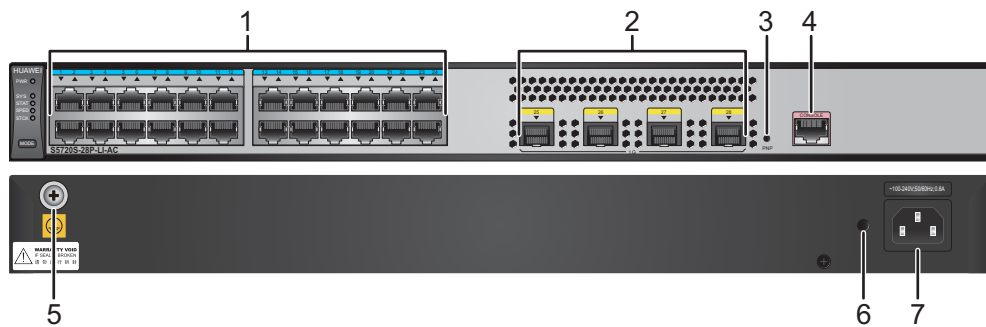
Table 5-356 lists the mapping between the S5720S-28P-LI-AC chassis and software versions.

Table 5-356 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28P-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-136 S5720S-28P-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket NOTE It is used with an AC power cable .	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-357](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-357 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-358](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-358 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-359](#).

Table 5-359 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

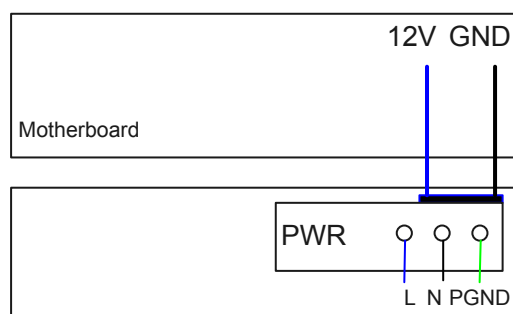
The S5720S-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-28P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28P-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-137](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-137 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-360 lists technical specifications of the S5720S-28P-LI-AC.

Table 5-360 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	20.2 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	16.1 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010578

5.9.5 S5720SV2-28P-LI-AC

Version Mapping

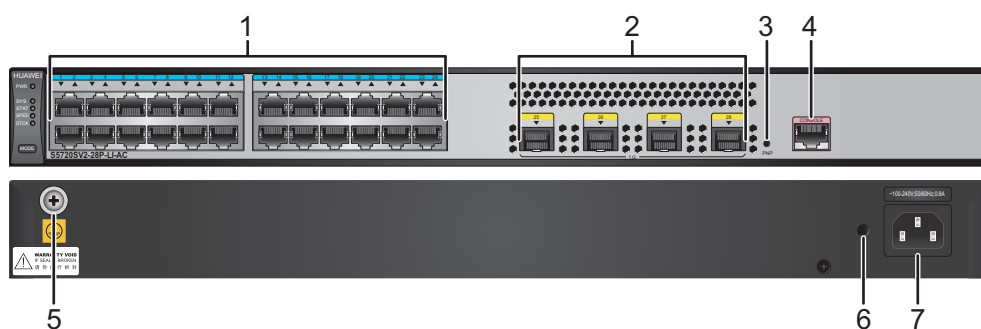
Table 5-361 lists the mapping between the S5720SV2-28P-LI-AC chassis and software versions.

Table 5-361 Version mapping

Series	Model	Software Version
S5720S-LI	S5720SV2-28P-LI-AC	V200R012C20 to V200R019C10 versions

Appearance and Structure

Figure 5-138 S5720SV2-28P-LI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking) • H87MMA5671A2 GPON optical module NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.
3	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
7	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-362](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-362 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-363](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-363 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-364](#).

Table 5-364 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

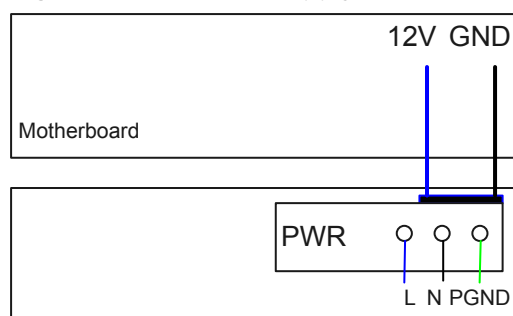
Indicator Description

The S5720SV2-28P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720SV2-28P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720SV2-28P-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-139](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-139 Power supply mode of a built-in AC power module

L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720SV2-28P-LI-AC has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-365](#) lists technical specifications of the S5720SV2-28P-LI-AC.

Table 5-365 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	20.2 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	16.1 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010852

5.9.6 S5720S-28P-PWR-LI-AC

Version Mapping

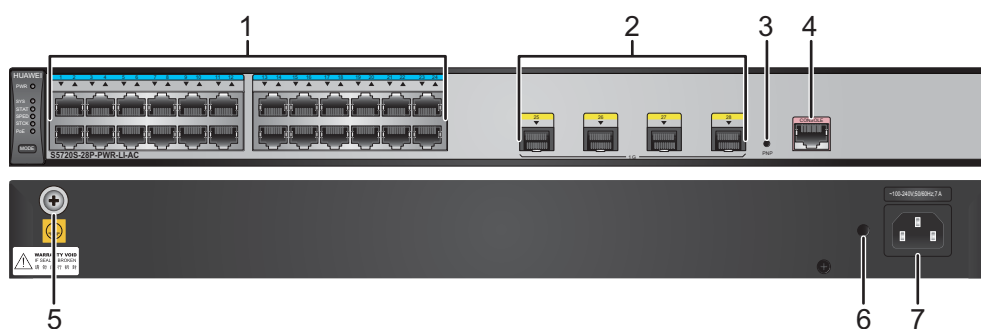
Table 5-366 lists the mapping between the S5720S-28P-PWR-LI-AC chassis and software versions.

Table 5-366 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28P-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-140 S5720S-28P-PWR-LI-AC appearance



1	<p>Twenty-four PoE + 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket NOTE It is used with an AC power cable .	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-367](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-367 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-368](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-368 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-369](#).

Table 5-369 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

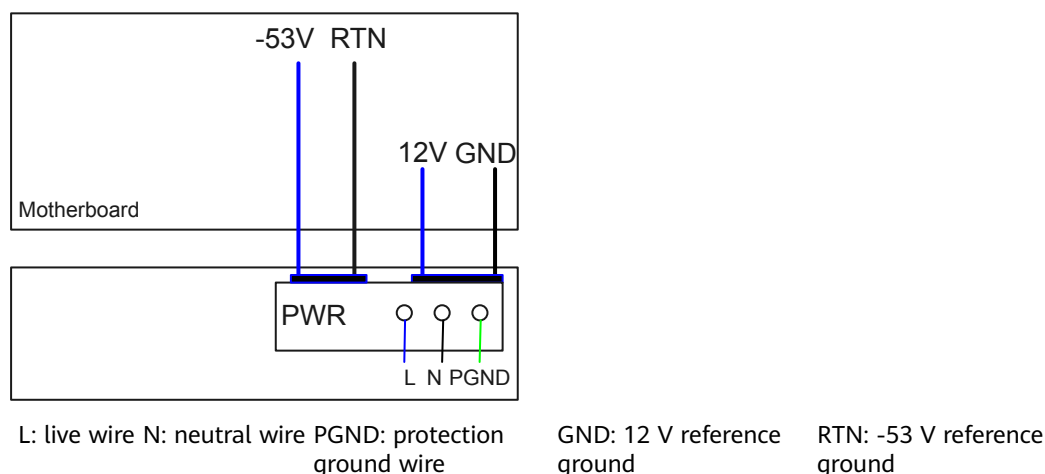
The S5720S-28P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-28P-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

[Figure 5-141](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-141 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720S-28P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-370 lists technical specifications of the S5720S-28P-PWR-LI-AC.

Table 5-370 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 40.4 W • 100% PoE loads: 446.7 W (system power consumption: 77.1 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	26 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010589

5.9.7 S5720S-52P-LI-AC

Version Mapping

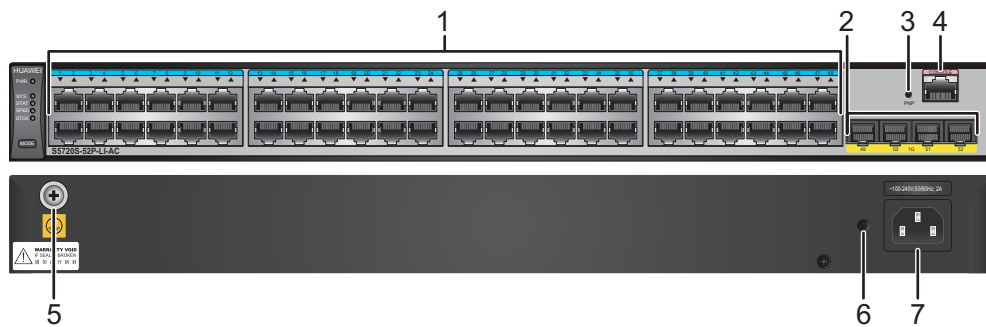
[Table 5-371](#) lists the mapping between the S5720S-52P-LI-AC chassis and software versions.

Table 5-371 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52P-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-142 S5720S-52P-LI-AC appearance



1	<p>Forty-eight 10/100/1000BASE-T ports</p>	<p>2</p> <p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>4</p> <p>One console port</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	<p>6</p> <p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-372** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-372 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. **Table 5-373** describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-373 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-374](#).

Table 5-374 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

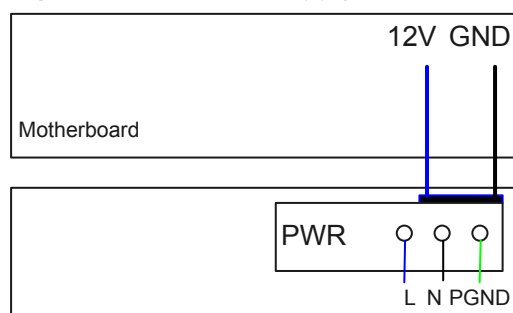
The S5720S-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-52P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52P-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-143](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-143 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-375 lists technical specifications of the S5720S-52P-LI-AC.

Table 5-375 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	47.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	29.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010601

5.9.8 S5720SV2-52P-LI-AC

Version Mapping

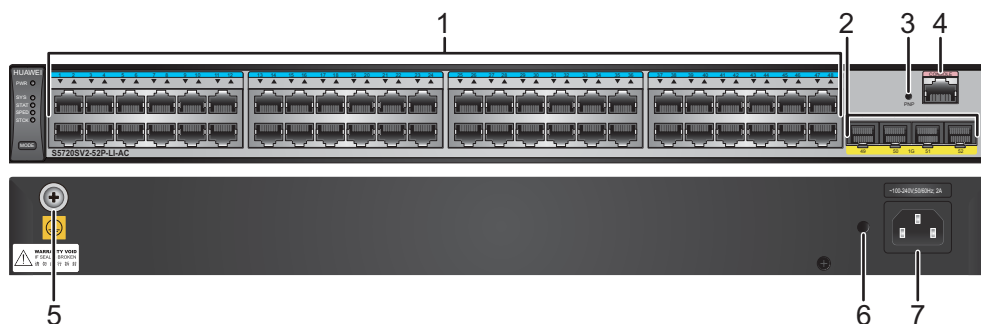
Table 5-376 lists the mapping between the S5720SV2-52P-LI-AC chassis and software versions.

Table 5-376 Version mapping

Series	Model	Software Version
S5720S-LI	S5720SV2-52P-LI-AC	V200R012C20 to V200R019C10 versions

Appearance and Structure

Figure 5-144 S5720SV2-52P-LI-AC appearance



1	<p>Forty-eight 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking) • H87MMA5671A2 GPON optical module <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>
7	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-377](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-377 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-378](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-378 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-379](#).

Table 5-379 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

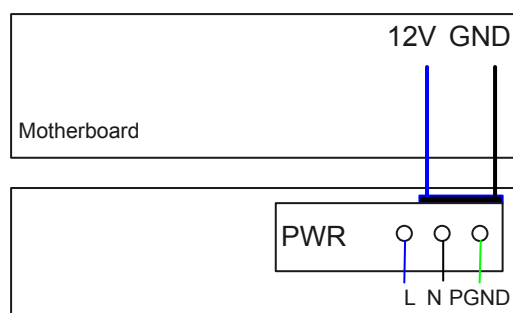
Indicator Description

The S5720SV2-52P-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720SV2-52P-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720SV2-52P-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-145](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-145 Power supply mode of a built-in AC power module

L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720SV2-52P-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-380 lists technical specifications of the S5720SV2-52P-LI-AC.

Table 5-380 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	47.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	29.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010853

5.9.9 S5720S-52P-PWR-LI-AC

Version Mapping

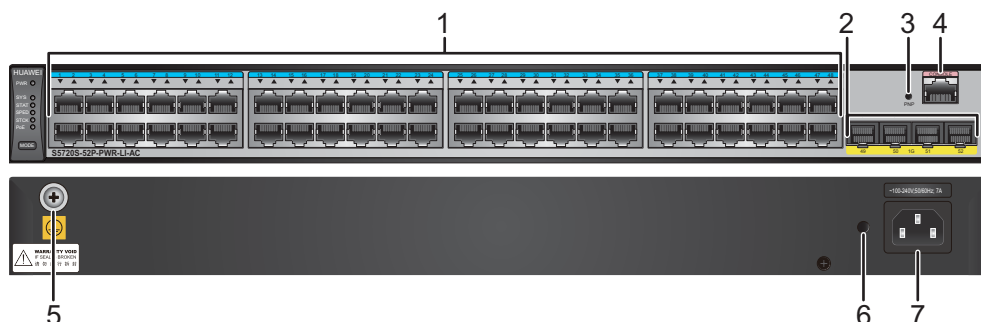
Table 5-381 lists the mapping between the S5720S-52P-PWR-LI-AC chassis and software versions.

Table 5-381 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52P-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-146 S5720S-52P-PWR-LI-AC appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • Stack optical module (only used for stack connection) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only used for stack connection) • 3 m and 10 m AOC cables (only used for stack connection) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket NOTE It is used with an AC power cable .	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-382](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-382 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-383](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-383 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-384](#).

Table 5-384 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

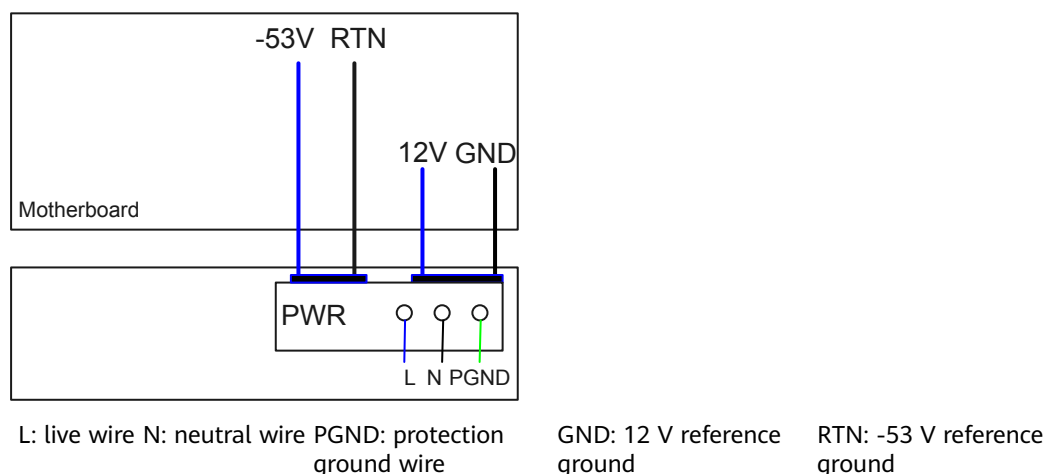
The S5720S-52P-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-52P-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52P-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

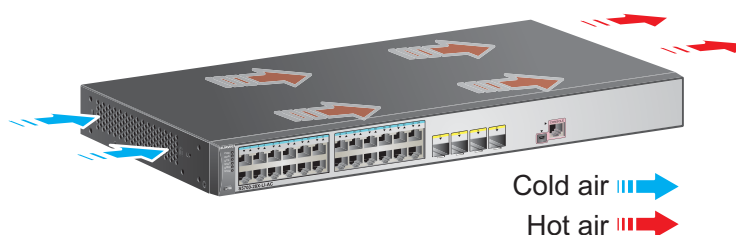
[Figure 5-147](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-147 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720S-52P-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-385](#) lists technical specifications of the S5720S-52P-PWR-LI-AC.

Table 5-385 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 1000BASE-X ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 61.7 W• 100% PoE loads: 461.8 W (system power consumption: 92.2 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	42 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010613

5.9.10 S5720S-28X-LI-AC

Version Mapping

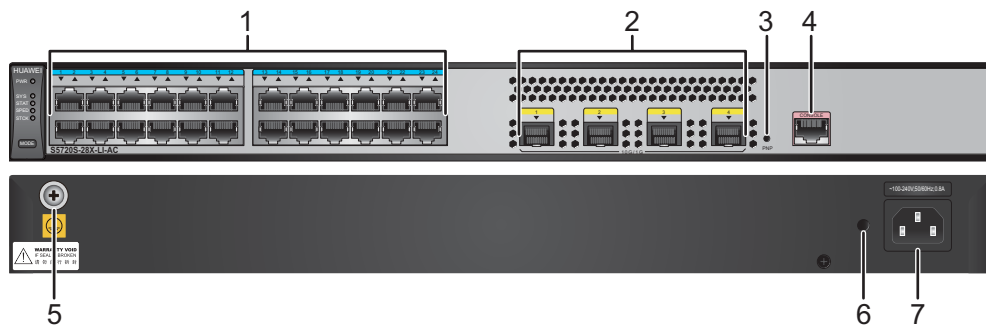
[Table 5-386](#) lists the mapping between the S5720S-28X-LI-AC chassis and software versions.

Table 5-386 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-148 S5720S-28X-LI-AC appearance



1	<p>Twenty-four 10/100/1000BASE-T ports</p>	<p>2</p> <p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>A switch can use a maximum of two 10GE optical modules with 40 km or longer transmission distances.</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	<p>4</p> <p>One console port</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	<p>6</p> <p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket NOTE It is used with an AC power cable .	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-387](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-387 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-388](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-388 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-389](#).

Table 5-389 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

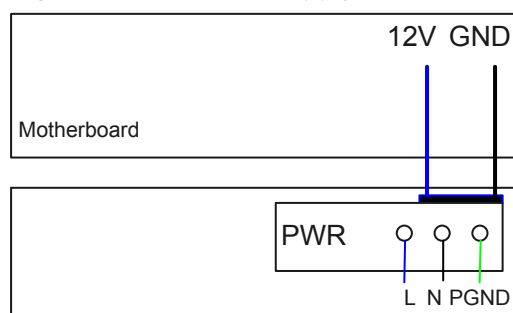
The S5720S-28X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-28X-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-149](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-149 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-28X-LI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-390 lists technical specifications of the S5720S-28X-LI-AC.

Table 5-390 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	3.9 kg (8.6 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	29.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	21.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010585

5.9.11 S5720S-28X-LI-24S-AC

Version Mapping

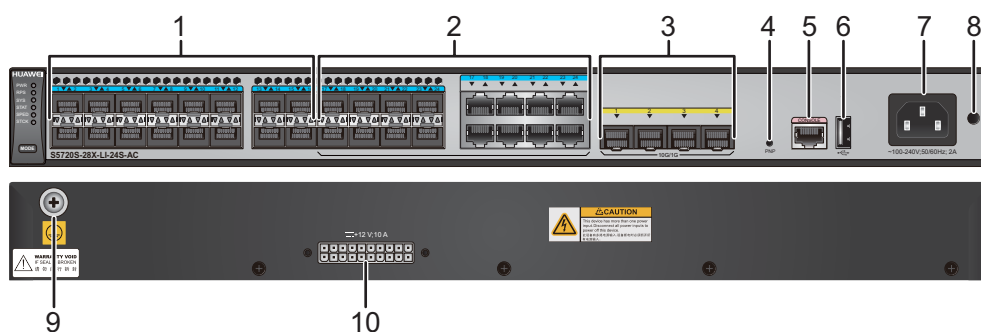
Table 5-391 lists the mapping between the S5720S-28X-LI-24S-AC chassis and software versions.

Table 5-391 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-LI-24S-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-150 S5720S-28X-LI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port

7	AC socket NOTE It is used with an AC power cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	Ground screw NOTE It is used with a ground cable .	10	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-392](#) describes the attributes of a 100/1000BASE-X port.

Table 5-392 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-393](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-393 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-394](#).

Table 5-394 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

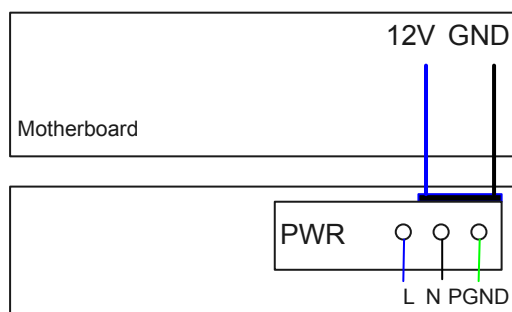
The S5720S-28X-LI-24S-AC has the same types of indicators as the S5720-28X-LI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-LI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-151 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

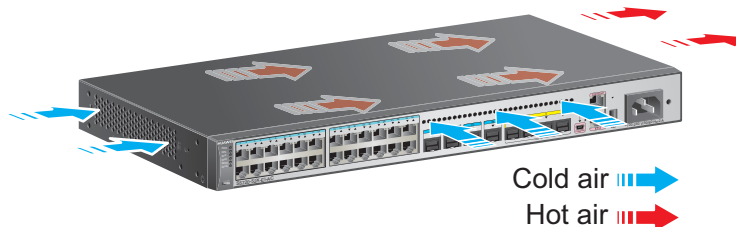
Figure 5-151 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-28X-LI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-395](#) lists technical specifications of the S5720S-28X-LI-24S-AC.

Table 5-395 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports except combo ports and 10GE SFP+ optical ports
RTC	Not supported
RPS	Supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	28.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010630

5.9.12 S5720S-28X-PWR-LI-AC

Version Mapping

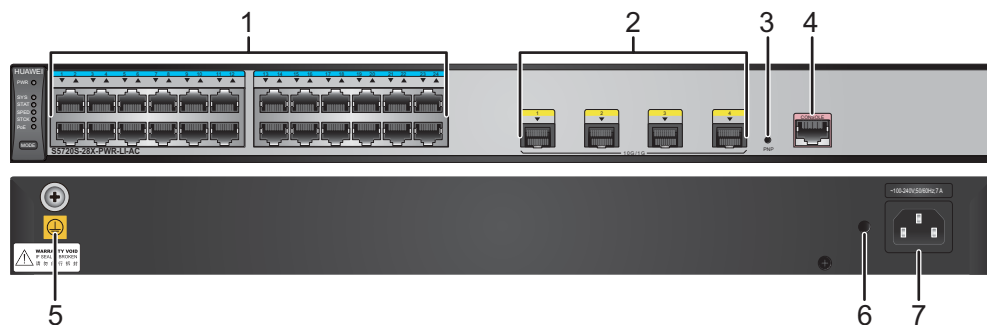
Table 5-396 lists the mapping between the S5720S-28X-PWR-LI-AC chassis and software versions.

Table 5-396 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-28X-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-152 S5720S-28X-PWR-LI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port
5	Ground screw NOTE It is used with a ground cable .	6	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

7	AC socket NOTE It is used with an AC power cable .	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-397](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-397 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-398](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-398 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-399](#).

Table 5-399 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

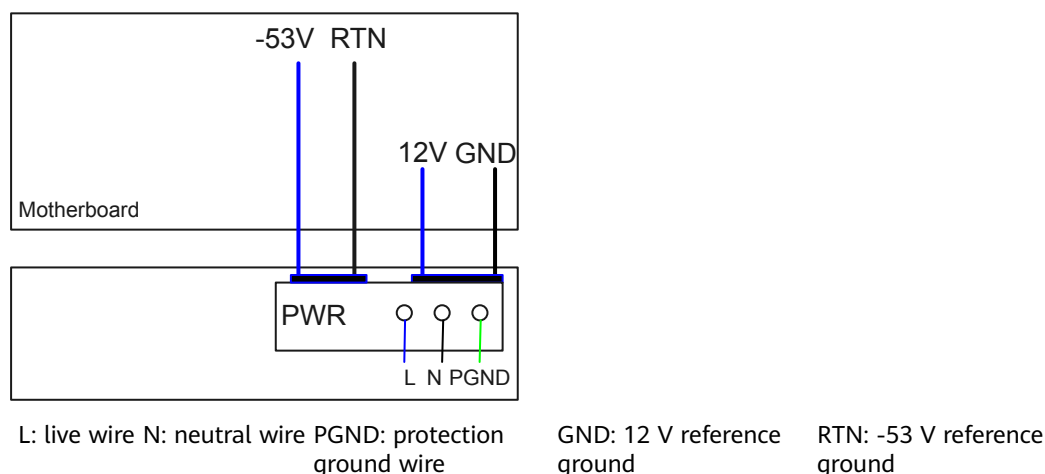
The S5720S-28X-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-28X-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

[Figure 5-153](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-153 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720S-28X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-400 lists technical specifications of the S5720S-28X-PWR-LI-AC.

Table 5-400 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.2 kg (11.45 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 42.7 W • 100% PoE loads: 448.5 W (system power consumption: 78.9 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	29.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010597

5.9.13 S5720S-52X-LI-AC

Version Mapping

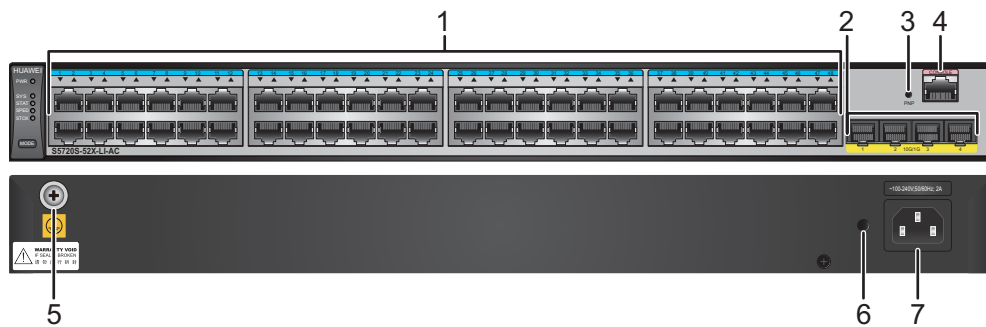
[Table 5-401](#) lists the mapping between the S5720S-52X-LI-AC chassis and software versions.

Table 5-401 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52X-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-154 S5720S-52X-LI-AC appearance



1	<p>Forty-eight 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket NOTE It is used with an AC power cable .	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-402](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-402 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-403](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-403 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-404](#).

Table 5-404 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

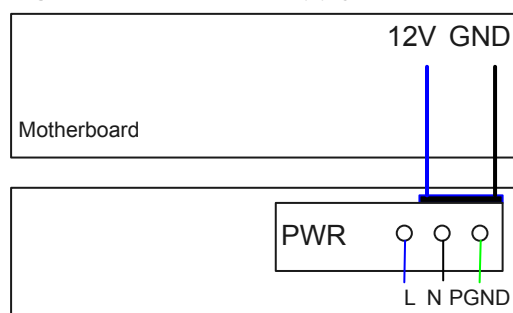
The S5720S-52X-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC except that the S5720S-52X-LI-AC does not have an RPS, USB, or PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52X-LI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-155](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

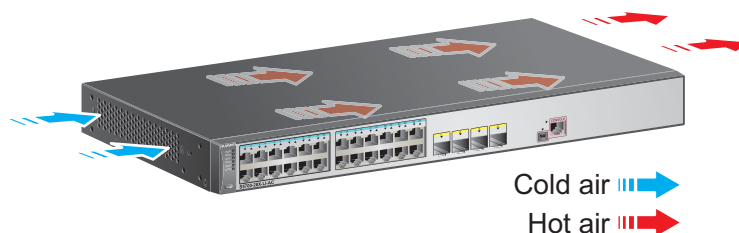
Figure 5-155 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-52X-LI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.

**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-405 lists technical specifications of the S5720S-52X-LI-AC.

Table 5-405 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.4 kg (9.7 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	31.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 44.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010604

5.9.14 S5720S-52X-PWR-LI-AC

Version Mapping

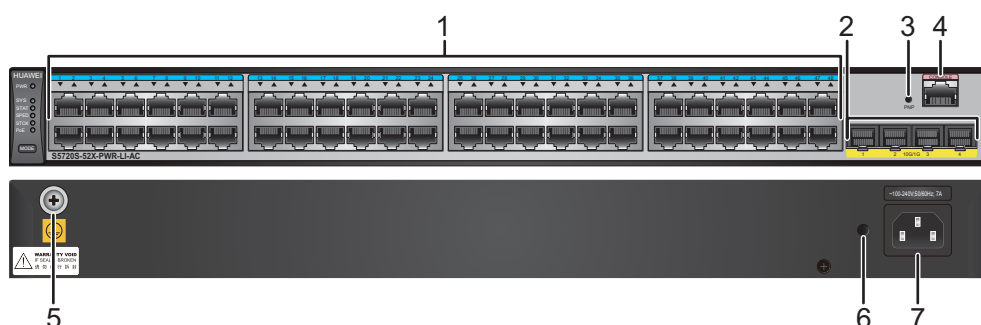
Table 5-406 lists the mapping between the S5720S-52X-PWR-LI-AC chassis and software versions.

Table 5-406 Version mapping

Series	Model	Software Version
S5720S-LI	S5720S-52X-PWR-LI-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-156 S5720S-52X-PWR-LI-AC appearance



1	<p>Forty-eight PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	4	<p>One console port</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	6	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>

7	AC socket NOTE It is used with an AC power cable .	-	-
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-407](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-407 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-408](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-408 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-409](#).

Table 5-409 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Indicator Description

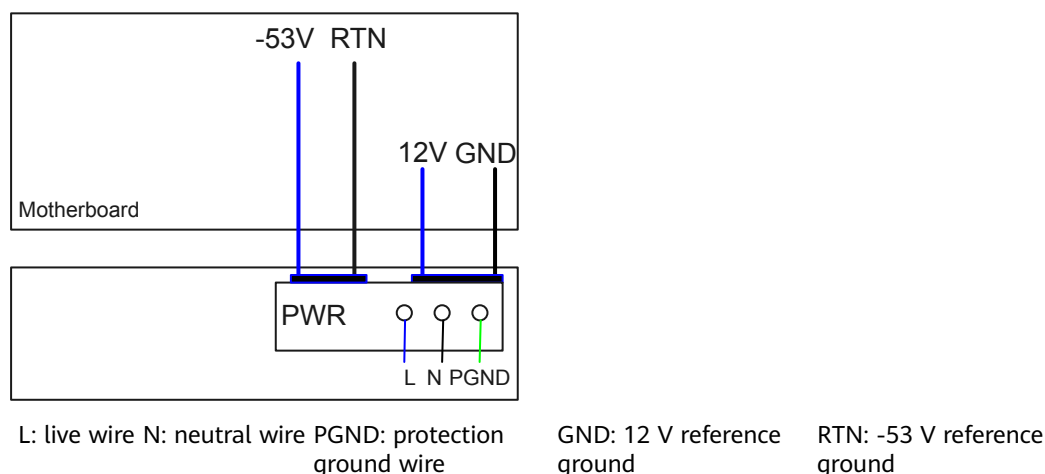
The S5720S-52X-PWR-LI-AC has similar indicators to those of the S5720-28X-PWR-LI-AC, except that the S5720S-52X-PWR-LI-AC does not have an RPS or USB indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52X-PWR-LI-AC has a built-in power module and does not support pluggable power modules. The built-in power module can provide 370 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at. The switch cannot connect to an RPS power supply.

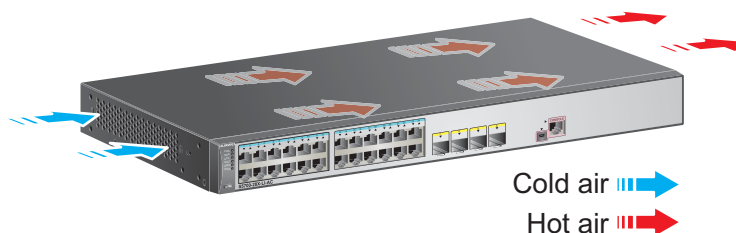
[Figure 5-157](#) shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

Figure 5-157 Power supply by a built-in AC PoE power module



Heat Dissipation

The S5720S-52X-PWR-LI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-410 lists technical specifications of the S5720S-52X-PWR-LI-AC.

Table 5-410 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	38 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.6 kg (12.35 lb)
Stack ports	Forty-eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 63.5 W • 100% PoE loads: 464.3 W (system power consumption: 94.7 W, PoE: 369.6 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	42.2 W
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 48.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010617

5.10 S5700-SI

5.10.1 S5700-24TP-SI-AC

Version Mapping

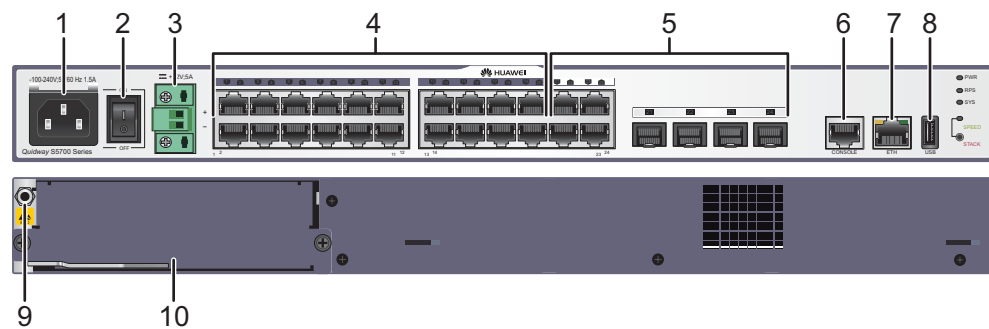
Table 5-411 lists the mapping between the S5700-24TP-SI-AC chassis and software versions.

Table 5-411 Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-SI-AC	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-158 S5700-24TP-SI-AC appearance



1	AC socket NOTE It is used with an AC power cable .	2	Power switch
3	Backup power socket NOTE This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.	4	Twenty 10/100/1000BASE-T ports

5	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module 	6	One console port
7	One ETH management port	8	One USB port
9	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	10	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-412](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-412 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-413](#).

Table 5-413 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-414](#) describes the attributes of an ETH management port.

Table 5-414 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-159 Indicators on the S5700-24TP-SI-AC

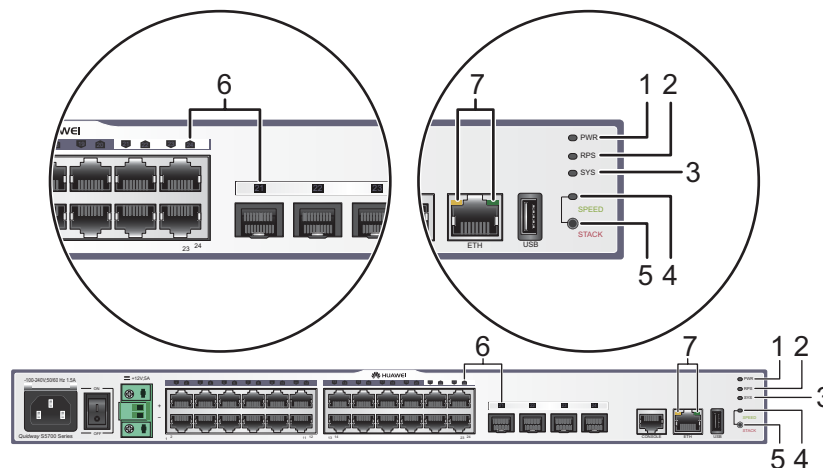


Table 5-415 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR: power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the backup power.
2	RPS: backup power supply indicator	Green	<ul style="list-style-type: none">Off: No backup power is connected to the switch or the backup power is faulty.Steady on: The backup power is connected to the switch.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none">Steady on: The system is not operating properly or is starting.Slow blinking: The system is running normally.Fast blinking: The system is copying the system software and configuration file from a USB flash drive.
		Yellow	<ul style="list-style-type: none">Steady on: The system is performing self-check during startup.Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none">Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.

Number	Indicator/ Button	Color	Description
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. When you press this button a third time, the mode indicator turns off. <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-416 .	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 5-416 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-24TP-SI-AC has a built-in power module and can connect to an external DC power supply for power redundancy.

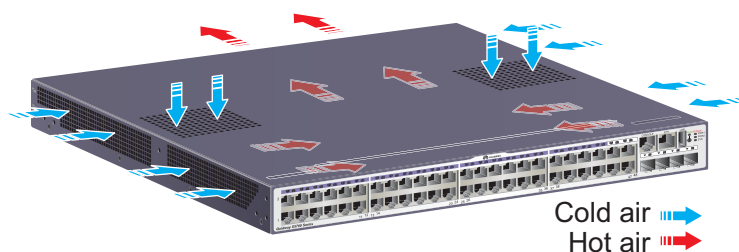
Heat Dissipation

NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-24TP-SI-AC has a built-in fan for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-417](#) lists technical specifications of the S5700-24TP-SI-AC.

Table 5-417 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	37 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode

Item	Description
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 5 kg (11.02 lb)• Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	40 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352360

5.10.2 S5700-24TP-SI-DC

Version Mapping

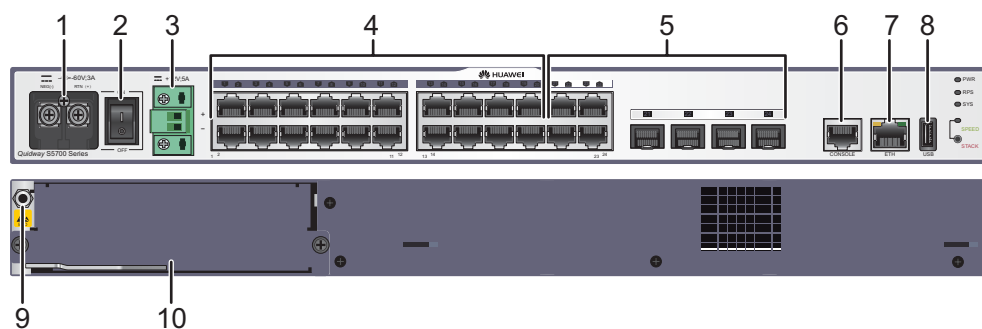
Table 5-418 lists the mapping between the S5700-24TP-SI-DC chassis and software versions.

Table 5-418 Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-SI-DC	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-160 S5700-24TP-SI-DC appearance



1	DC power terminal NOTE It is used together with a DC Power Cable .	2	Power switch
3	Backup power socket NOTE This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.	4	Twenty 10/100/1000BASE-T ports

5	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module 	6	One console port
7	One ETH management port	8	One USB port
9	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	10	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-419](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-419 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-420](#).

Table 5-420 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-421](#) describes the attributes of an ETH management port.

Table 5-421 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-24TP-SI-DC has the same types of indicators as the S5700-24TP-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-24TP-SI-DC has a built-in power module and can connect to an external DC power supply for power redundancy.

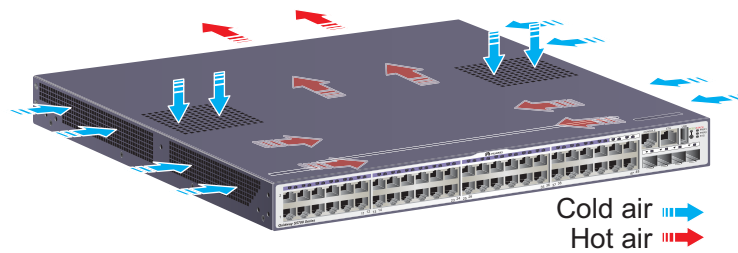
Heat Dissipation

NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-24TP-SI-DC has a built-in fan for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-422 lists technical specifications of the S5700-24TP-SI-DC.

Table 5-422 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	37 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	40 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02352343

5.10.3 S5700-24TP-PWR-SI

Version Mapping

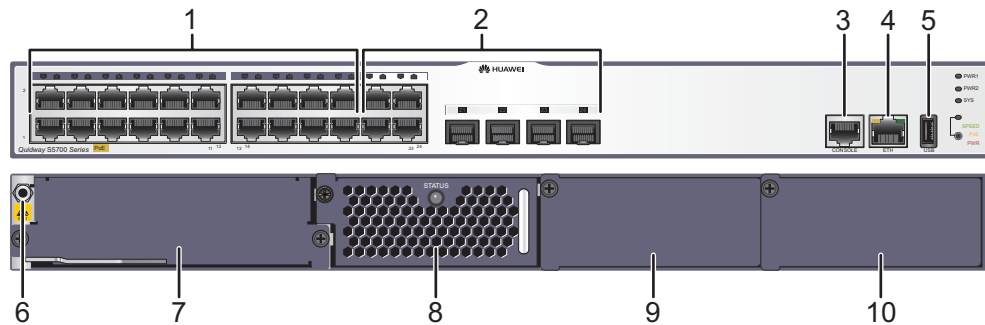
Table 5-423 lists the mapping between the S5700-24TP-PWR-SI chassis and software versions.

Table 5-423 Version mapping

Series	Model	Software Version
S5700-SI	S5700-24TP-PWR-SI	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-161 S5700-24TP-PWR-SI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) 	8	Fan slot NOTE Applicable fan module: <ul style="list-style-type: none"> • CX7E1FANA fan module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-424](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-424 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-425](#).

Table 5-425 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 5-426** describes the attributes of an ETH management port.

Table 5-426 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-24TP-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

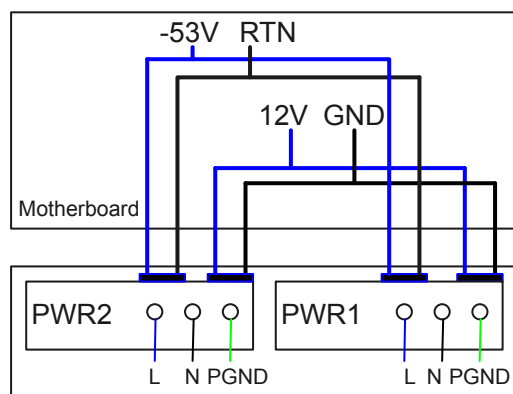
The S5700-24TP-PWR-SI has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 5-427](#) lists its power supply configurations.

Table 5-427 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 8 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12

[Figure 5-162](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-162 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5700-24TP-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-428](#) lists technical specifications of the S5700-24TP-PWR-SI.

Table 5-428 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	84.3 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported

Item	Description
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	455 W (system power consumption: 85 W, PoE: 370 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352369

5.10.4 S5700-48TP-SI-AC

Version Mapping

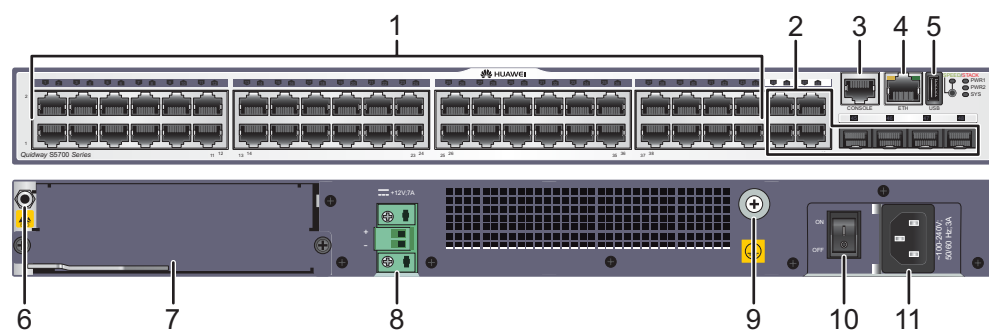
[Table 5-429](#) lists the mapping between the S5700-48TP-SI-AC chassis and software versions.

Table 5-429 Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-SI-AC	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-163 S5700-48TP-SI-AC appearance



1	Forty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) 	8	Backup power socket NOTE This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.

9	Ground screw NOTE It is used with a ground cable .	1 0	Power switch
1 1	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-430** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-430 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-431](#).

Table 5-431 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-432](#) describes the attributes of an ETH management port.

Table 5-432 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-48TP-SI-AC has the same types of indicators as the S5700-24TP-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-48TP-SI-AC has a built-in power module and can connect to an external DC power supply for power redundancy.

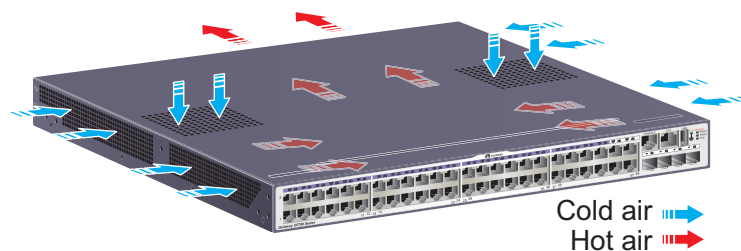
Heat Dissipation

NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-48TP-SI-AC has two built-in fans for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



Technical Specifications

Table 5-433 lists technical specifications of the S5700-48TP-SI-AC.

Table 5-433 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	34 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	64 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352353

5.10.5 S5700-48TP-SI-DC

Version Mapping

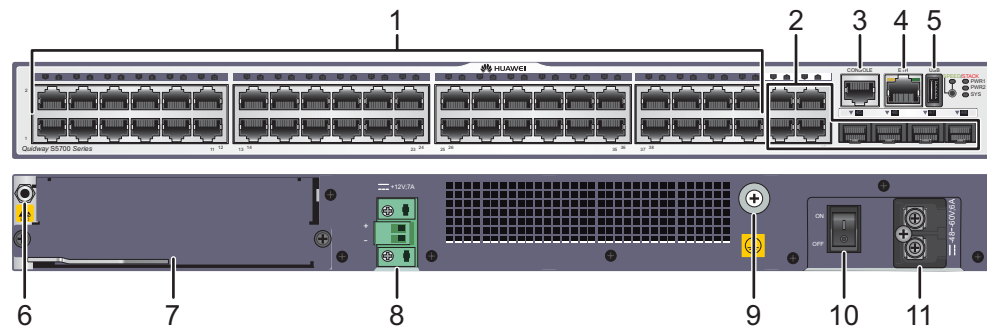
[Table 5-434](#) lists the mapping between the S5700-48TP-SI-DC chassis and software versions.

Table 5-434 Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-SI-DC	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-164 S5700-48TP-SI-DC appearance



1	Forty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port
5	One USB port	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) 	8	Backup power socket NOTE This socket can be connected to a backup power supply unit. The backup power supply unit must provide 12 V DC output voltage (ranging from 11 V to 13 V) and a minimum power of 100 W.
9	Ground screw NOTE It is used with a ground cable.	10	Power switch
11	DC power terminal NOTE It is used together with a DC Power Cable.	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-435](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-435 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-436](#).

Table 5-436 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 5-437** describes the attributes of an ETH management port.

Table 5-437 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-48TP-SI-DC has the same types of indicators as the S5700-24TP-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-48TP-SI-DC has a built-in power module and can connect to an external DC power supply for power redundancy.

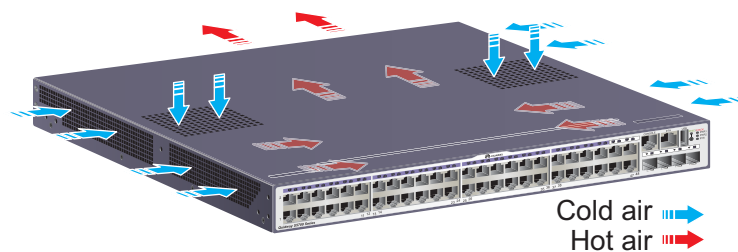
Heat Dissipation

NOTE

The fans can work in the intelligent mode or forcible mode:

- In the intelligent mode, the fans start to operate only when the ambient temperature goes higher than a specified value. In V200R003C00 and later versions, you can run the **display fan speed-adjust threshold minus** command on the switches that use the intelligent heat dissipation mode to view the temperature thresholds for the fans to start and stop running. The **set fan speed-adjust threshold minus** command can be used to lower these temperature thresholds.
- In the forcible mode, the fans operate immediately when the switch starts. You can run the **display fan speed-adjust threshold minus** on the switches that support intelligent fan speed adjustment to view the temperature thresholds for the fans to increase and decrease rotating speeds. The **set fan speed-adjust threshold minus** command can lower these temperature thresholds.

The S5700-48TP-SI-DC has two built-in fans for intelligent air cooling. Air flows in from the left, right, and top sides, and exhausts from the rear panel.



Technical Specifications

[Table 5-438](#) lists technical specifications of the S5700-48TP-SI-DC.

Table 5-438 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	34 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 5 kg (11.02 lb)• Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	64 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Silent
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification

Item	Description
Part number	02352357

5.10.6 S5700-48TP-PWR-SI

Version Mapping

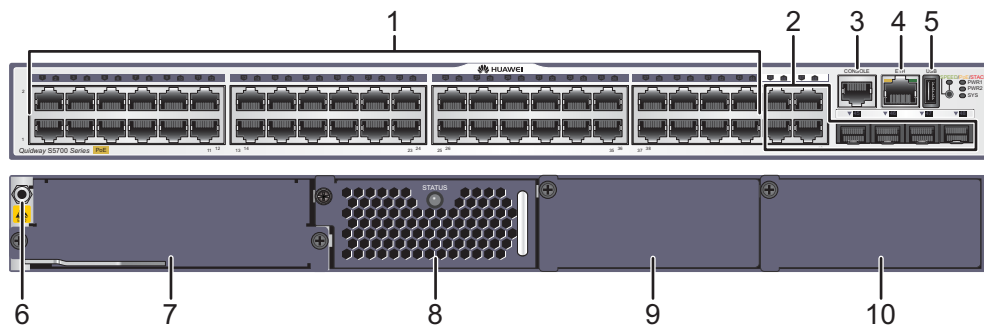
Table 5-439 lists the mapping between the S5700-48TP-PWR-SI chassis and software versions.

Table 5-439 Version mapping

Series	Model	Software Version
S5700-SI	S5700-48TP-PWR-SI	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-165 S5700-48TP-PWR-SI appearance



1	Forty-four PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port

5	One USB port	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 9.27 ES5D00ETPC00 (Stack Rear Card) 	8	Fan slot NOTE Applicable fan module: CX7E1FANA fan module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 250 W AC PoE power module 500 W AC PoE power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 250 W AC PoE power module 500 W AC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-440](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-440 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-441](#).

Table 5-441 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-442](#) describes the attributes of an ETH management port.

Table 5-442 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-48TP-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-48TP-PWR-SI has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 5-443](#) lists its power supply configurations.

Table 5-443 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 8 ● 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 16 ● 802.3at (30 W per port): 8

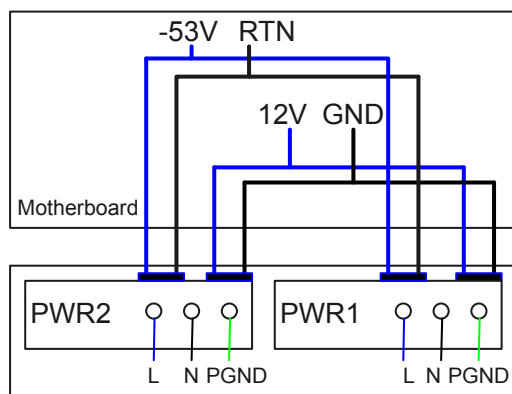
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	500 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-166 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-166 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
 GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-48TP-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-444 lists technical specifications of the S5700-48TP-PWR-SI.

Table 5-444 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	71.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">• Empty: ≤ 5 kg (11.02 lb)• Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	907 W (system power consumption: 167 W, PoE: 740 W)

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352371

5.10.7 S5700-26X-SI-12S-AC

Version Mapping

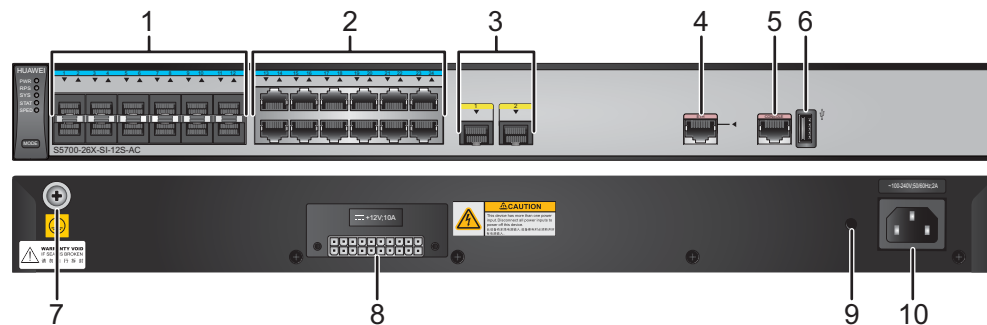
[Table 5-445](#) lists the mapping between the S5700-26X-SI-12S-AC chassis and software versions.

Table 5-445 Version mapping

Series	Model	Software Version
S5700-SI	S5700-26X-SI-12S-AC	V200R002C00 to V200R005C02 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-167 S5700-26X-SI-12S-AC appearance



1	<p>Twelve 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Twelve 10/100/1000BASE-T ports</p>
3	<p>Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions) 	4	<p>One ETH management port</p>
5	<p>One console port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>

9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	1 0	AC socket NOTE It is used with an AC power cable .
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Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-446](#) describes the attributes of a 100/1000BASE-X port.

Table 5-446 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-447](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-447 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-448](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-448 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-449](#).

Table 5-449 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-450](#) describes the attributes of an ETH management port.

Table 5-450 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-168 Indicators on the S5700-26X-SI-12S-AC

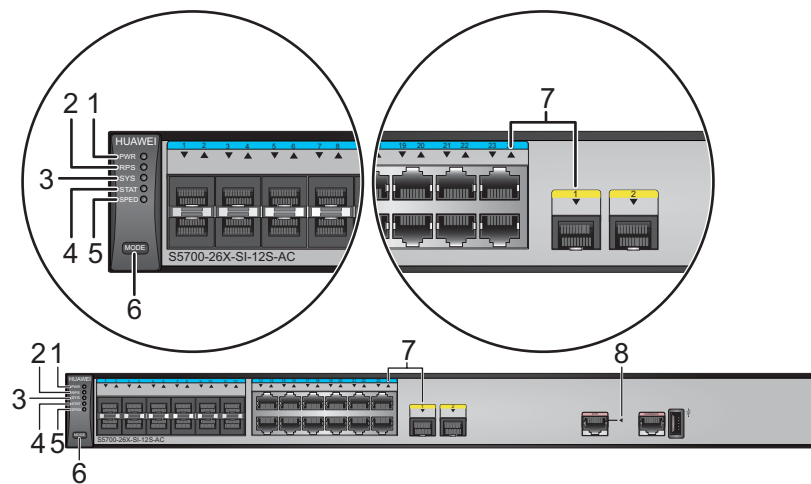


Table 5-451 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR: power supply indicator	-	Off: The switch is powered off.
		Green	Steady on: The switch is powered on.
		Yellow	Steady on: The built-in power module is faulty, and the switch is powered by the RPS system.
2	RPS: RPS power supply indicator	-	Off: No RPS is connected to the switch.
		Green	<ul style="list-style-type: none"> Steady on: The RPS is in cold backup state. Blinking: The RPS is providing power for another device and cannot provide power for the current switch.
		Yellow	Blinking: The RPS is providing power for the switch and the built-in power module of the switch is faulty.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive. Slow blinking: The system is running normally.
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.

Number	Indicator/ Button	Color	Description
4	STAT: status indicator	Green	<ul style="list-style-type: none">• Off: The status mode is not selected.• Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none">• Off: The speed mode is not selected.• Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	MODE: mode switch button	-	<ul style="list-style-type: none">• When you press this button once, the SPED indicator turns green and the service port indicators show the speed of each service port.• When you press this button a second time, the STAT indicator turns green. <p>If you do not press the button within 45 seconds, the indicators restore to the default status. That is, the STAT indicator turns green, and the SPED indicator is off.</p>

Number	Indicator/ Button	Color	Description
7	Service port indicator <ul style="list-style-type: none"> • GE electrical/optical ports: The ports are numbered from bottom to top and left to right, starting with 1. • 10GE optical ports: Each port has an indicator above it. 		Meanings of service port indicators vary in different modes. For details, see Table 5-452 .
8	ETH indicator	Green	<ul style="list-style-type: none"> • Off: No link is established on the port. • Steady on: The port is connected. • Blinking: The port is sending or receiving data.

Table 5-452 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

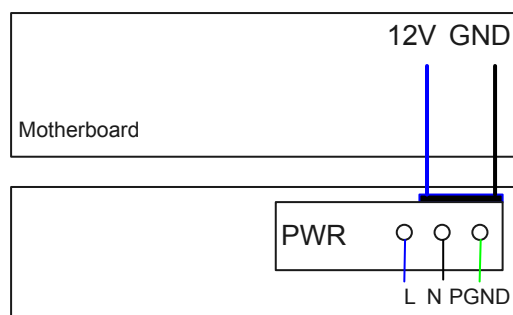
Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-26X-SI-12S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-169 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-169 Power supply mode of a built-in AC power module





L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-26X-SI-12S-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



Cold air 
Hot air 

Technical Specifications

Table 5-453 lists technical specifications of the S5700-26X-SI-12S-AC.

Table 5-453 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	200 MB
Mean time between failures (MTBF)	91.74 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode

Item	Description
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight	≤ 5 kg (11.02 lb)
Stack ports	Not supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	42.3 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> ● EMC certification ● Safety certification ● Manufacturing certification
Part number	02354039

5.10.8 S5700-28C-SI

Version Mapping

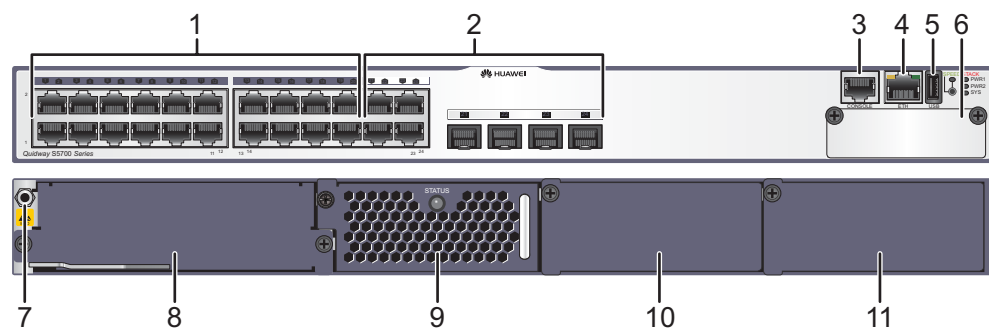
Table 5-454 lists the mapping between the S5700-28C-SI and software versions.

Table 5-454 Version mapping

Series	Model	Software Version
S5700-SI	S5700-28C-SI	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-170 S5700-28C-SI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) • 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)

7	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) • 9.28 ES5D00ETPB00 (Extended Rear Card)
9	Fan slot NOTE Applicable fan module: CX7E1FANA fan module	10	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
11	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-455](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-455 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-456](#).

Table 5-456 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-457](#) describes the attributes of an ETH management port.

Table 5-457 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-171 Indicators on the S5700-28C-SI

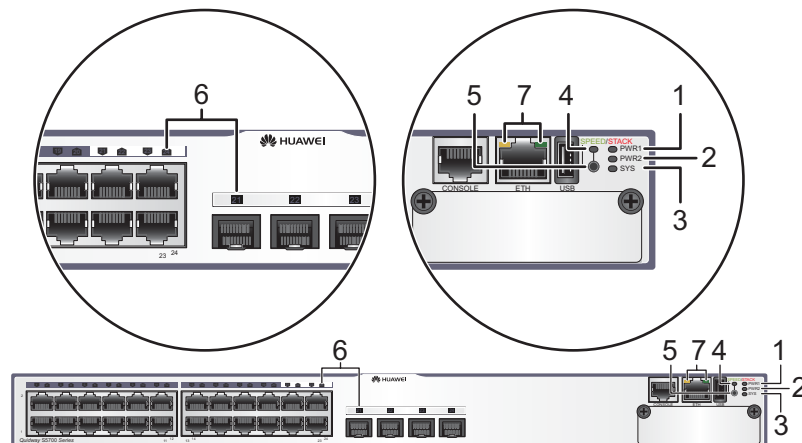


Table 5-458 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> • The power module in power module slot 1 is available but its power switch is not switched on. • The power module in power module slot 1 is available but is not connected to a power source. • The power module in power module slot 1 fails.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> • The power module in power module slot 2 is available but its power switch is not switched on. • A power module is available in this slot but it is not connected to a power source. • The power module in power module slot 2 fails.

Number	Indicator/ Button	Color	Description
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is not operating properly or is starting. Slow blinking: The system is running normally. Fast blinking: The system is copying the system software and configuration file from a USB flash drive.
		Yellow	<ul style="list-style-type: none"> Steady on: The system is performing self-check during startup. Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
4	MODE: mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/Button	Color	Description
5	Mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. When you press this button a third time, the mode indicator turns off. <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-459 .	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 5-459 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

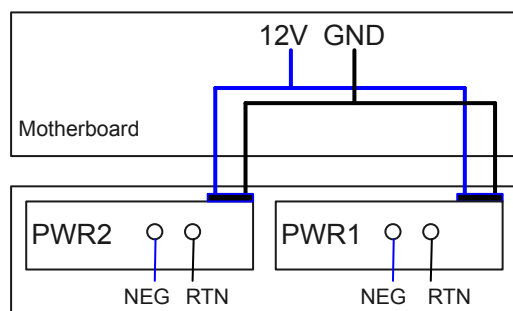
Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28C-SI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

[Figure 5-172](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-172 Power supply connections of dual DC power modules



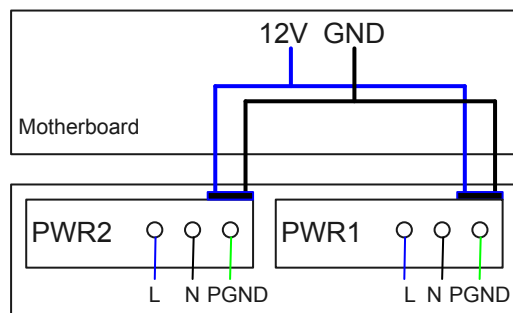
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-173 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-173 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

Table 5-460 lists technical specifications of the S5700-28C-SI.

Table 5-460 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.7 years when a 2-port 10GE interface card is configured, 74.9 years when a 4-port GE front card is configured, 29.58 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	±2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode Using DC power modules: ±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02352341

5.10.9 S5700-28C-PWR-SI

Version Mapping

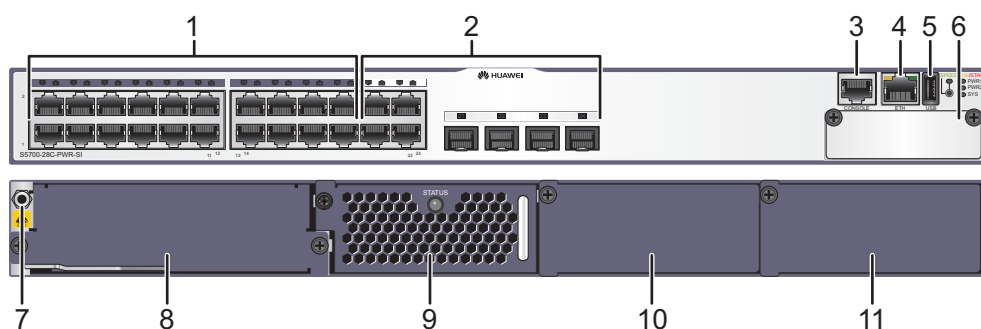
[Table 5-461](#) lists the mapping between the S5700-28C-PWR-SI and software versions.

Table 5-461 Version mapping

Series	Model	Software Version
S5700-SI	S5700-28C-PWR-SI	V200R001C00 to V200R005C02 NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-174 S5700-28C-PWR-SI appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port
5	One USB port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) • 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) • 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
7	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	8	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) • 9.28 ES5D00ETPB00 (Extended Rear Card)
9	Fan slot NOTE Applicable fan module: CX7E1FANA fan module	10	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module
11	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-462](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-462 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-463](#).

Table 5-463 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 5-464** describes the attributes of an ETH management port.

Table 5-464 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-175 Indicators on the S5700-28C-PWR-SI

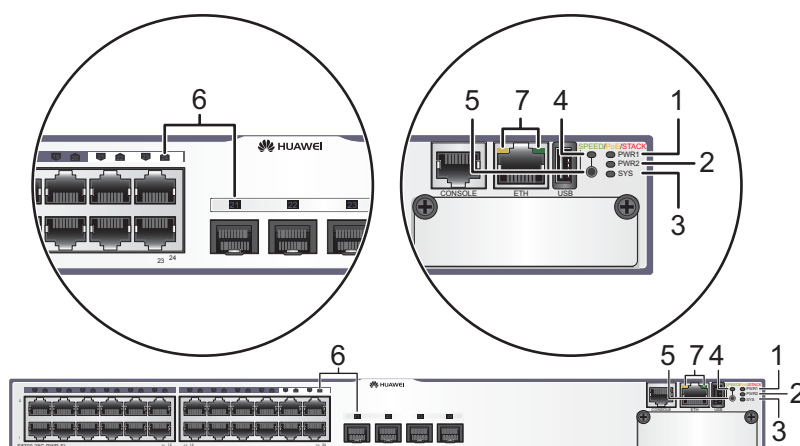


Table 5-465 Description of indicators on the switch

Number	Indicator/Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the power module is faulty when a single power module is configured.
		Green	Steady on: The power module in power module slot 1 is working properly.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. The power module in power module slot 1 is available but is not connected to a power source. The system power and PoE power are faulty.
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.

Number	Indicator/Button	Color	Description
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the power module is faulty when a single power module is configured.
		Green	Steady on: The power module in power module slot 2 is working properly.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none">• A power module is available in this slot but its power switch is in the OFF position.• A power module is available in this slot but it is not connected to a power source.• The system power and PoE power are faulty.
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none">• Steady on: The system is not operating properly or is starting.• Slow blinking: The system is running normally.• Fast blinking: The system is copying the system software and configuration file from a USB flash drive.
		Yellow	<ul style="list-style-type: none">• Steady on: The system is performing self-check during startup.• Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.

Number	Indicator/ Button	Color	Description
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
		Yellow	Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator/Button	Color	Description
5	Mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. When you press this button a third time, the mode indicator turns yellow and the service port indicators show the PoE status. When you press this button a fourth time, the mode indicator turns off. <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-466 .	
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 5-466 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.

Display Mode	Color	Description
Speed	Green	<ul style="list-style-type: none">• Off: The port is not connected or has been shut down.• Steady on: 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.• Blinking: 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	Green	<ul style="list-style-type: none">• Off: The port does not provide PoE power.• Steady on: The port is providing PoE power.• Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
Stack	Green	<ul style="list-style-type: none">• Off: The STCK mode is not selected.• If the indicator is steady on, the switch is not a master switch:<ul style="list-style-type: none">– If the indicator of a port is steady on, the number of this port is the stack ID of the switch.– If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.• If the indicator is blinking, the switch is a master switch:<ul style="list-style-type: none">– If the indicator of a port is blinking, the number of this port is the stack ID of the switch.– If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

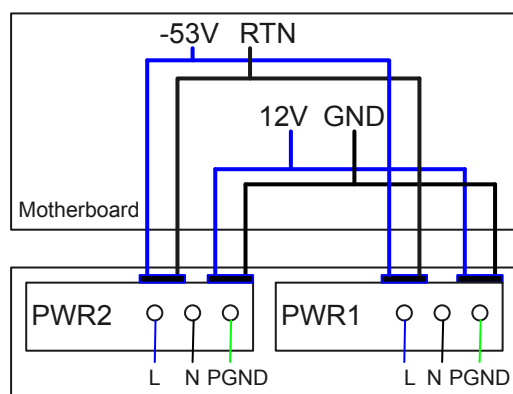
The S5700-28C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 5-467](#) lists its power supply configurations.

Table 5-467 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	-	123.2 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 8 ● 802.3at (30 W per port): 4
500 W	-	369.6 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 16 ● 802.3at (30 W per port): 8
500 W	500 W	369.6 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 12

[Figure 5-176](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-176 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5700-28C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

[Table 5-468](#) lists technical specifications of the S5700-28C-PWR-SI.

Table 5-468 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.6 years when a 2-port 10GE interface card is configured, 74.6 years when a 4-port GE front card is configured, 25.68 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> • Empty: ≤ 5 kg (11.02 lb) • Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	466 W (system power consumption: 96 W, PoE: 370 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354137

5.10.10 S5700-52C-SI

Version Mapping

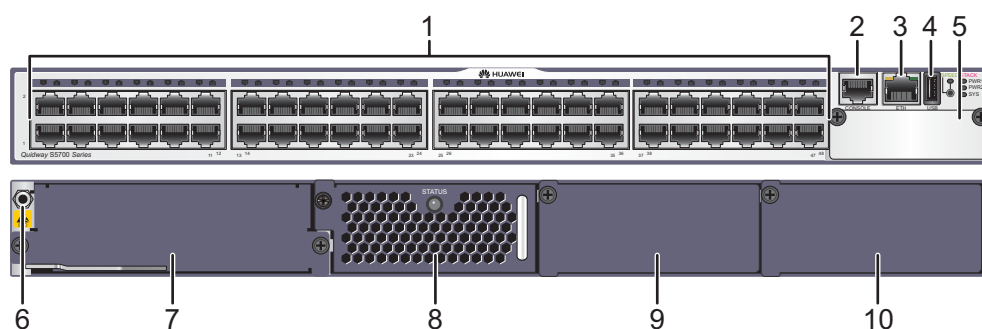
Table 5-469 lists the mapping between the S5700-52C-SI and software versions.

Table 5-469 Version mapping

Series	Model	Software Version
S5700-SI	S5700-52C-SI	V100R005C01 to V200R005C02 NOTE This model does not match V100R006C01, V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-177 S5700-52C-SI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.

7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) • 9.28 ES5D00ETPB00 (Extended Rear Card) 	8	Fan slot NOTE Applicable fan module: CX7E1FANA fan module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-470](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-470 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-471](#).

Table 5-471 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-472](#) describes the attributes of an ETH management port.

Table 5-472 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

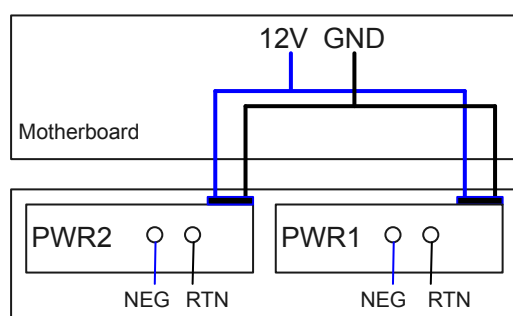
The S5700-52C-SI has the same types of indicators as the S5700-28C-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52C-SI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the switch cannot use pluggable AC and DC power modules simultaneously. In V200R005C00 and later versions, the switch supports mixing of pluggable AC and DC power modules.

Figure 5-178 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-178 Power supply connections of dual DC power modules



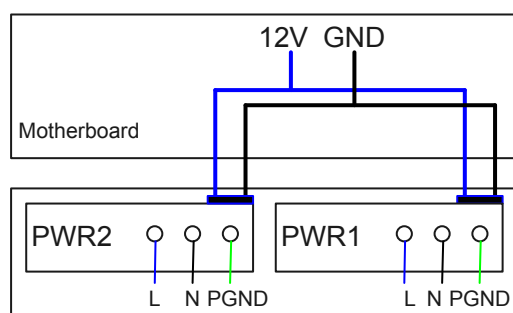
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-179 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-179 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5700-52C-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-473 lists technical specifications of the S5700-52C-SI.

Table 5-473 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	51.3 years when a 2-port 10GE interface card is configured, 70.3 years when a 4-port GE front card is configured, 28.58 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02352356

5.10.11 S5700-52C-PWR-SI

Version Mapping

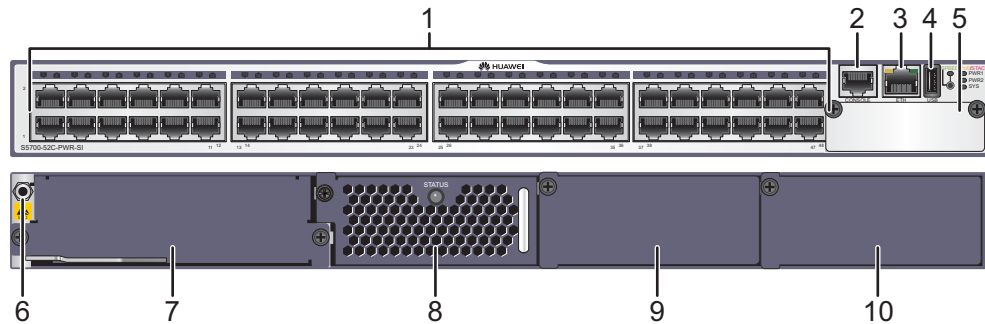
[Table 5-474](#) lists the mapping between the S5700-52C-PWR-SI and software versions.

Table 5-474 Version mapping

Series	Model	Software Version
S5700-SI	S5700-52C-PWR-SI	V200R001C00 to V200R005C02 NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-180 S5700-52C-PWR-SI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	One USB port
5	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card) 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.
7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 9.27 ES5D00ETPC00 (Stack Rear Card) 9.28 ES5D00ETPB00 (Extended Rear Card) 	8	Fan slot NOTE Applicable fan module: CX7E1FANA fan module
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 250 W AC PoE power module 500 W AC PoE power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 250 W AC PoE power module 500 W AC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-475** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-475 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-476](#).

Table 5-476 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-477](#) describes the attributes of an ETH management port.

Table 5-477 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB flash drive used on a switch must comply with USB 1.1.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5700-52C-PWR-SI has the same types of indicators as the S5700-28C-PWR-SI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 5-478](#) lists its power supply configurations.

Table 5-478 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 8 ● 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 12

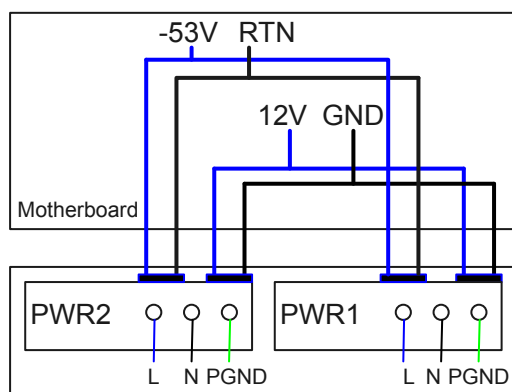
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-181 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-181 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5700-52C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-479 lists technical specifications of the S5700-52C-PWR-SI.

Table 5-479 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	50.4 years when a 2-port 10GE interface card is configured, 68.6 years when a 4-port GE front card is configured, 35.58 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack port	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	917 W (system power consumption: 177 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354135

5.11 S5720-SI

5.11.1 S5720-14X-PWH-SI-AC

Version Mapping

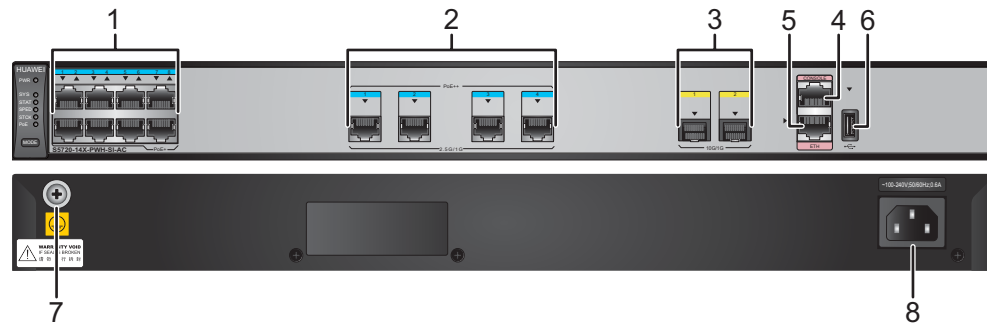
Table 5-480 lists the mapping between the S5720-14X-PWH-SI-AC chassis and software versions.

Table 5-480 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-14X-PWH-SI-AC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-182 S5720-14X-PWH-SI-AC appearance



1	Eight PoE+ 10/100/1000BASE-T ports	2	Four PoE++ 100M/1000M/2.5GE BASE-T ports (MultiGE port)
3	Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) 	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-481](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-481 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100M/1000M/2.5G BASE-T port

A 100M/1000M/2.5G BASE-T port (MultiGE port) sends and receives service data at 100 Mbit/s, 1000 Mbit/s, or 2.5 Gbit/s, and must use an [Ethernet cable](#). If the 2.5 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. [Table 5-482](#) describes the attributes of a 100M/1000M/2.5G BASE-T port.

Table 5-482 Attributes of a 100M/1000M/2.5G BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, mgbase-t
Working mode	100/1000/2500 Mbit/s auto-sensing
Maximum transmission distance	100 m

A 100M/1000M/2.5G BASE-T Ethernet port can connect to the following devices:

- All switches providing FE electrical interfaces, GE electrical interfaces or MultiGE electrical interfaces
- AP: AP7050DN-E (with 2.5G uplink interfaces) running V200R007C00
- Pico: BTS3911B running V100R010C10SPC092T

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-483](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-483 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-484](#).

Table 5-484 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-485](#) describes the attributes of an ETH management port.

Table 5-485 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

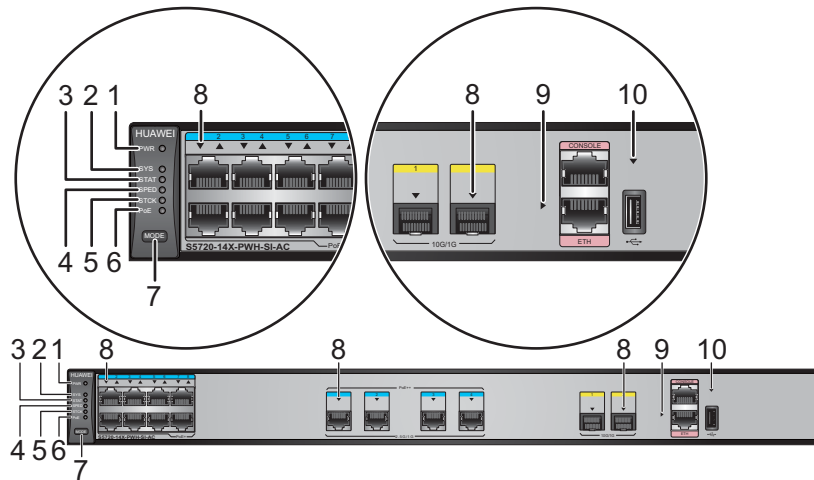
Indicator Description

 NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-183 Indicators on the S5720-14X-PWH-SI-AC



NOTE

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-486 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in PoE power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-487 .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-487 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

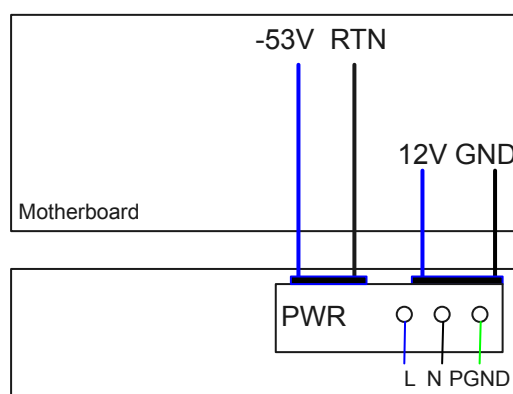
The S5720-14X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720-14X-PWH-SI-AC is a PoE switch and has a built-in PoE power module.

Table 5-488 Power supply configurations (built-in power module)

Available PoE Power	Maximum Number of Ports (Fully Loaded)
369.6 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 12 ● 802.3at (30 W per port): 12 ● Non-standard (90 W per port): 4 (only PoE++ ports) <p>NOTE A PoE++ port is a non-standard port and can only provide 90 W power for the attached PD.</p>

Figure 5-184 shows the power supply mode of a built-in AC PoE power module (PWR). The PWR module receives AC power from an external power source and provides two outputs: 12 V and -53 V. The 12 V output is provided for the chassis, and the -53 V output is provided for PDs.

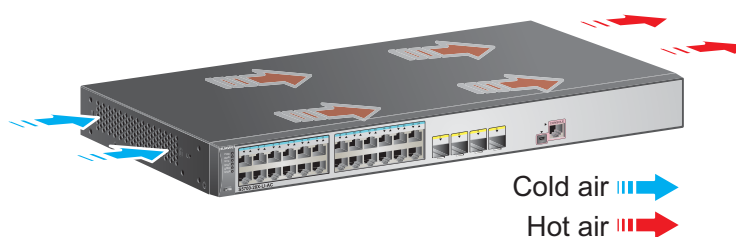
Figure 5-184 Power supply by a built-in AC PoE power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-14X-PWH-SI-AC has three built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-489 lists technical specifications of the S5720-14X-PWH-SI-AC.

Table 5-489 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.55 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	5.9 kg (13.01 lb)
Stack ports	First eight GE electrical ports 10GE SFP+ ports (V200R010C00 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 52 W • 100% PoE loads: 422 W (system power consumption: 52 W, PoE: 370 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	44.94 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 52.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350MTV

5.11.2 S5720-28P-SI-AC

Version Mapping

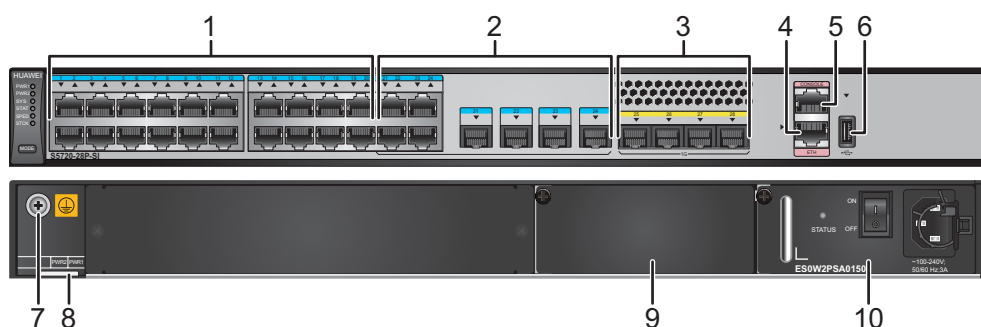
Table 5-490 lists the mapping between the S5720-28P-SI-AC chassis and software versions.

Table 5-490 Version mapping

Series		Model	Software Version
S5720-SI	S5720-P-SI	S5720-28P-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-185 S5720-28P-SI-AC appearance



1	Twenty 10/100/1000BASE-T ports	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
3	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only applicable to stack ports, a maximum transmission distance of 10 km, OSXD22N00 not supported) • 1 m, 3 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 5 m SFP+ high-speed copper cable (only for stack ports and applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>	4	One ETH management port

5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-491](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-491 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

 **NOTE**

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. [Table 5-492](#) describes the attributes of a 1000BASE-X port.

Table 5-492 Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-493](#).

Table 5-493 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-494](#) describes the attributes of an ETH management port.

Table 5-494 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28P-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-28P-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

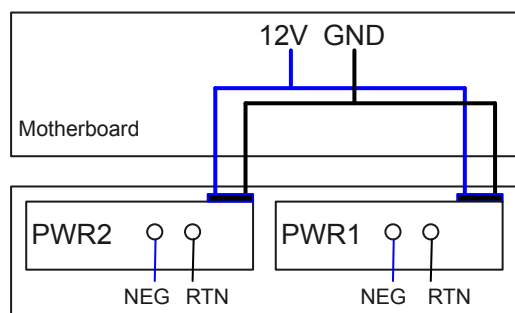
The S5720-28P-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

[Figure 5-186](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-186 Power supply connections of dual DC power modules



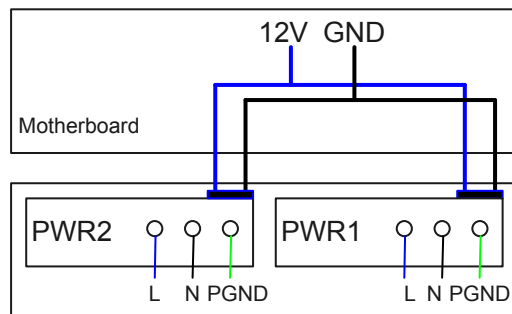
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

[Figure 5-187](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-187 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28P-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-495 lists technical specifications of the S5720-28P-SI-AC.

Table 5-495 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.48 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.1 kg (20.06 lb)
Stack ports	GE electrical ports and GE SFP optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	34.6 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	21.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLS

5.11.3 S5720-52P-SI-AC

Version Mapping

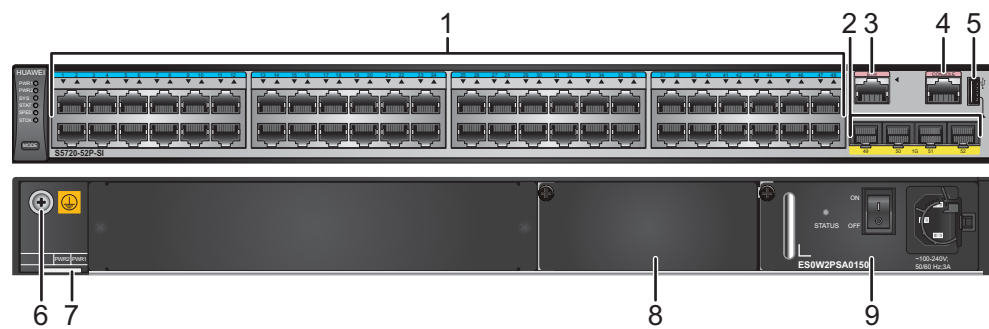
[Table 5-496](#) lists the mapping between the S5720-52P-SI-AC chassis and software versions.

Table 5-496 Version mapping

Series		Model	Software Version
S5720-SI	S5720-P-SI	S5720-52P-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-188 S5720-52P-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only applicable to stack ports, a maximum transmission distance of 10 km, OSXD22N00 not supported) • 1 m, 3 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 5 m SFP+ high-speed copper cable (only for stack ports and applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module
9	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-497](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-497 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. [Table 5-498](#) describes the attributes of a 1000BASE-X port.

Table 5-498 Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-499](#).

Table 5-499 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-500](#) describes the attributes of an ETH management port.

Table 5-500 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52P-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52P-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

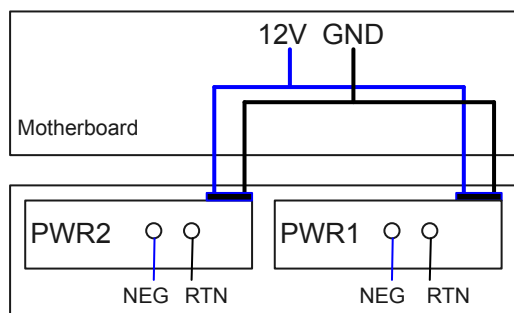
The S5720-52P-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

[Figure 5-189](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-189 Power supply connections of dual DC power modules



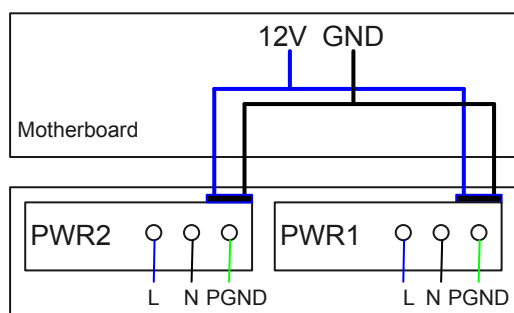
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-190 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-190 Power supply connections of dual AC power modules



L: Live wire

N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5720-52P-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-501 lists technical specifications of the S5720-52P-SI-AC.

Table 5-501 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	75.66 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.5 kg (20.95 lb)
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	53.6 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	32.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLU

5.11.4 S5720-28X-SI-AC

Version Mapping

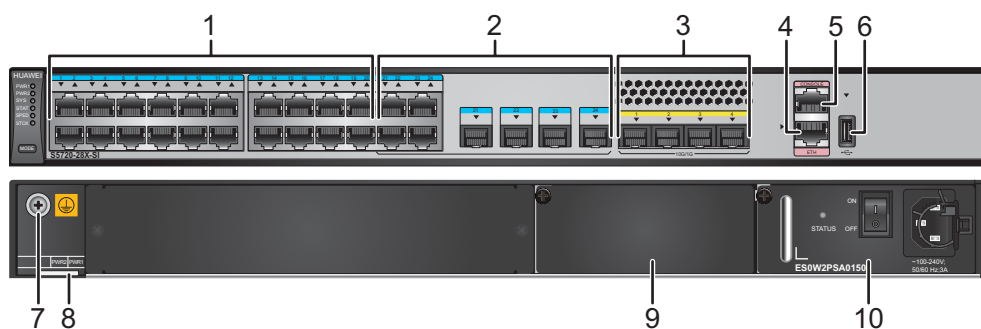
[Table 5-502](#) lists the mapping between the S5720-28X-SI-AC chassis and software versions.

Table 5-502 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-191 S5720-28X-SI-AC appearance



1	Twenty 10/100/1000BASE-T ports	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	One ETH management port

5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-503](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-503 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-504](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-504 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-505](#).

Table 5-505 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-506](#) describes the attributes of an ETH management port.

Table 5-506 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-SI-AC has similar indicators as those on the S5720-52X-PWR-SI-AC, except that the S5720-28X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

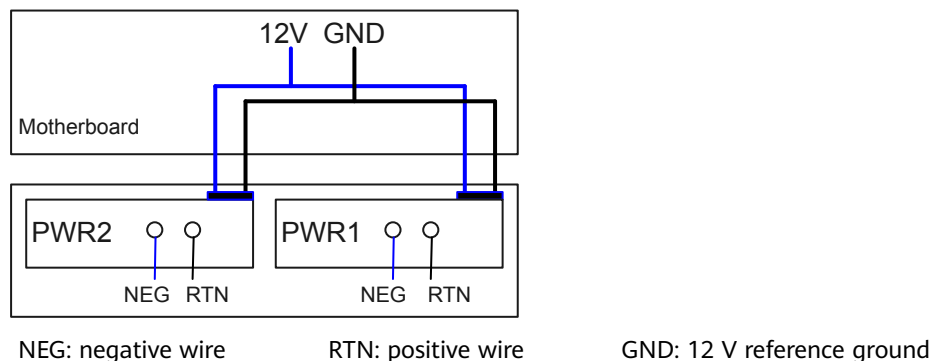
The S5720-28X-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

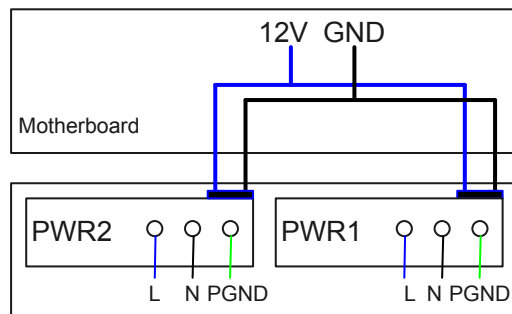
[Figure 5-192](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-192 Power supply connections of dual DC power modules



[Figure 5-193](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-193 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28X-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-507 lists technical specifications of the S5720-28X-SI-AC.

Table 5-507 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	82.4 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.1 kg (20.06 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	37.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	22.3 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLT

5.11.5 S5720-28X-SI-DC

Version Mapping

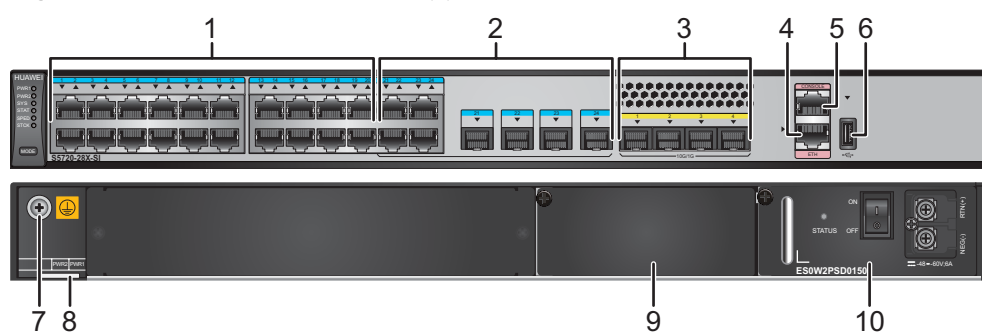
[Table 5-508](#) lists the mapping between the S5720-28X-SI-DC chassis and software versions.

Table 5-508 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-194 S5720-28X-SI-DC appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> ● FE optical module ● GE optical module ● GE-CWDM optical module ● GE-DWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	One ETH management port
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>

9	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module 	1 0	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-509** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-509 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-510](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-510 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-511](#).

Table 5-511 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-512](#) describes the attributes of an ETH management port.

Table 5-512 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-SI-DC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-28X-SI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

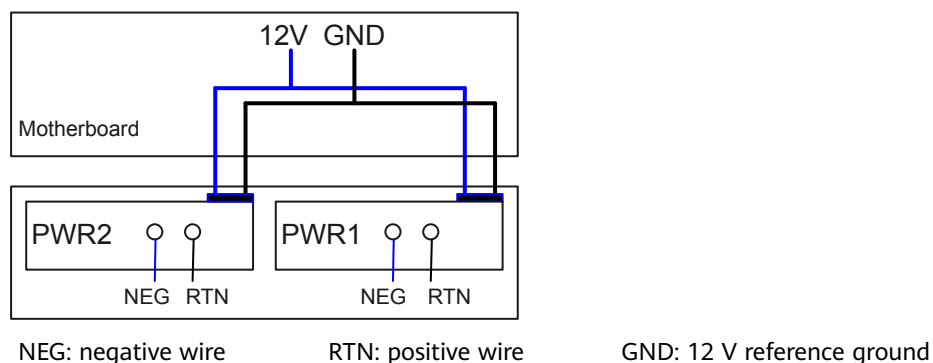
The S5720-28X-SI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

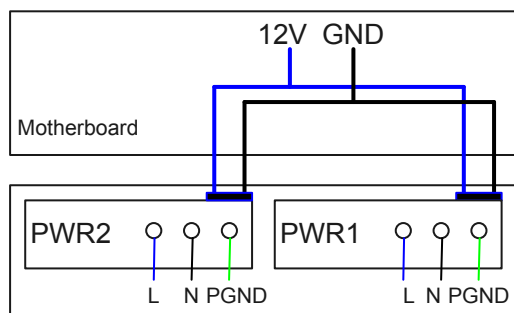
[Figure 5-195](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-195 Power supply connections of dual DC power modules



[Figure 5-196](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-196 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28X-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-513 lists technical specifications of the S5720-28X-SI-DC.

Table 5-513 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	82.4 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.1 kg (20.06 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	36.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	22.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NGU

5.11.6 S5720-28X-PWR-SI-AC

Version Mapping

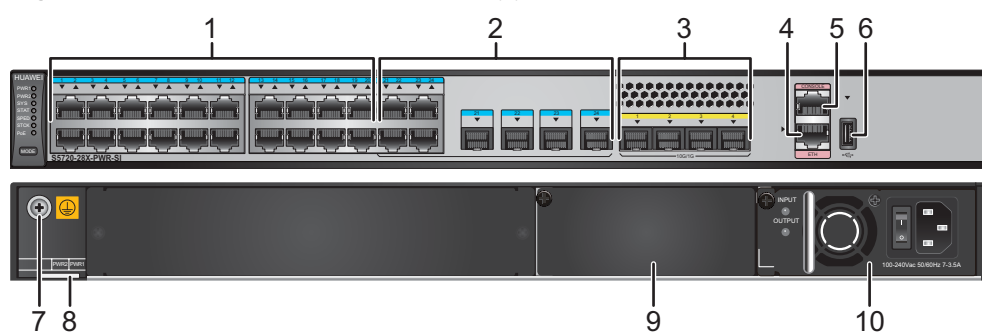
[Table 5-514](#) lists the mapping between the S5720-28X-PWR-SI-AC chassis and software versions.

Table 5-514 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-PWR-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-197 S5720-28X-PWR-SI-AC appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	One ETH management port
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>

9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none">• 500 W AC PoE power module• 650 W DC PoE power module	1 0	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none">• 500 W AC PoE power module• 650 W DC PoE power module
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-515](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-515 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-516](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-516 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-517](#).

Table 5-517 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-518](#) describes the attributes of an ETH management port.

Table 5-518 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-PWR-SI-AC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-519](#) lists its power supply configurations.

Table 5-519 Power supply configurations

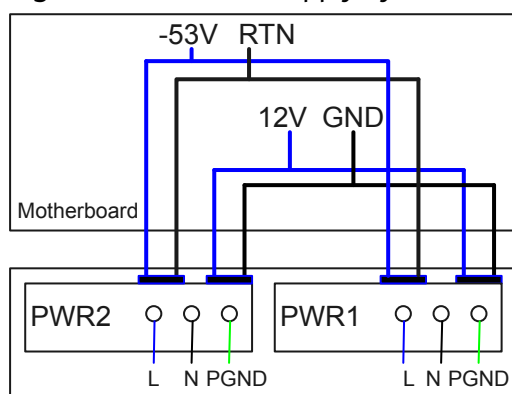
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-198](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

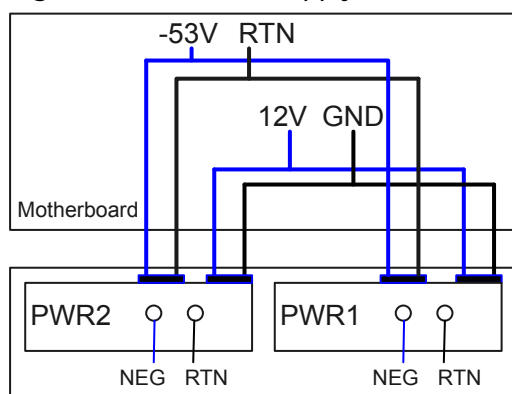
Figure 5-198 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-199 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 5-199 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-28X-PWR-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-520 lists technical specifications of the S5720-28X-PWR-SI-AC.

Table 5-520 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	66.78 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.3 kg (20.51 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 56.1 W100% PoE loads: 913 W (system power consumption: 173 W, PoE: 740 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	31.8 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLW

5.11.7 S5720-28X-PWR-SI-DC

Version Mapping

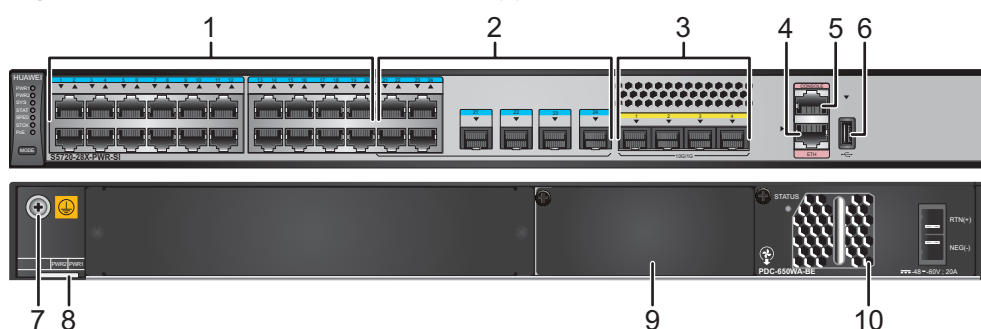
Table 5-521 lists the mapping between the S5720-28X-PWR-SI-DC chassis and software versions.

Table 5-521 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-PWR-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-200 S5720-28X-PWR-SI-DC appearance



1	<p>Twenty PoE+ 10/100/1000BASE-T ports</p>	2	<p>Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One ETH management port</p>

5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	10	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-522](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-522 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-523](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-523 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-524](#).

Table 5-524 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-525](#) describes the attributes of an ETH management port.

Table 5-525 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-28X-PWR-SI-DC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-PWR-SI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-526](#) lists its power supply configurations.

Table 5-526 Power supply configurations

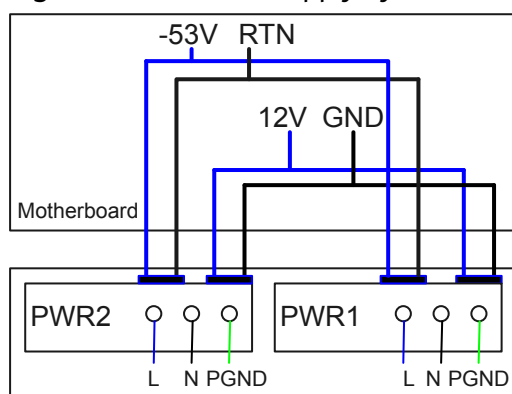
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-201](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

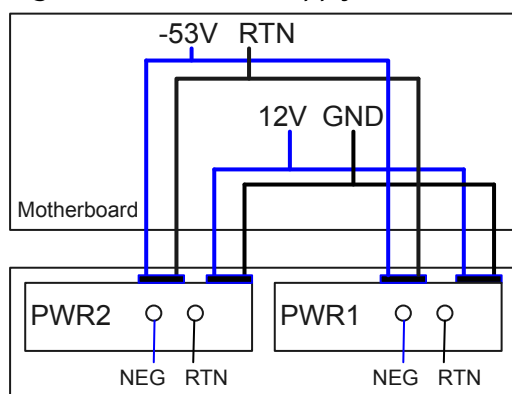
Figure 5-201 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-202 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 5-202 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-28X-PWR-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-527 lists technical specifications of the S5720-28X-PWR-SI-DC.

Table 5-527 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	66.78 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.3 kg (20.51 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 56.3 W 100% PoE loads: 887 W (system power consumption: 147 W, PoE: 740 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	32.6 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NGW

5.11.8 S5720-28X-SI-24S-AC

Version Mapping

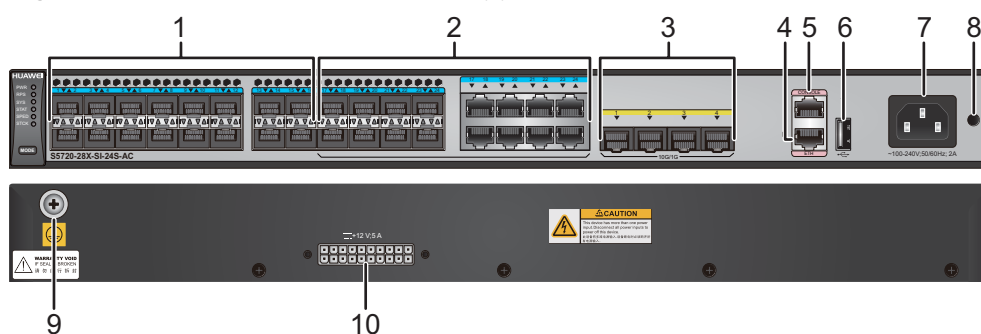
Table 5-528 lists the mapping between the S5720-28X-SI-24S-AC chassis and software versions.

Table 5-528 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-24S-AC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-203 S5720-28X-SI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One ETH management port</p>

5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	AC socket NOTE It is used with an AC power cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	Ground screw NOTE It is used with a ground cable .	10	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-529](#) describes the attributes of a 100/1000BASE-X port.

Table 5-529 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-530](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-530 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-531](#).

Table 5-531 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-532](#) describes the attributes of an ETH management port.

Table 5-532 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

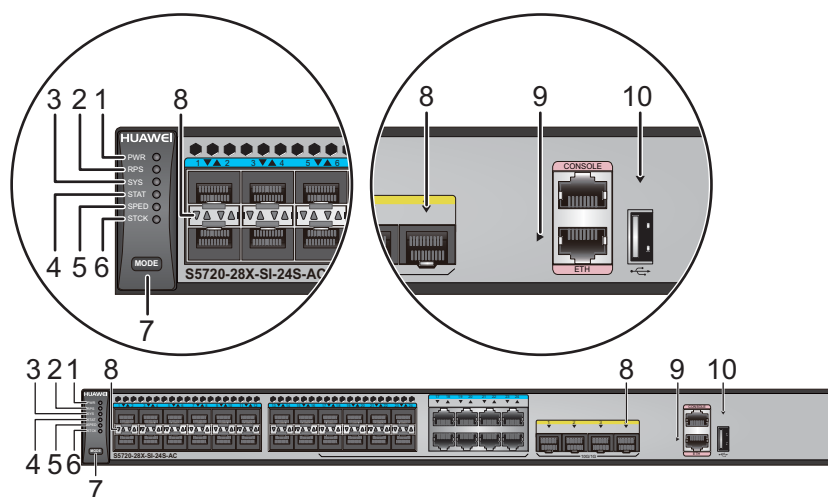
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-204 Indicators on the S5720-28X-SI-24S-AC



NOTE

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 5-533 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-534 and Table 5-535 .		

No.	Indicator	Name	Color	Status	Description
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-534 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-535 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

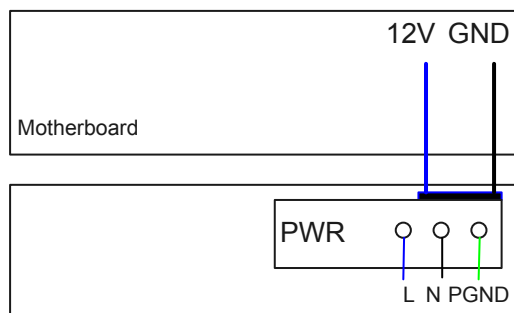
Display Mode	Color	Status	Description
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is blinking, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-28X-SI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-205 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-205 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-28X-SI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-536 lists technical specifications of the S5720-28X-SI-24S-AC.

Table 5-536 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports except combo ports and 10GE SFP+ optical ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	41.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	28.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010625

5.11.9 S5720-28X-SI-24S-DC

Version Mapping

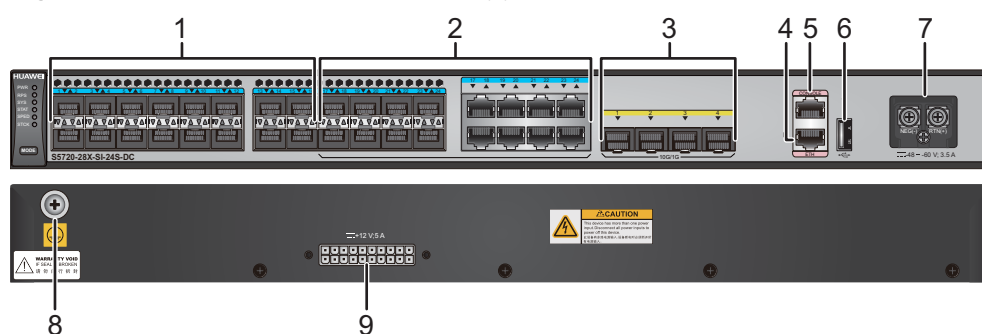
[Table 5-537](#) lists the mapping between the S5720-28X-SI-24S-DC chassis and software versions.

Table 5-537 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-28X-SI-24S-DC	V200R010C00 to V200R019C10 versions

Appearance and Structure

Figure 5-206 S5720-28X-SI-24S-DC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	<p>One ETH management port</p>
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One USB port</p>
7	<p>DC power terminal</p> <p>NOTE It is used together with a DC Power Cable.</p>	8	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
9	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-538](#) describes the attributes of a 100/1000BASE-X port.

Table 5-538 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-539](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-539 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-540](#).

Table 5-540 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-541](#) describes the attributes of an ETH management port.

Table 5-541 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

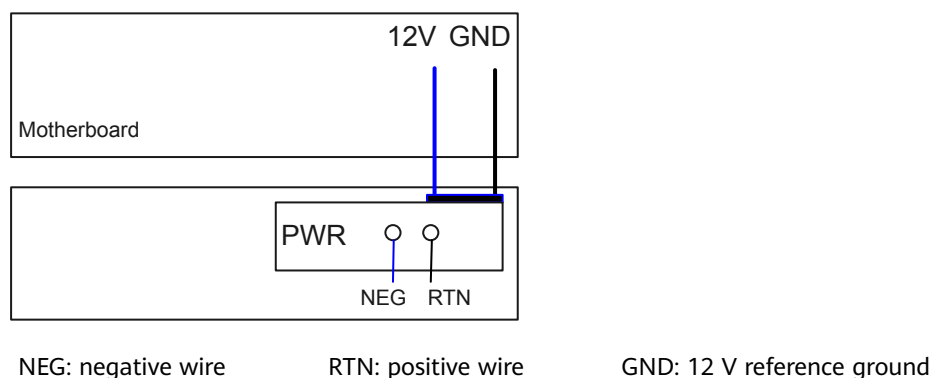
The S5720-28X-SI-24S-DC has the same types of indicators as the S5720-28X-SI-24S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-28X-SI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

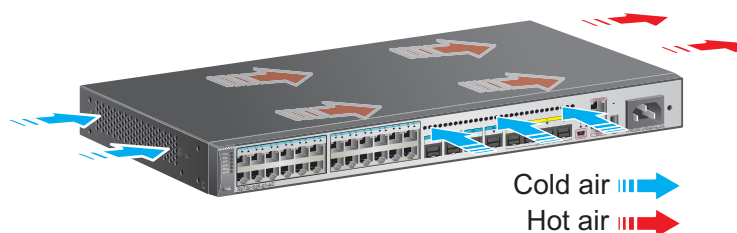
[Figure 5-207](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-207 Power supply by a single DC power module



Heat Dissipation

The S5720-28X-SI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-542](#) lists technical specifications of the S5720-28X-SI-24S-DC.

Table 5-542 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.1 kg (9.04 lb)
Stack ports	GE SFP optical ports except combo ports and 10GE SFP+ optical ports
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	42.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	30.3 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 43 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010626

5.11.10 S5721-28X-SI-24S-AC

Version Mapping

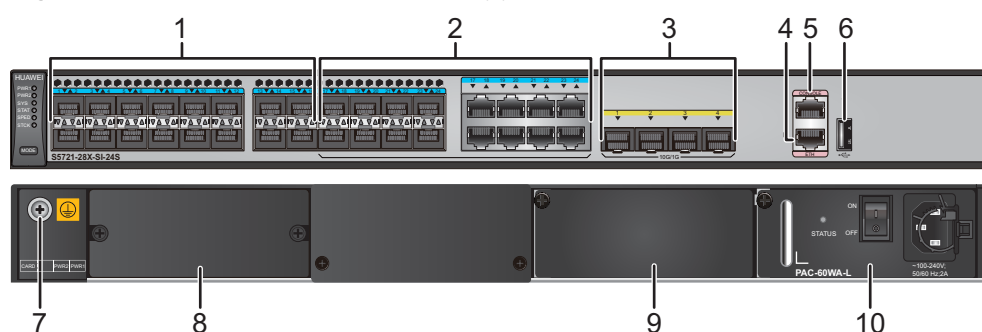
[Table 5-543](#) lists the mapping between the S5721-28X-SI-24S-AC chassis and software versions.

Table 5-543 Version mapping

Series		Switch Model	Software Version
S5720-SI	S5720-X-SI	S5721-28X-SI-24S-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-208 S5721-28X-SI-24S-AC appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE-DWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>	4	One ETH management port
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Rear card slot</p> <p>NOTE This slot is reserved for future use.</p>
9	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module • 150 W DC power module 	10	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module • 150 W DC power module

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-544](#) describes the attributes of a 100/1000BASE-X port.

Table 5-544 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-545](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-545 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-546](#).

Table 5-546 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-547](#) describes the attributes of an ETH management port.

Table 5-547 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

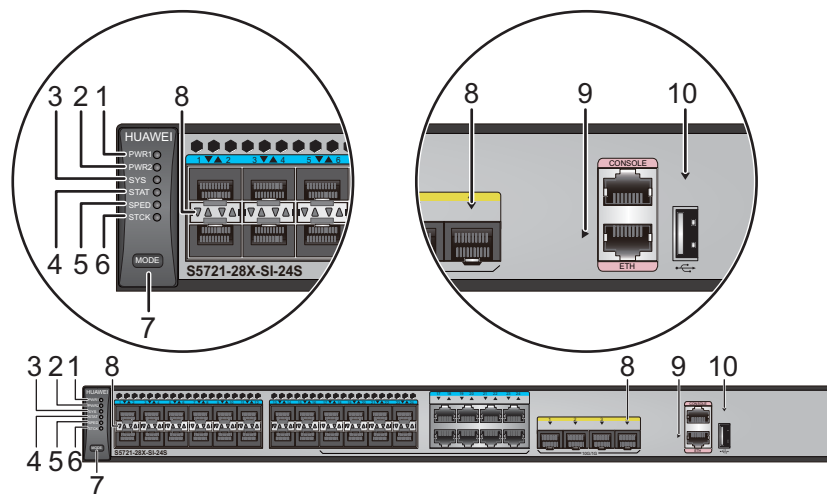
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-209 Indicators on the S5721-28X-SI-24S-AC



NOTE

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 5-548 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.

No.	Indicator	Name	Color	Status	Description
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-549 and Table 5-550 .		

No.	Indicator	Name	Color	Status	Description
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-549 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-550 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

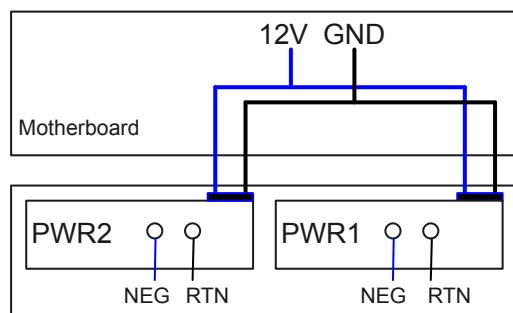
The S5721-28X-SI-24S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W AC power module and a 150 W DC power module is used in the same switch, the maximum output power of the 150 W DC power module is 60 W.

Figure 5-210 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-210 Power supply connections of dual DC power modules



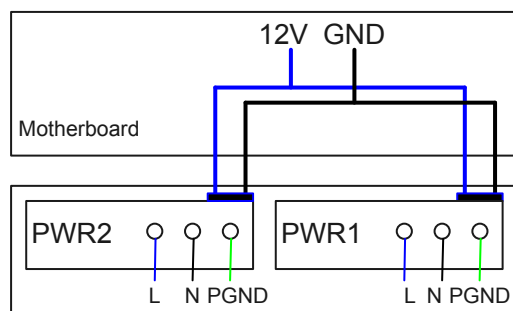
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-211 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-211 Power supply connections of dual AC power modules



L: Live wire

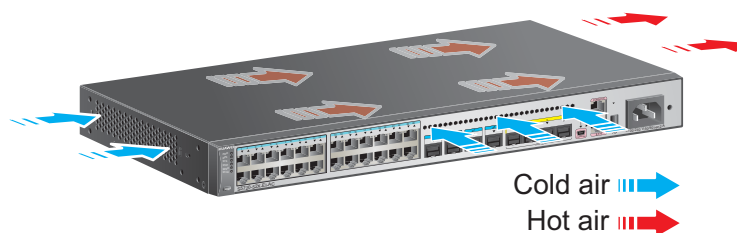
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5721-28X-SI-24S-AC has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-551 lists technical specifications of the S5721-28X-SI-24S-AC.

Table 5-551 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (including package)	8.6 kg (18.96 lb)
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	41 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	34.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010661

5.11.11 S5720-52X-SI-AC

Version Mapping

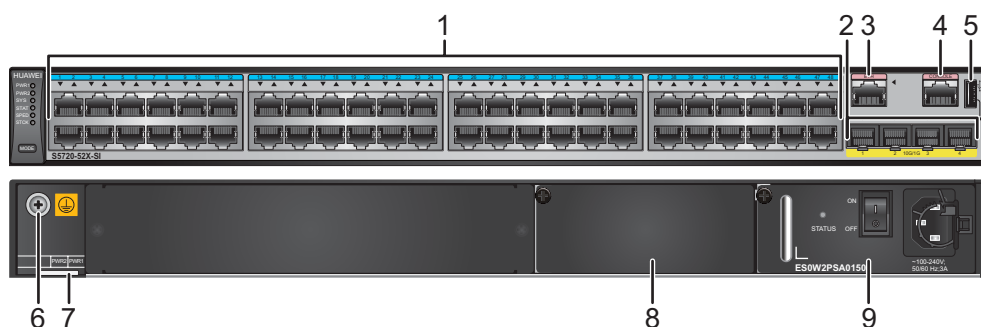
[Table 5-552](#) lists the mapping between the S5720-52X-SI-AC chassis and software versions.

Table 5-552 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-212 S5720-52X-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module
9	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-553](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-553 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-554](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-554 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-555](#).

Table 5-555 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-556](#) describes the attributes of an ETH management port.

Table 5-556 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52X-SI-AC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

[Figure 5-213](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-213 Power supply connections of dual DC power modules

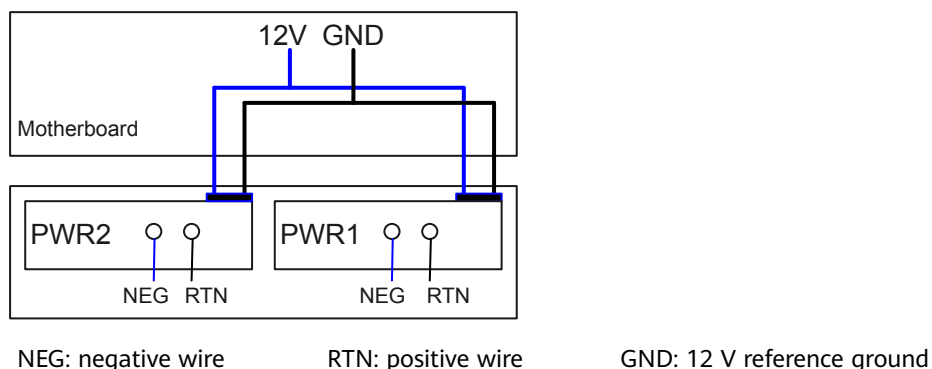
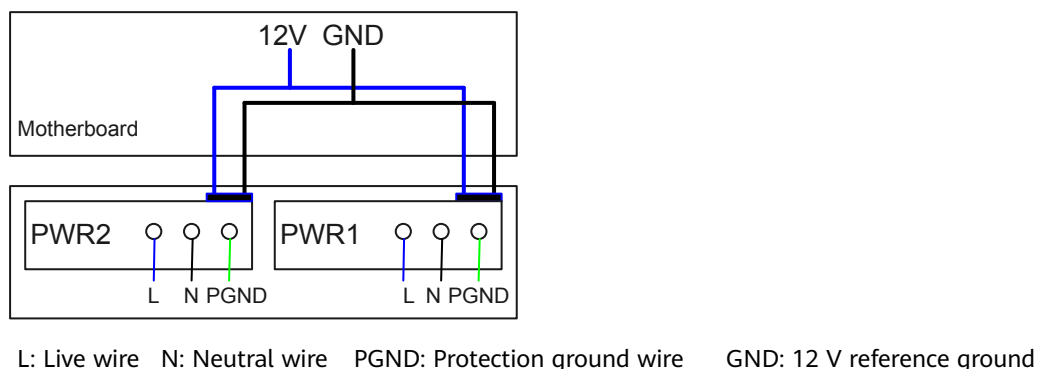


Figure 5-214 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-214 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-52X-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-557 lists technical specifications of the S5720-52X-SI-AC.

Table 5-557 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.23 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.5 kg (20.95 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	56.8 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	33.8 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLV

5.11.12 S5720-52X-SI-DC

Version Mapping

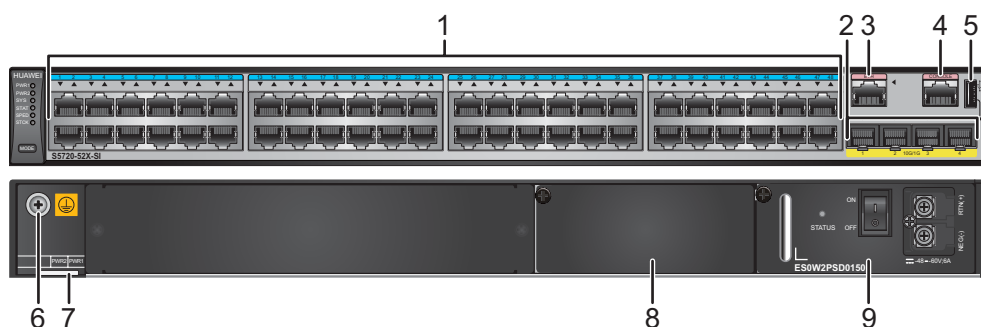
Table 5-558 lists the mapping between the S5720-52X-SI-DC chassis and software versions.

Table 5-558 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-215 S5720-52X-SI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module
9	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 60 W AC power module (supported in V200R011C10 and later versions) • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-559](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-559 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-560](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-560 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-561](#).

Table 5-561 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-562](#) describes the attributes of an ETH management port.

Table 5-562 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52X-SI-DC has similar indicators to those on the S5720-52X-PWR-SI-AC, except that the S5720-52X-SI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-SI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

NOTE

If a 60 W power module and a 150 W power module is used in the same switch, the maximum output power of the 150 W power module is 60 W.

Figure 5-216 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-216 Power supply connections of dual DC power modules

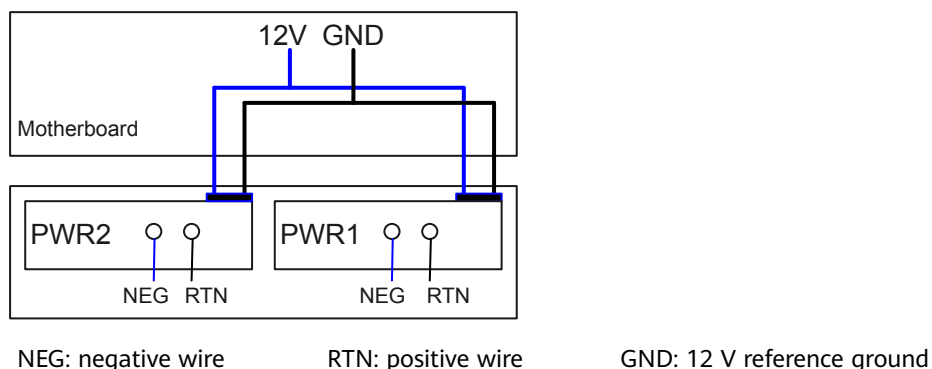
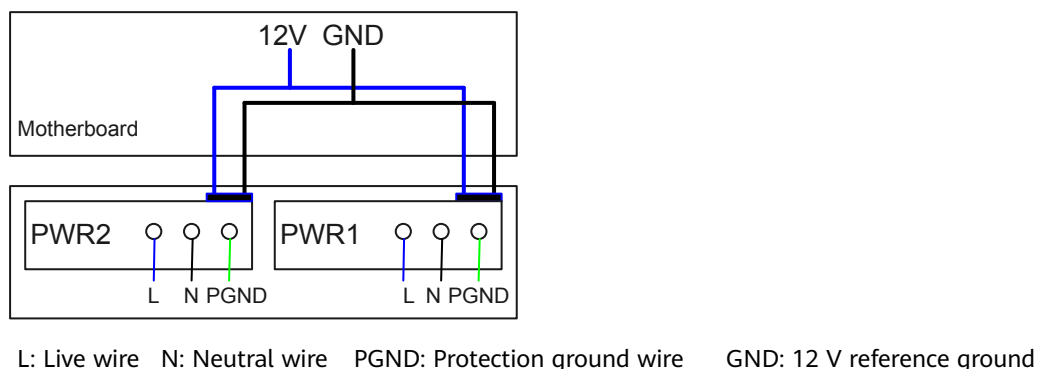


Figure 5-217 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-217 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-52X-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-563 lists technical specifications of the S5720-52X-SI-DC.

Table 5-563 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.23 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.5 kg (20.95 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	57.9 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	34 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NGV

5.11.13 S5720-52X-PWR-SI-AC

Version Mapping

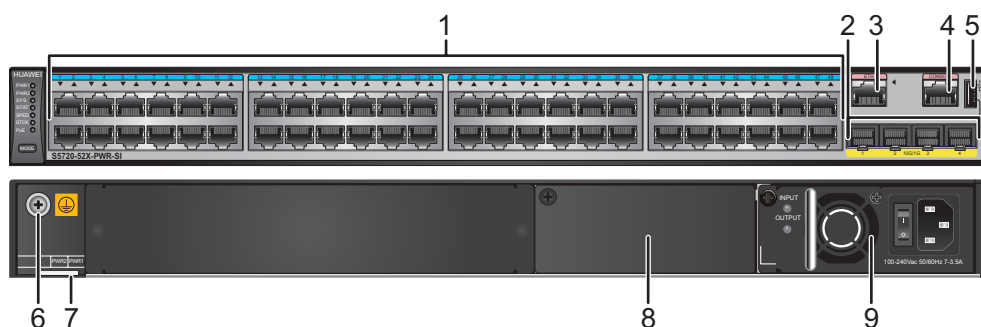
[Table 5-564](#) lists the mapping between the S5720-52X-PWR-SI-AC chassis and software versions.

Table 5-564 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-218 S5720-52X-PWR-SI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-565](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-565 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-566](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-566 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-567](#).

Table 5-567 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-568](#) describes the attributes of an ETH management port.

Table 5-568 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

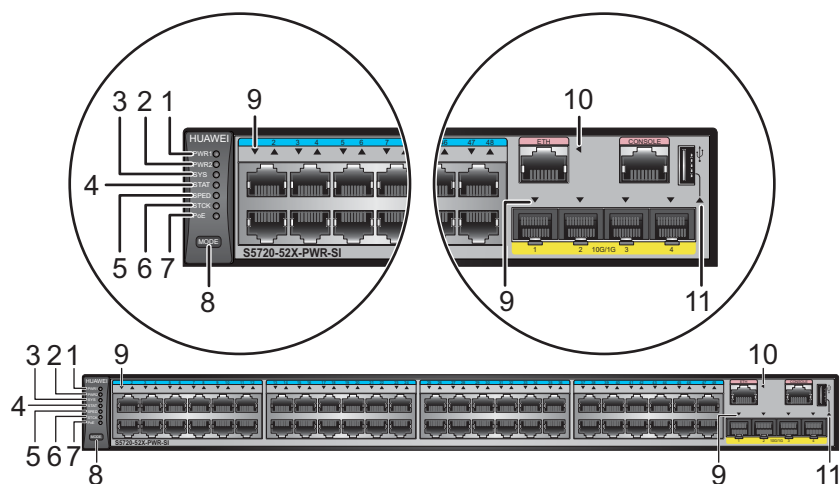
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-219 Indicators on the S5720-52X-PWR-SI-AC



NOTE

The S5720-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-569 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.

No.	Indicator	Name	Color	Status	Description
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The system is in the sleep state. NOTE The system can wake from the sleeping state if you press the MODE button. Only non-PoE model supports sleep state.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-570 .		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-570 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-52X-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-571](#) lists its power supply configurations.

Table 5-571 Power supply configurations

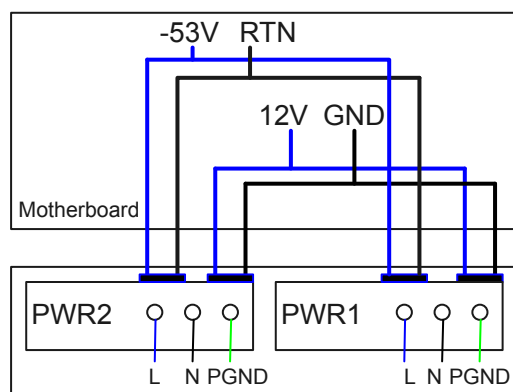
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-220 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

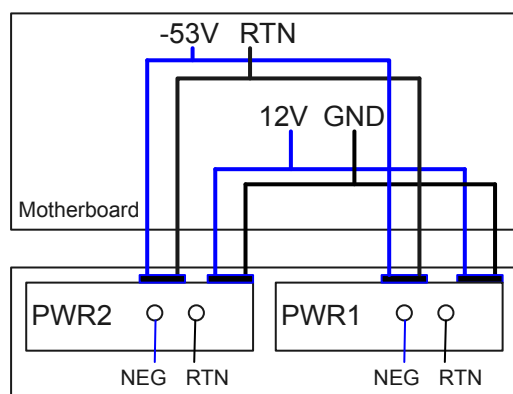
Figure 5-220 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-221 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 5-221 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-52X-PWR-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

[Table 5-572](#) lists technical specifications of the S5720-52X-PWR-SI-AC.

Table 5-572 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ±6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ±6 kV in differential mode, ±6 kV in common mode Using 650 W DC power modules: ±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.6 kg (21.17 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 93.1 W 100% PoE loads: 943.2 W (system power consumption: 203.2 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	51 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLX

5.11.14 S5720-52X-PWR-SI-DC

Version Mapping

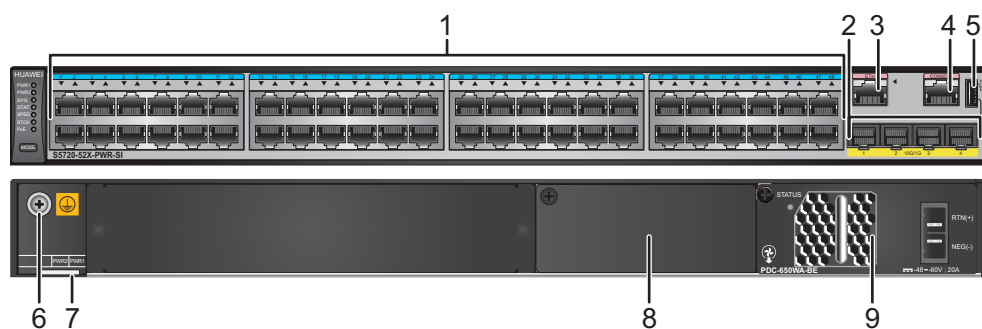
[Table 5-573](#) lists the mapping between the S5720-52X-PWR-SI-DC chassis and software versions.

Table 5-573 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-222 S5720-52X-PWR-SI-DC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module
9	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-574](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-574 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-575](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-575 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-576](#).

Table 5-576 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-577](#) describes the attributes of an ETH management port.

Table 5-577 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52X-PWR-SI-DC has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-PWR-SI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-578](#) lists its power supply configurations.

Table 5-578 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12

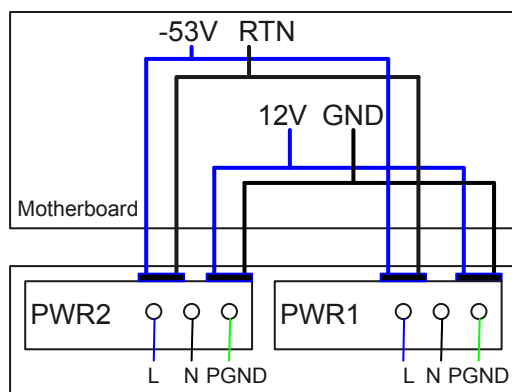
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-223 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

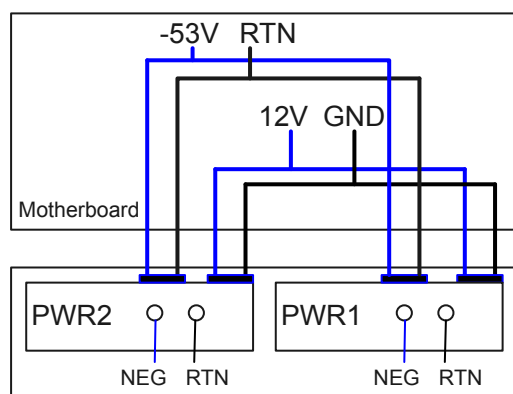
Figure 5-223 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground
 GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-224 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 5-224 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-52X-PWR-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-579 lists technical specifications of the S5720-52X-PWR-SI-DC.

Table 5-579 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.6 kg (21.17 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 93.1 W 100% PoE loads: 943.2 W (system power consumption: 203.2 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	51 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NGX

5.11.15 S5720-52X-PWR-SI-ACF

Version Mapping

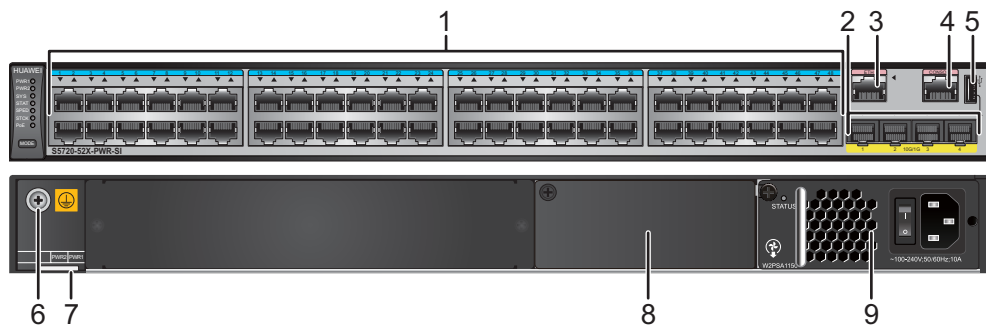
Table 5-580 lists the mapping between the S5720-52X-PWR-SI-ACF chassis and software versions.

Table 5-580 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-PWR-SI-ACF	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-225 S5720-52X-PWR-SI-ACF appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	8	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 1150 W AC PoE power module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions)
9	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 1150 W AC PoE power module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-581** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-581 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 5-582** describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-582 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-583](#).

Table 5-583 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-584](#) describes the attributes of an ETH management port.

Table 5-584 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-52X-PWR-SI-ACF has the same types of indicators as the S5720-52X-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-PWR-SI-ACF is a PoE switch. It has two power module slots and uses 1150 W AC PoE power modules or 1000 W AC PoE power modules (applicable in V200R013C00 and later versions). A 1150 W AC PoE power module and a 1000 W AC PoE power module can be used together. [Table 5-585](#) lists its power supply configurations.

Table 5-585 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 29 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

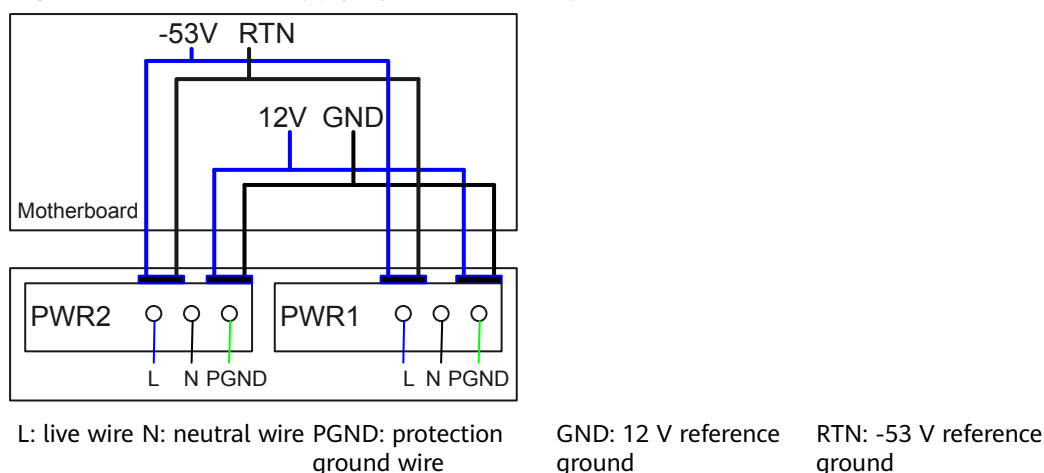
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-226 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-226 Power supply by dual AC PoE power modules



Heat Dissipation

The S5720-52X-PWR-SI-ACF has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-586 lists technical specifications of the S5720-52X-PWR-SI-ACF.

Table 5-586 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.86 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 94.8 W • 100% PoE loads: 1631.5 W (system power consumption: 191.5 W, PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	57 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 56.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLY

5.11.16 S5720-52X-SI-48S

Version Mapping

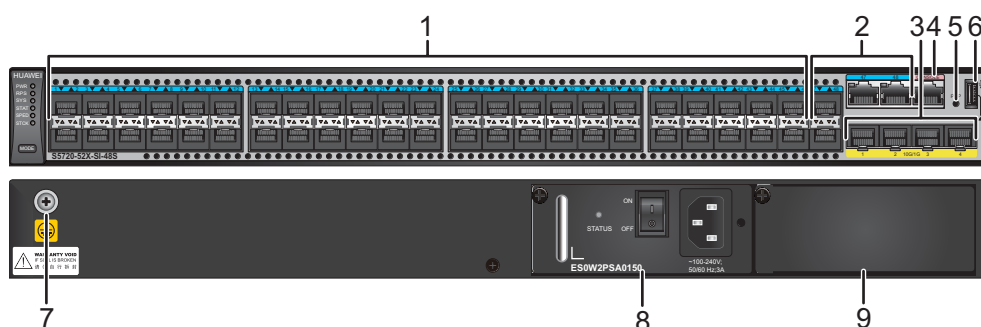
[Table 5-587](#) lists the mapping between the S5720-52X-SI-48S chassis and software versions.

Table 5-587 Version mapping

Series		Model	Software Version
S5720-SI	S5720-X-SI	S5720-52X-SI-48S	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-227 S5720-52X-SI-48S appearance



1	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (for OADM scenarios only) • GE-DWDM optical module • GE copper module (10M/100M/1000M auto-sensing) 	2	<p>Two combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ stack cables (only applicable to zero-configuration stacking) • H87MMA5671A2 GPON optical module <p>NOTE</p> <p>If one port uses a GPON optical module, other ports cannot be used.</p>	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	<p>One USB port</p>

7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-588](#) describes the attributes of a 100/1000BASE-X port.

Table 5-588 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-589](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-589 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-590](#).

Table 5-590 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

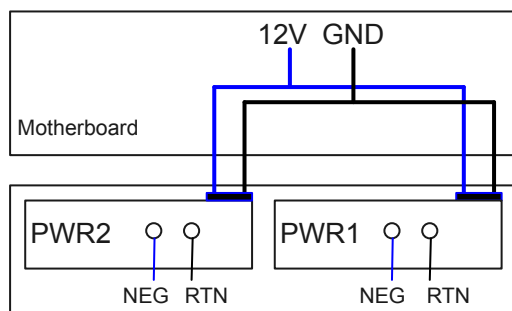
The S5720-52X-SI-48S has similar indicators to those of the S5721-28X-SI-24S-AC, except that the S5720-52X-SI-48S does not have an ETH management port. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-SI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-228](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-228 Power supply connections of dual DC power modules



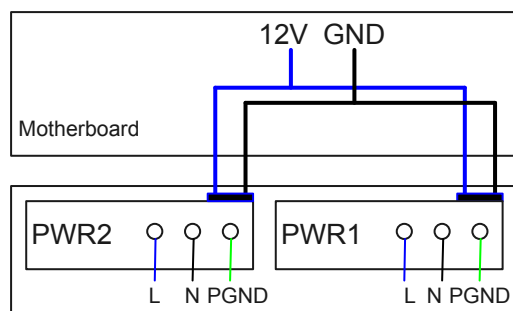
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-229 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

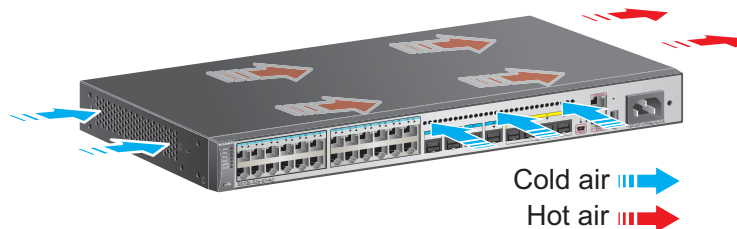
Figure 5-229 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52X-SI-48S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-591 lists technical specifications of the S5720-52X-SI-48S.

Table 5-591 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	35.23 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.05 kg (17.75 lb)
Stack ports	GE optical ports and 10GE SFP+ optical ports except combo ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	85 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	65 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010814

5.12 S5720S-SI

5.12.1 S5720S-28P-SI-AC

Version Mapping

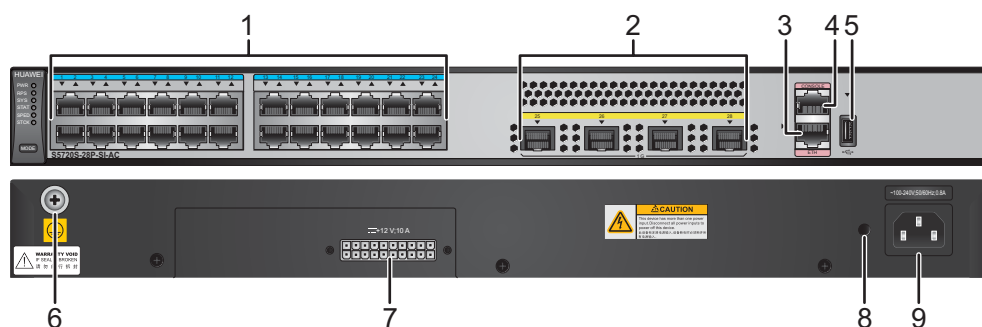
Table 5-592 lists the mapping between the S5720S-28P-SI-AC chassis and software versions.

Table 5-592 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-P-SI	S5720S-28P-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-230 S5720S-28P-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only applicable to stack ports, a maximum transmission distance of 10 km, OSXD22N00 not supported) • 1 m, 3 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 5 m SFP+ high-speed copper cable (only for stack ports and applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-593](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-593 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. [Table 5-594](#) describes the attributes of a 1000BASE-X port.

Table 5-594 Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-595](#).

Table 5-595 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-596](#) describes the attributes of an ETH management port.

Table 5-596 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

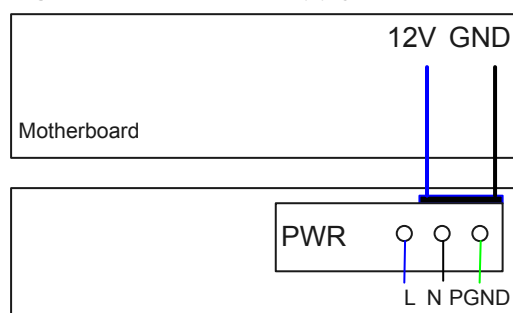
The S5720S-28P-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28P-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-231 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-231 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-28P-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

[Table 5-597](#) lists technical specifications of the S5720S-28P-SI-AC.

Table 5-597 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	104.92 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	29.1 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	20.2 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLN

5.12.2 S5720S-52P-SI-AC

Version Mapping

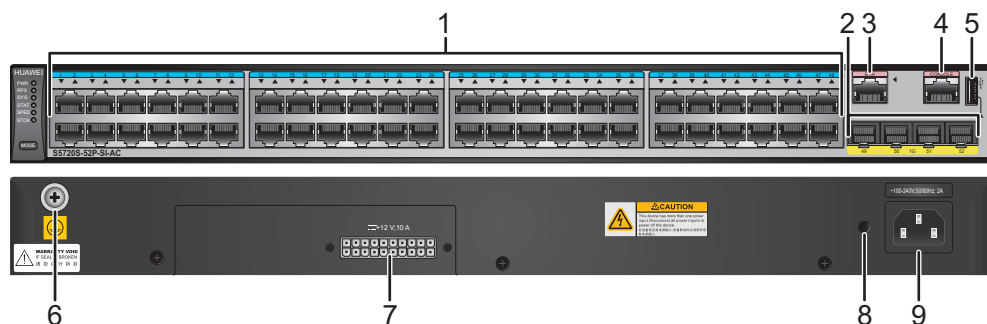
Table 5-598 lists the mapping between the S5720S-52P-SI-AC chassis and software versions.

Table 5-598 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-P-SI	S5720S-52P-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-232 S5720S-52P-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only applicable to stack ports, a maximum transmission distance of 10 km, OSXD22N00 not supported) • 1 m, 3 m, 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 5 m SFP+ high-speed copper cable (only for stack ports and applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 1000BASE-X optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-599](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-599 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. When a 1000BASE-X port uses a 10GE optical module, SFP+ high-speed copper cable, or active optical cable (AOC), the port can only be used for stack connection. [Table 5-600](#) describes the attributes of a 1000BASE-X port.

Table 5-600 Attributes of a 1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-601](#).

Table 5-601 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-602](#) describes the attributes of an ETH management port.

Table 5-602 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

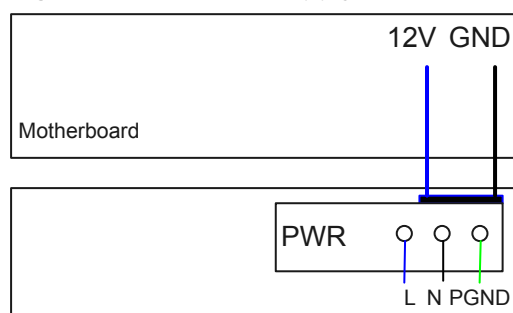
The S5720S-52P-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52P-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-233 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

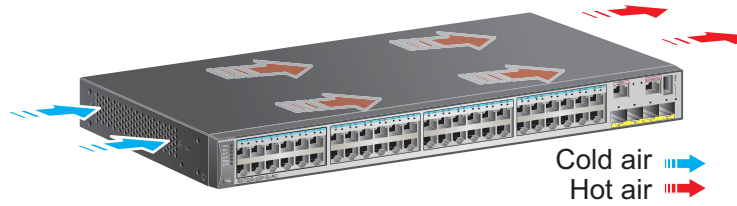
Figure 5-233 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-52P-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-603 lists technical specifications of the S5720S-52P-SI-AC.

Table 5-603 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	90.07 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	GE electrical ports and GE SFP optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	51.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	33 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLQ

5.12.3 S5720S-28X-SI-AC

Version Mapping

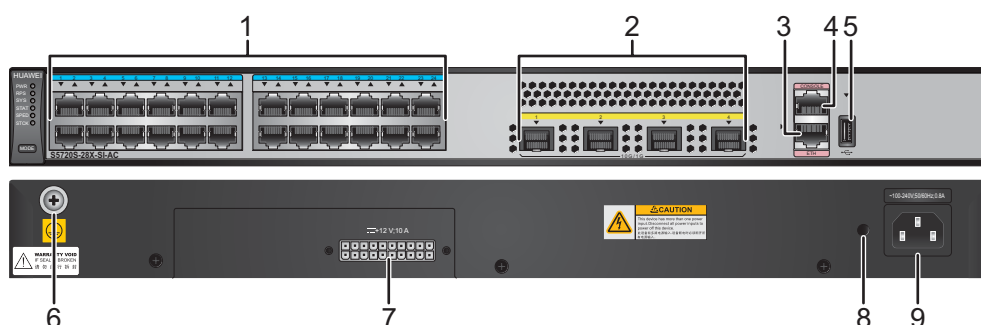
Table 5-604 lists the mapping between the S5720S-28X-SI-AC chassis and software versions.

Table 5-604 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-28X-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-234 S5720S-28X-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (a maximum transmission distance of 10 km, OSXD22N00 not supported) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-605** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-605 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 5-606** describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-606 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-607](#).

Table 5-607 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-608](#) describes the attributes of an ETH management port.

Table 5-608 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

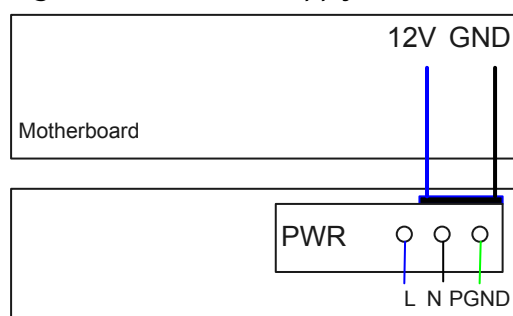
The S5720S-28X-SI-AC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-235](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-235 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-28X-SI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-609 lists technical specifications of the S5720S-28X-SI-AC.

Table 5-609 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	32 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	22 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLP

5.12.4 S5720S-28X-SI-DC

Version Mapping

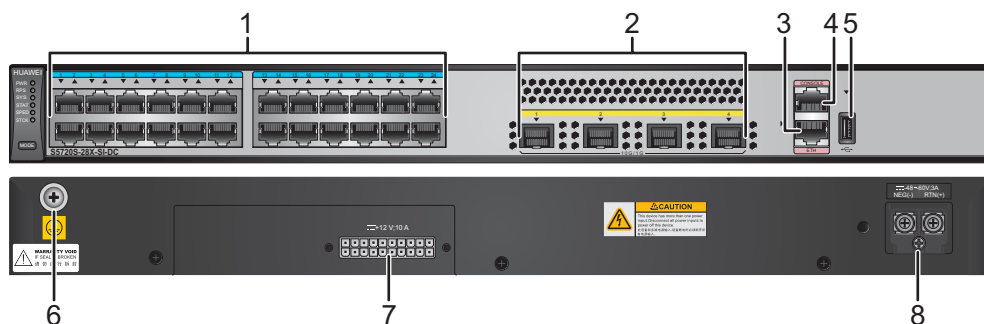
Table 5-610 lists the mapping between the S5720S-28X-SI-DC chassis and software versions.

Table 5-610 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-28X-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-236 S5720S-28X-SI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (a maximum transmission distance of 10 km, OSXD22N00 not supported) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	DC power terminal NOTE It is used together with a DC Power Cable .
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-611** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-611 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. **Table 5-612** describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-612 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-613](#).

Table 5-613 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-614](#) describes the attributes of an ETH management port.

Table 5-614 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

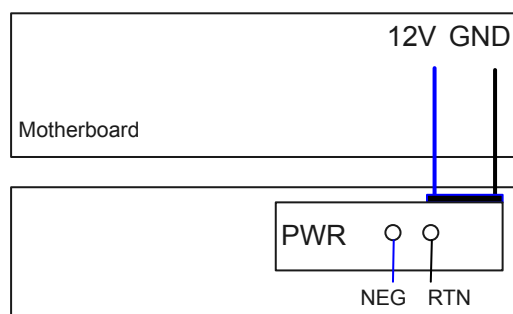
The S5720S-28X-SI-DC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-28X-SI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-237 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-237 Power supply by a single DC power module



NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Heat Dissipation

The S5720S-28X-SI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-615 lists technical specifications of the S5720S-28X-SI-DC.

Table 5-615 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	100.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.58 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	33 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	21.9 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NGY

5.12.5 S5720S-52X-SI-AC

Version Mapping

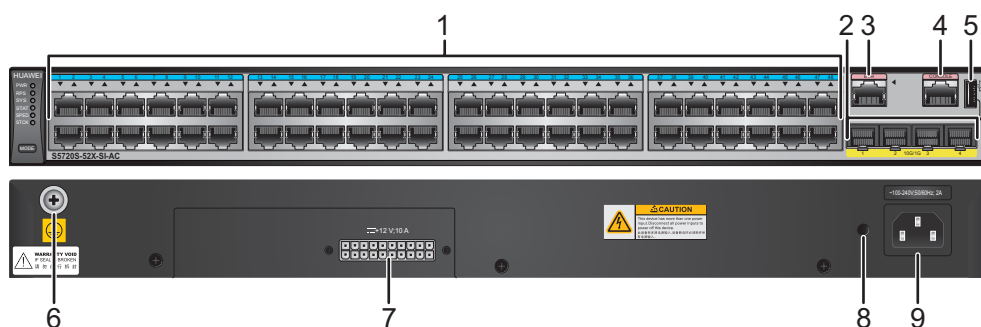
Table 5-616 lists the mapping between the S5720S-52X-SI-AC chassis and software versions.

Table 5-616 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-52X-SI-AC	V200R008C00 to V200R019C10 versions

Appearance and Structure

Figure 5-238 S5720S-52X-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-617](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-617 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-618](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-618 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-619](#).

Table 5-619 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-620](#) describes the attributes of an ETH management port.

Table 5-620 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

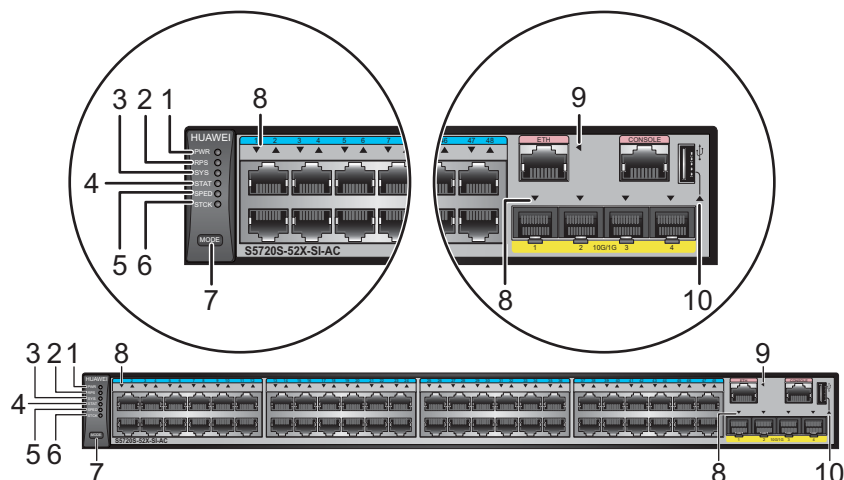
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-239 Indicators on the S5720S-52X-SI-AC



 **NOTE**

The S5720S-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5720S-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-621 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Yellow	Blinking	The system is in the sleep state. NOTE The system can wake from the sleeping state if you press the MODE button.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-622 .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-622 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

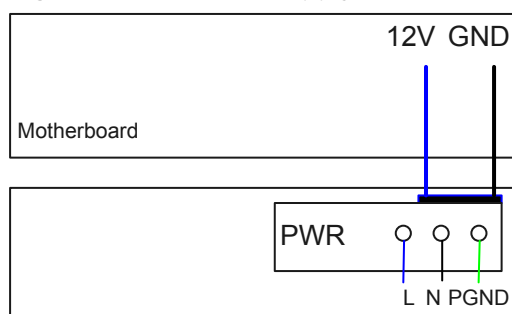
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720S-52X-SI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-240 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-240 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720S-52X-SI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-623 lists technical specifications of the S5720S-52X-SI-AC.

Table 5-623 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	54.7 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	34.4 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350DLR

5.12.6 S5720S-52X-SI-DC

Version Mapping

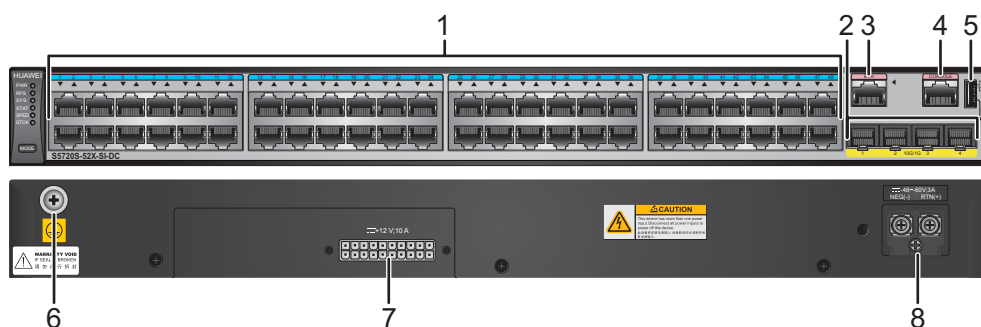
[Table 5-624](#) lists the mapping between the S5720S-52X-SI-DC chassis and software versions.

Table 5-624 Version mapping

Series		Model	Software Version
S5720S-SI	S5720S-X-SI	S5720S-52X-SI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-241 S5720S-52X-SI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) • H87MMA5671A2 GPON optical module (applicable in V200R012C00 and later versions) <p>NOTE</p> <p>If a port uses a GPON optical module, other 10GE SFP+ optical ports cannot be used.</p>
3	One ETH management port	4	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>
5	One USB port	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

7	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	8	DC power terminal NOTE It is used together with a DC Power Cable .
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-625](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-625 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-626](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-626 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-627](#).

Table 5-627 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-628](#) describes the attributes of an ETH management port.

Table 5-628 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

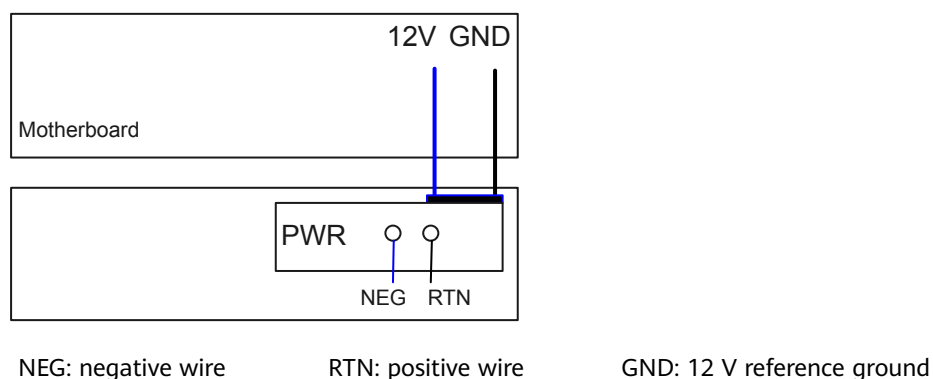
The S5720S-52X-SI-DC has the same types of indicators as the S5720S-52X-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720S-52X-SI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-242 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-242 Power supply by a single DC power module



Heat Dissipation

The S5720S-52X-SI-DC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-629 lists technical specifications of the S5720S-52X-SI-DC.

Table 5-629 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	86.64 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.02 lb)
Stack ports	GE electrical ports and 10GE SFP+ optical ports on the front panel
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	59.7 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	35.5 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	(0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NHA

5.13 S5720I-SI

5.13.1 S5720I-6X-PWH-SI-AC

Version Mapping

[Table 5-630](#) lists the mapping between the S5720I-6X-PWH-SI-AC chassis and software versions.

Table 5-630 Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-6X-PWH-SI-AC	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-243 S5720I-6X-PWH-SI-AC appearance

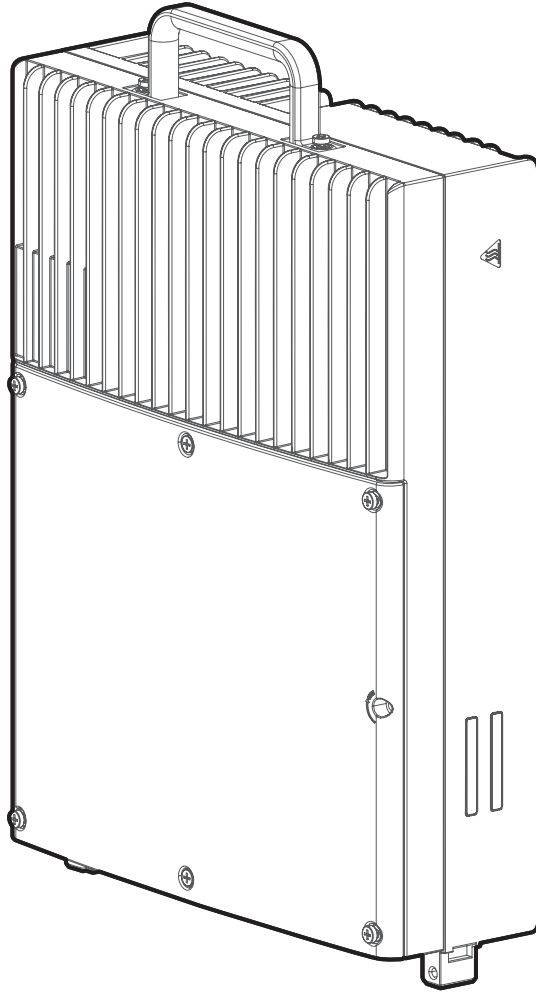
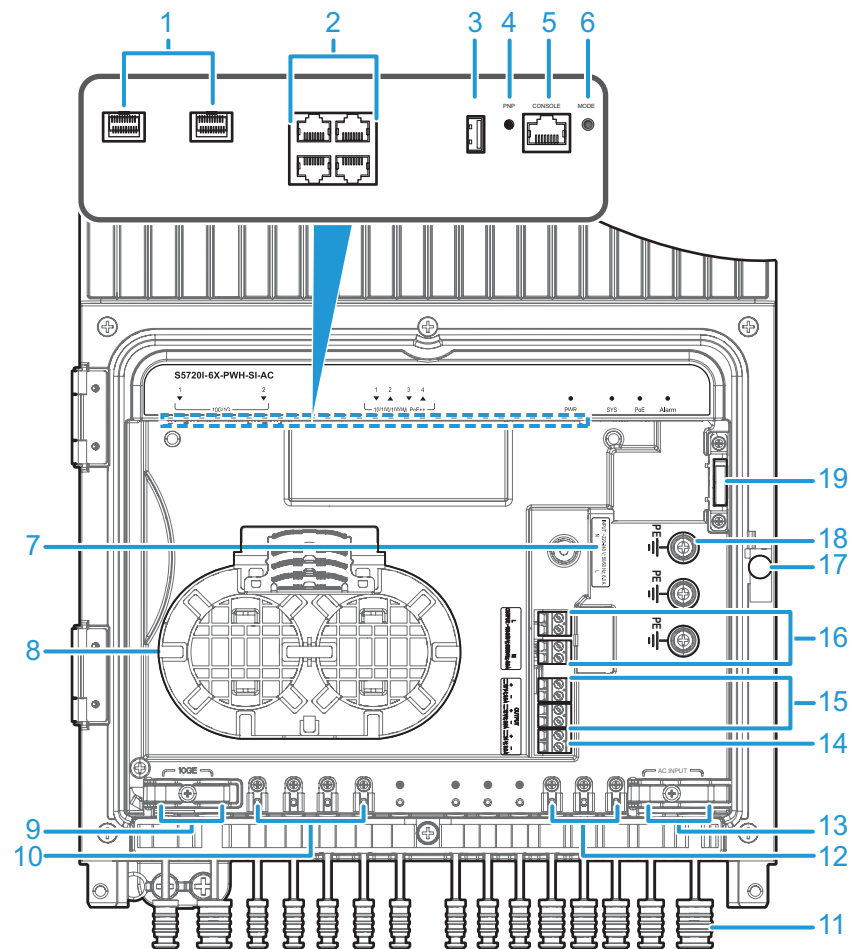


Figure 5-244 Interior of the S5720I-6X-PWH-SI-AC maintenance compartment



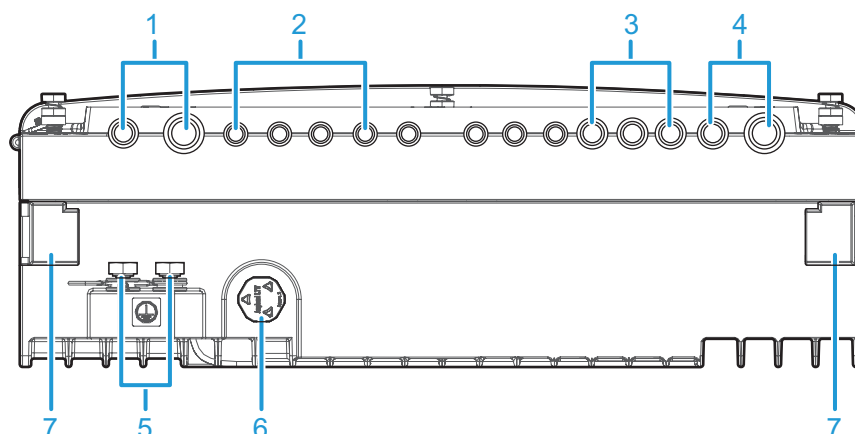
<p>1 Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • Industrial optical module • GPON optical module • Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S) <p>NOTE</p> <p>If one port uses a GPON optical module, the other port cannot be used.</p> <p>The locking bar of an optical port is upward. If an optical module cannot be completely inserted into the optical port, do not force it into the port. Turn the optical module 180 degrees and try again.</p>	<p>2 Four PoE++ 10/100/1000BASE-T ports</p>
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3	One USB port	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	<p>MODE button</p> <p>NOTE</p> <p>The switch supports two indicator modes: status (default mode) and PoE. To change the current indicator mode, press the MODE button.</p> <p>Hold down the MODE button for 6 seconds and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> • If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of the PoE indicator is as follows: <ul style="list-style-type: none"> • If the system enters the web initial login mode successfully, the PoE indicator turns green and stays on for a maximum of 10 minutes. • If the system fails to enter the initial login mode, the PoE indicator fast blinks for 10 seconds and then restores to the default status. • If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, the PoE indicator fast blinks for 10 seconds, and then returns to the default status.

7	<p>AC power input socket</p> <p>NOTICE</p> <p>The external power supply system must be connected to a circuit breaker (20 A is recommended). For safety purposes, do not use a switch without a circuit breaker.</p> <p>An AC power input socket is used with a power connector, which is included in the installation accessory package delivered with the switch. A power cable needs to be connected to the power connector onsite. If no power cable is available, you can purchase one (part number: 25030398) from Huawei.</p>	8	<p>Fiber management tray (FMT)</p> <p>NOTE</p> <p>The FMT is removable.</p> <p>A maximum of four fused fibers are supported.</p> <p>Maximum length of a fiber that can be coiled up in the FMT: 20 m (for a single bare fiber) or 1 m (for a single fiber pigtail). If two fibers are used, this length is halved.</p>
9	<p>Two optical fiber outlets</p> <p>NOTE</p> <p>The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).</p>	10	<p>Four Ethernet cable outlets</p> <p>NOTE</p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
11	<p>Rubber bungs for cable outlets</p> <p>NOTE</p> <p>Rubber bungs must be inserted into the idle cable outlets.</p>	12	<p>Three DC or AC output power cable outlets</p> <p>NOTE</p> <p>The diameter of power cables supported by an outlet is 9.3±0.5 mm.</p>
13	<p>Two AC input power cable outlets</p> <p>NOTE</p> <p>The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).</p>	14	<p>AC power output socket 2</p> <p>NOTE</p> <p>The switch provides one 24 V AC output to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p> <p>One 24 V AC output provides a maximum of 72 W power.</p>

<p>1 5</p>	<p>DC power output socket</p> <p>NOTE</p> <p>The switch provides two 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p> <p>Two 12 V DC outputs provide a total of 48 W power. The maximum power of a single output is 48 W.</p> <p>Two 12 V DC outputs and one 24 V AC output share power resources with PoE output. The total shared power is 150 W.</p>	<p>1 6</p>	<p>AC power output socket 1</p> <p>NOTICE</p> <p>Cables need to be connected to an AC power output socket onsite. Pay attention to the position of the L and N labels, ensuring that the cables are connected in the correct sockets.</p> <p>The switch provides 220 V AC power to external devices, such as strobe lights and non-PoE PTZ dome cameras. The maximum output current is 4 A.</p> <p>The internal 220 V AC power supply is used only for external power conversion. It has no circuit breaker, regulated voltage circuit, or surge protection.</p> <p>The connected devices must provide certain surge protection capabilities. Recommended values are 20 kA in differential mode and 20 kA in common mode.</p>
<p>1 7</p>	<p>Latch of the maintenance compartment</p> <p>NOTE</p> <ul style="list-style-type: none"> • You need to use the key provided in the installation accessory package to open the door of the maintenance compartment. • After the maintenance compartment door is closed, the latch is automatically locked. 	<p>1 8</p>	<p>PE cable ground terminal</p> <p>NOTE</p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>
<p>1 9</p>	<p>Door-opening alarm button</p> <p>NOTE</p> <p>When the door of the maintenance compartment is opened, a door-opening alarm is reported.</p>	<p>-</p>	<p>-</p>

Figure 5-245 Bottom of the S5720I-6X-PWH-SI-AC chassis



1	<p>Two optical fiber outlets</p> <p>NOTE</p> <p>The diameter of optical fibers supported: 8 ± 0.5 mm to 9.6 ± 0.5 mm (on the left outlet) and 13.3 ± 0.5 mm (on the right outlet).</p>	2	<p>Four Ethernet cable outlets</p> <p>NOTE</p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
3	<p>Three DC or AC output power cable outlets</p> <p>NOTE</p> <p>The diameter of power cables supported by an outlet is 9.3 ± 0.5 mm.</p>	4	<p>Two AC input power cable outlets</p> <p>NOTE</p> <p>The diameter of power cables supported: 9.5 ± 0.5 mm (on the left outlet) and 14 ± 0.5 mm (on the right outlet).</p>
5	<p>Ground screw</p> <p>NOTE</p> <p>It is used to ground the switch. The ground cable needs to be purchased separately.</p>	6	<p>Atmospheric pressure valve</p> <p>NOTE</p> <p>It ensures that the atmospheric pressure inside and outside the switch are the same.</p>
7	<p>Mounting column for a cable cover</p> <p>NOTE</p> <p>It is used to mount an optional cable cover.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-631](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-631 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none">The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-632](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-632 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-633](#).

Table 5-633 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-246 Indicators on the outside of the S5720I-6X-PWH-SI-AC

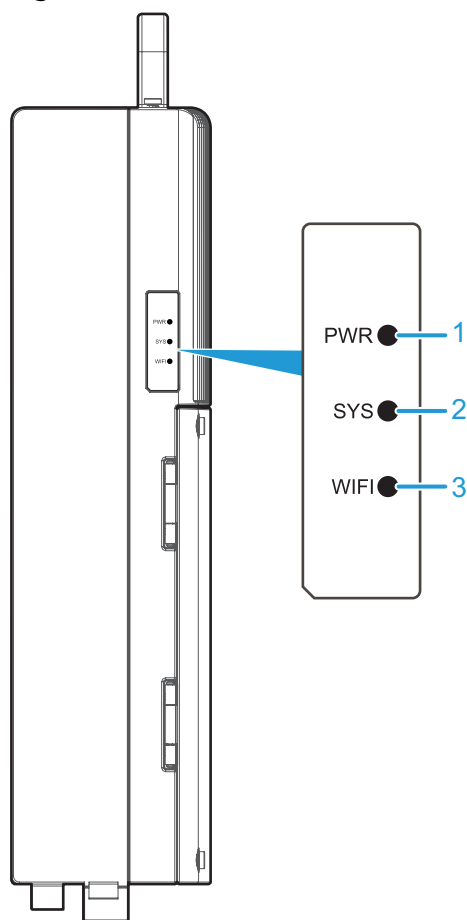


Figure 5-247 Indicators inside the maintenance compartment of the S5720I-6X-PWH-SI-AC

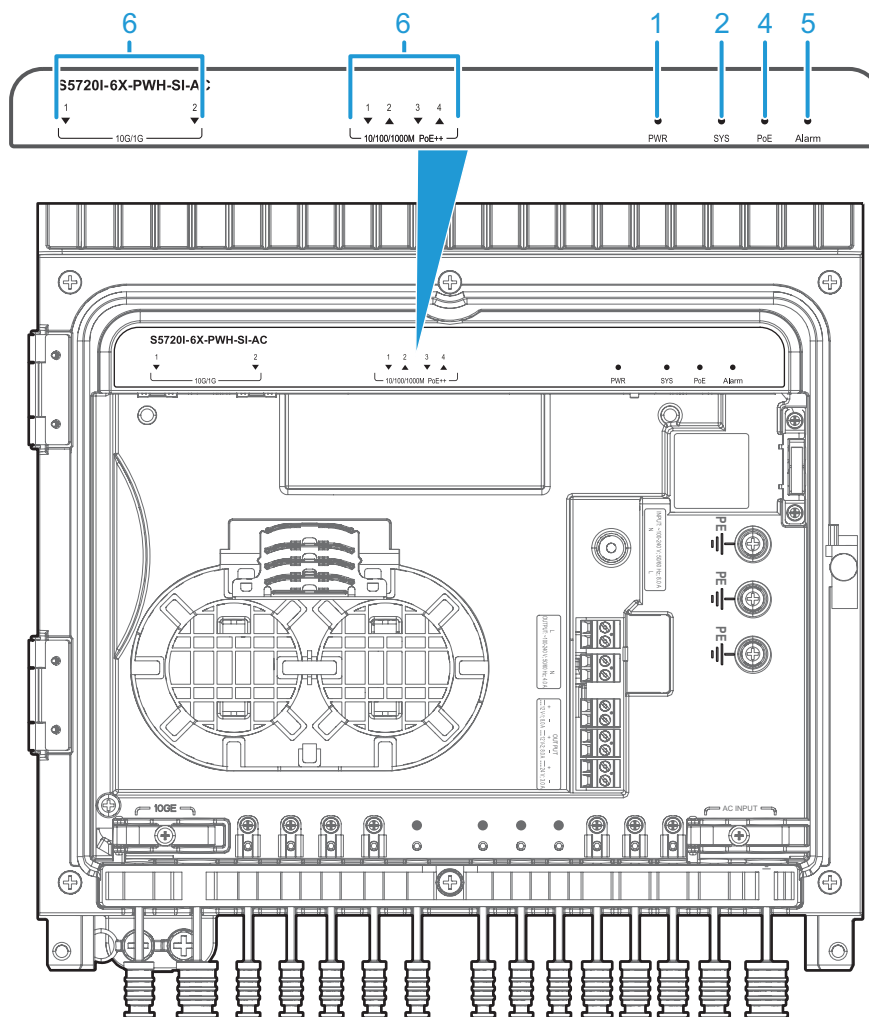


Table 5-634 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Built-in power supply indicator	-	Off	The switch is not powered on.
			Green	Steady on	The power module is supplying power normally.
2	SYS	System status indicator	-	Off	The system is not running.

No.	Indicator	Name	Color	Status	Description
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.
			Green	Slow blinking	The system is operating properly.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
3	WIFI	Wi-Fi indicator	Red	Fast blinking	The Wi-Fi function is reserved for future use. You can configure the WIFI indicator on a switch to fast blink red, helping field maintenance personnel quickly find the switch.
4	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected. In this mode, the service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode. This indicator is steady green after you successfully log in to the switch for the first time using the MODE button.
			Green	Blinking	If you fail to log in to the switch for the first time using the MODE button, this indicator fast blinks for 10 seconds, and then returns to the default status.
5	Alarm	12 V DC and 24 V AC output	-	Off	The 12 V DC or 24 V AC power supply is not in use or the output is normal.

No.	Indicator	Name	Color	Status	Description
		power indicator	Red	Steady on	A short circuit has occurred for the 12 V DC or 24 V AC power supply. Check whether the external device is short-circuited.
6	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-635 .		

Table 5-635 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow alternately	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply Configuration

The S5720I-6X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720I-6X-PWH-SI-AC can be connected to an external 220 V AC power supply. [Table 5-636](#) lists power supply configurations.

Table 5-636 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External 220 V AC power supply	150 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 4 • 802.3at (30 W per port): 4 • 802.3bt (60 W per port): 2

NOTE

The PoE output shares power resources with two 12 V DC outputs and one 24 V AC output. The shared power is 150 W.

Heat Dissipation

The S5720I-6X-PWH-SI-AC has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-637](#) lists technical specifications of the S5720I-6X-PWH-SI-AC.

Table 5-637 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41.29 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode

Item	Description
Power supply surge protection	Impulse current: <ul style="list-style-type: none">• AC input: 20 kA Surge: <ul style="list-style-type: none">• AC input: ± 6 kV in differential mode, ± 6 kV in common mode• 12 V DC output: ± 2 kV in differential mode, ± 4 kV in common mode• 24 V AC output: ± 2 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	390 mm x 300 mm x 110 mm (15.4 in. x 11.8 in. x 4.3 in.)
Weight (with packaging)	13.1 kg (28.88 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none">• Without PoE: 26 W• Total power consumption: 188 W (system power consumption: 38 W, total output power: 150 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	25 W

Item	Description
Operating temperature	-40°C to +55°C (-40°F to +131°F) NOTE When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch can start when the temperature is higher than -25°C (-13°F).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
IP rating	IP66
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010835

5.13.2 S5720I-10X-PWH-SI-AC

Version Mapping

Table 5-638 lists the mapping between the S5720I-10X-PWH-SI-AC chassis and software versions.

Table 5-638 Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-10X-PWH-SI-AC	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-248 S5720I-10X-PWH-SI-AC appearance

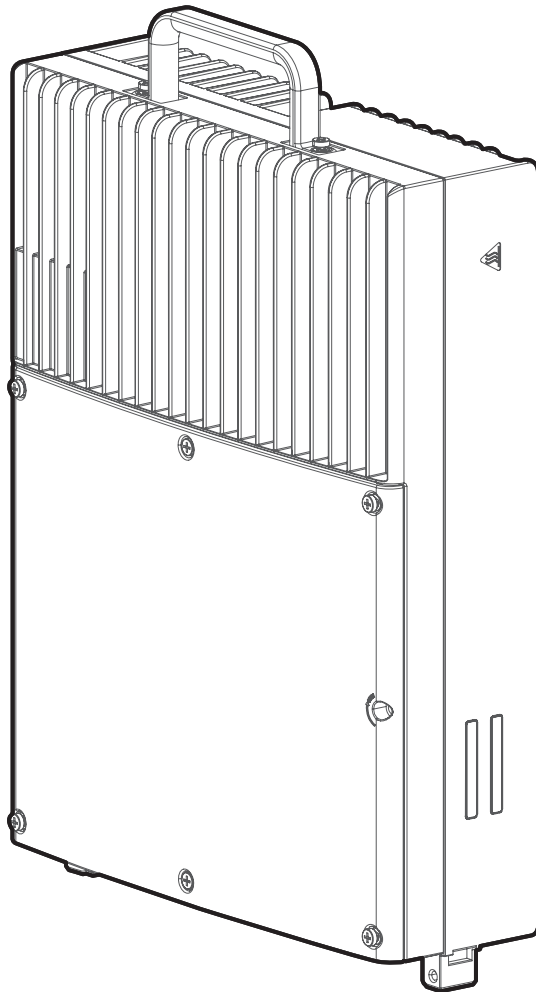
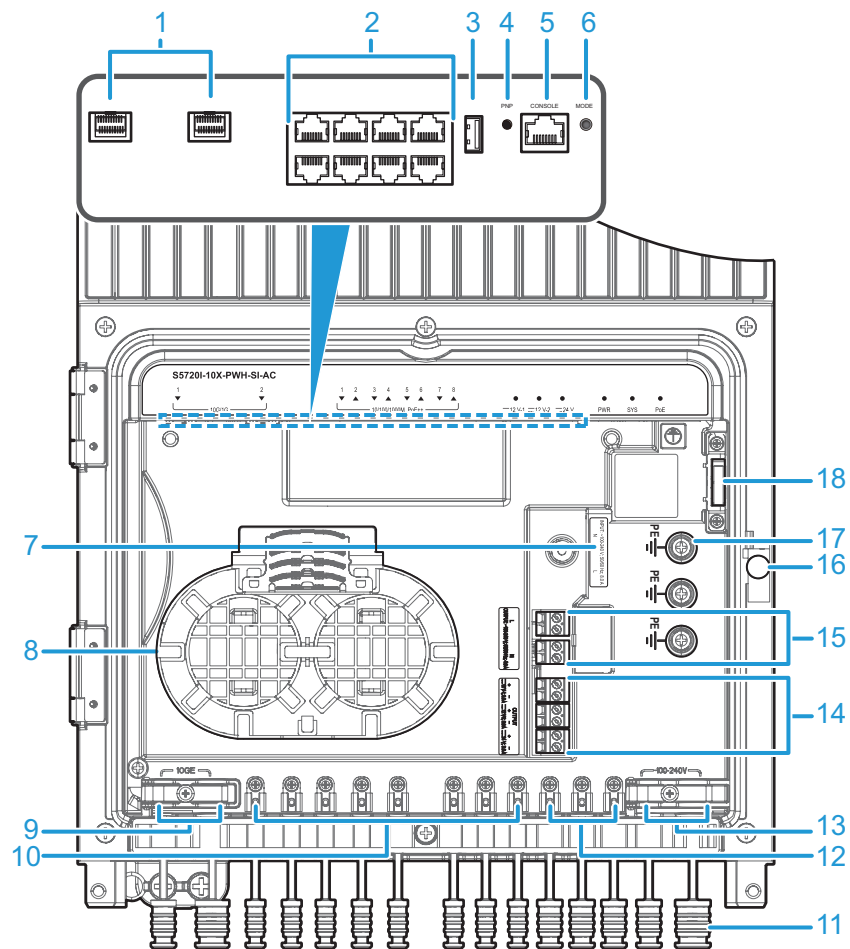


Figure 5-249 Interior of the S5720I-10X-PWH-SI-AC maintenance compartment



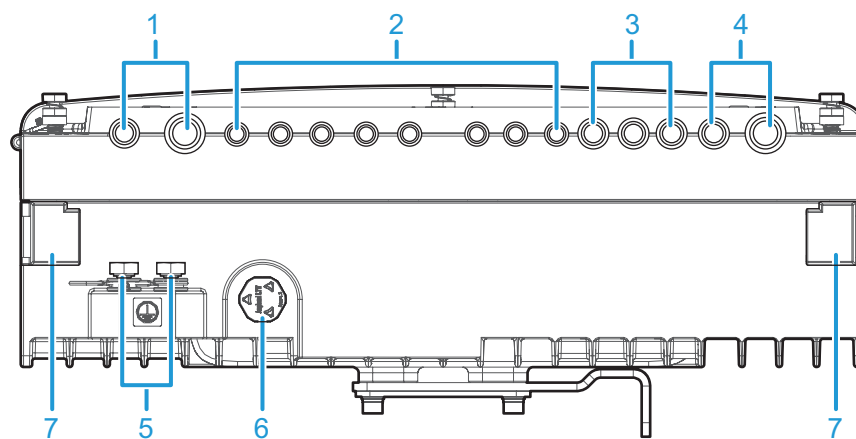
<p>1 Two 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • Industrial optical module • GPON optical module • Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S) <p>NOTE</p> <p>If one port uses a GPON optical module, the other port cannot be used.</p> <p>The locking bar of an optical port is upward. If an optical module cannot be completely inserted into the optical port, do not force it into the port. Turn the optical module 180 degrees and try again.</p>	<p>2 Eight PoE++ 10/100/1000BASE-T ports</p>
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3	One USB port	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	<p>MODE button</p> <p>NOTE</p> <p>The switch supports two indicator modes: status (default mode) and PoE. To change the current indicator mode, press the MODE button.</p> <p>Hold down the MODE button for 6 seconds and release it to start the web initial login mode. Either of the following situations will occur:</p> <ul style="list-style-type: none"> • If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of the PoE indicator is as follows: <ul style="list-style-type: none"> • If the system enters the web initial login mode successfully, the PoE indicator turns green and stays on for a maximum of 10 minutes. • If the system fails to enter the initial login mode, the PoE indicator fast blinks for 10 seconds and then restores to the default status. • If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, the PoE indicator fast blinks for 10 seconds, and then returns to the default status.

7	<p>AC power input socket</p> <p>NOTICE</p> <p>The external power supply system must be connected to a circuit breaker (20 A is recommended). For safety purposes, do not use a switch without a circuit breaker.</p> <p>An AC power input socket is used with a power connector, which is included in the installation accessory package delivered with the switch. A power cable needs to be connected to the power connector onsite. If no power cable is available, you can purchase one (part number: 25030398) from Huawei.</p>	8	<p>Fiber management tray (FMT)</p> <p>NOTE</p> <p>The FMT is removable.</p> <p>A maximum of four fused fibers are supported.</p> <p>Maximum length of a fiber that can be coiled up in the FMT: 20 m (for a single bare fiber) or 1 m (for a single fiber pigtail). If two fibers are used, this length is halved.</p>
9	<p>Two optical fiber outlets</p> <p>NOTE</p> <p>The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).</p>	10	<p>Eight Ethernet cable outlets</p> <p>NOTE</p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
11	<p>Rubber bungs for cable outlets</p> <p>NOTE</p> <p>Rubber bungs must be inserted into the idle cable outlets.</p>	12	<p>Three DC or AC output power cable outlets</p> <p>NOTE</p> <p>The diameter of power cables supported by an outlet is 9.3±0.5 mm.</p>
13	<p>Two AC input power cable outlets</p> <p>NOTE</p> <p>The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).</p>	14	<p>DC power output socket</p> <p>NOTE</p> <p>The switch provides two 12 V DC outputs and one 24 V DC output to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p> <p>Two 12 V DC outputs provide a total of 96 W power. The maximum power of a single output is 96 W.</p> <p>One 24 V DC output provides a maximum of 72 W power.</p> <p>Two 12 V DC outputs and one 24 V DC output share power resources with PoE output. The total shared power is 175 W (110 V input) or 200 W (220 V input).</p>

<p>1 5</p>	<p>AC power output socket 1</p> <p>NOTICE</p> <p>Cables need to be connected to an AC power output socket onsite. Pay attention to the position of the L and N labels, ensuring that the cables are connected in the correct sockets.</p> <p>The switch provides 110 V or 220 V AC power to external devices, such as strobe lights and non-PoE PTZ dome cameras. The maximum output current is 4 A.</p> <p>The internal 110 V or 220 V AC power supply is used only for external power conversion. It has no circuit breaker, regulated voltage circuit, or surge protection.</p> <p>The connected devices must provide certain surge protection capabilities. Recommended values are 20 kA in differential mode and 20 kA in common mode.</p>	<p>1 6</p> <p>Latch of the maintenance compartment</p> <p>NOTE</p> <ul style="list-style-type: none"> You need to use the key provided in the installation accessory package to open the door of the maintenance compartment. After the maintenance compartment door is closed, the latch is automatically locked.
<p>1 7</p>	<p>PE cable ground terminal</p> <p>NOTE</p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>	<p>1 8</p> <p>Door-opening alarm button</p> <p>NOTE</p> <p>When the door of the maintenance compartment is opened, a door-opening alarm is reported.</p>

Figure 5-250 Bottom of the S5720I-10X-PWH-SI-AC chassis



<p>1</p>	<p>Two optical fiber outlets</p> <p>NOTE</p> <p>The diameter of optical fibers supported: 8±0.5 mm to 9.6±0.5 mm (on the left outlet) and 13.3±0.5 mm (on the right outlet).</p>	<p>2</p> <p>Eight Ethernet cable outlets</p> <p>NOTE</p> <p>Cat5e and Cat6 Ethernet cables are supported.</p>
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3	<p>Three DC or AC output power cable outlets</p> <p>NOTE The diameter of power cables supported by an outlet is 9.3±0.5 mm.</p>	4	<p>Two AC input power cable outlets</p> <p>NOTE The diameter of power cables supported: 9.5±0.5 mm (on the left outlet) and 14±0.5 mm (on the right outlet).</p>
5	<p>Ground screw</p> <p>NOTE It is used to ground the switch. The ground cable needs to be purchased separately.</p>	6	<p>Atmospheric pressure valve</p> <p>NOTE It ensures that the atmospheric pressure inside and outside the switch are the same.</p>
7	<p>Mounting column for a cable cover</p> <p>NOTE It is used to mount an optional cable cover.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-639](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-639 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	<p>It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s.</p> <ul style="list-style-type: none"> The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm). If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-640](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-640 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-641](#).

Table 5-641 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-251 Indicators on the outside of the S5720I-10X-PWH-SI-AC

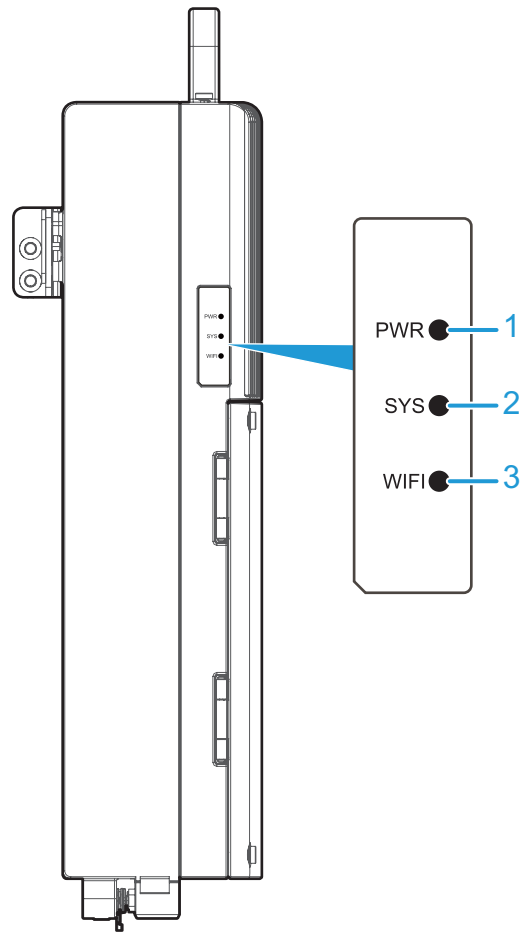


Figure 5-252 Indicators inside the maintenance compartment of the S5720I-10X-PWH-SI-AC

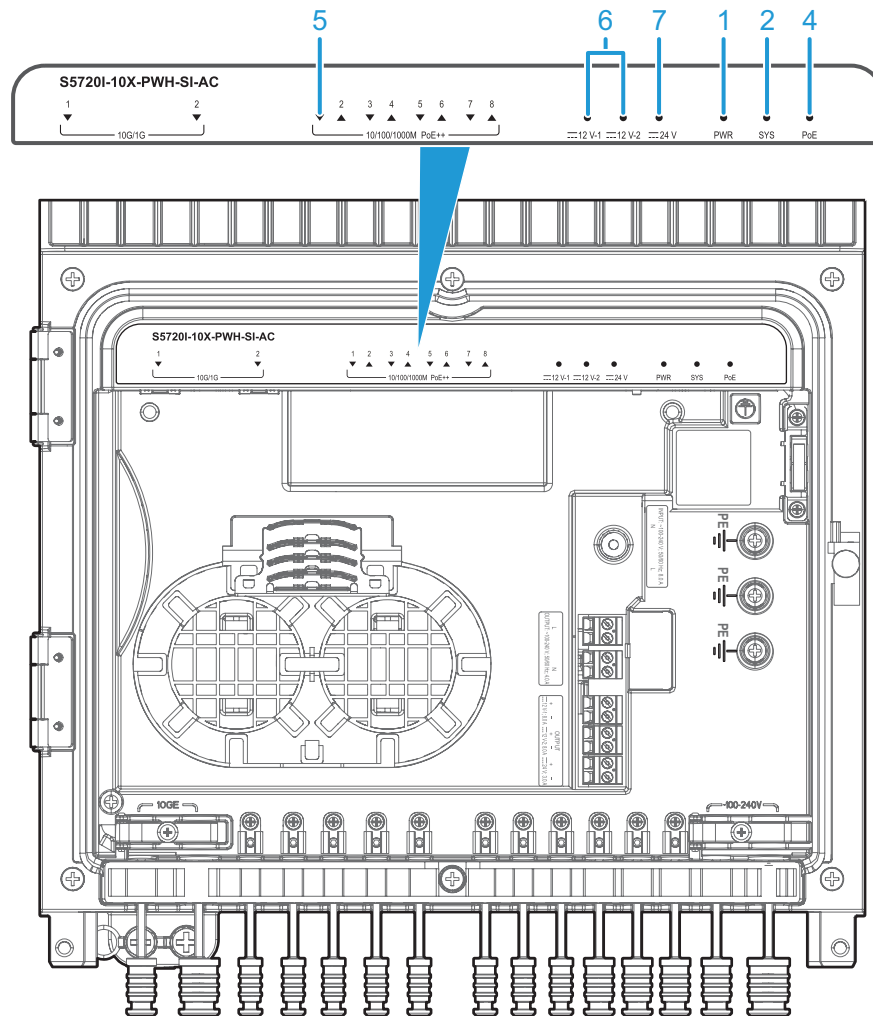


Table 5-642 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Built-in power supply indicator	-	Off	The switch is not powered on.
			Green	Steady on	The power module is supplying power normally.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is operating properly.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
			Red	Blinking	The system cannot be upgraded after a USB flash drive is inserted. The USB-based upgrade failed.
			Yellow	Blinking	The switch has restarted after a successful upgrade using a USB flash drive. You can remove the USB flash drive from the switch.
3	WIFI	Wi-Fi indicator	Red	Fast blinking	The Wi-Fi function is reserved and is not supported in V200R013C00. You can configure the WIFI indicator on a switch to fast blink red, helping field maintenance personnel quickly find the switch.
4	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected. In this mode, the service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode. This indicator is steady green after you successfully log in to the switch for the first time using the MODE button.
			Green	Blinking	If you fail to log in to the switch for the first time using the MODE button, this indicator fast blinks for 10 seconds, and then returns to the default status.
5	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-643 .		
6	12V-V1	12 V DC output indicator	-	Off	The 12 V DC power module is not supplying power.
	12V-V2		Green	Steady on	The 12 V DC power module is supplying power.

No.	Indicator	Name	Color	Status	Description
7	24V	24 V DC output indicator	-	Off	The 24 V DC power module is not supplying power.
			Green	Steady on	The 24 V DC power module is supplying power.

Table 5-643 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply Configuration

The S5720I-10X-PWH-SI-AC has a built-in power module and does not support pluggable power modules. The S5720I-10X-PWH-SI-AC can be connected to an

external 110 V or 220 V AC power supply. [Table 5-644](#) lists power supply configurations.

Table 5-644 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External 220 V AC power supply	200 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 6 • 802.3bt (60 W per port): 3
External 110 V AC power supply	175 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 5 • 802.3bt (60 W per port): 2

 **NOTE**

The PoE output shares power resources with two 12 V DC outputs and one 24 V DC output. The shared power is 175 W (110 V input) or 200 W (220 V input).

Heat Dissipation

The S5720I-10X-PWH-SI-AC has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-645](#) lists technical specifications of the S5720I-10X-PWH-SI-AC.

Table 5-645 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	34.4 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode

Item	Description
Power supply surge protection	AC input (impulse current): 20 kA DC output (surge): ± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	390 mm x 300 mm x 100 mm (15.4 in. x 11.8 in. x 3.9 in.)
Weight (with packaging)	12.8 kg (28.22 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> Without PoE: 33 W 100% PoE loads: 263 W (system power consumption: 63 W, PoE: 200 W)
Typical power consumption (30% of traffic load)	30 W <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption
Operating temperature	-40°C to +55°C (-40°F to +131°F) NOTE When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch can start when the temperature is higher than -25°C (-13°F).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
IP rating	IP66

Item	Description
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010832

5.13.3 S5720I-12X-SI-AC

Version Mapping

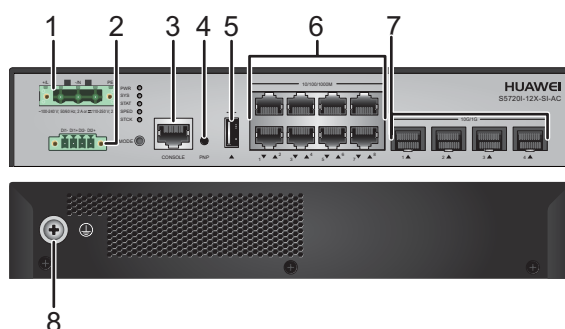
[Table 5-646](#) lists the mapping between the S5720I-12X-SI-AC chassis and software versions.

Table 5-646 Version mapping

Series	Switch Model	Software Version
S5720I-SI	S5720I-12X-SI-AC	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-253 S5720I-12X-SI-AC appearance



1	<p>AC input power socket</p> <p>NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	2	<p>Monitoring port</p> <p>NOTE It must be used with the Phoenix connector, which is included in the installation accessory package. The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door. For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.</p>
3	<p>One console port</p>	4	<p>One PNP button</p> <p>NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One USB port</p>	6	<p>Eight 10/100/1000BASE-T ports</p>
7	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • Industrial optical module • 3 m SFP+ high-speed cable • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking) 	8	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-647](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-647 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none">• The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).• If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-648](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-648 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-649](#).

Table 5-649 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232

Attribute	Description
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

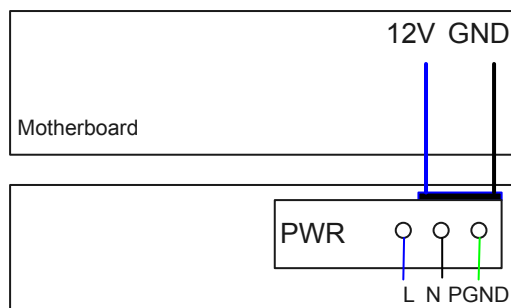
The S5720I-12X-SI-AC has similar indicators to those of the S5720I-12X-PWH-SI-DC except that the S5720I-12X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720I-12X-SI-AC has a built-in power module and does not support pluggable power modules.

[Figure 5-254](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-254 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720I-12X-SI-AC has no fans and uses natural heat dissipation.

Technical Specifications

Table 5-650 lists technical specifications of the S5720I-12X-SI-AC.

Table 5-650 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	67.89 years
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.09 in.)
Weight (with packaging)	2.65 kg (5.84 lb)
Stack ports	Eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz 110 V DC to 250 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz 110 V DC to 250 V DC
Maximum power consumption (100% throughput)	17 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	15.6 W
Operating temperature	<ul style="list-style-type: none">• -40°C to +65°C (-40°F to +149°F) (installed in the sealing cabinet)• -40°C to +70°C (-40°F to +158°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM)• -40°C to +75°C (-40°F to +167°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Protection rating	IP30
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010794

5.13.4 S5720I-12X-PWH-SI-DC

Version Mapping

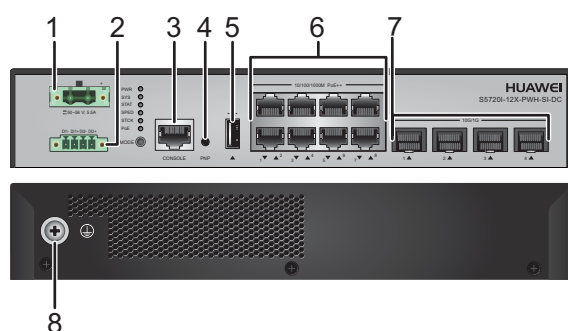
Table 5-651 lists the mapping between the S5720I-12X-PWH-SI-DC chassis and software versions.

Table 5-651 Version mapping

Series	Switch Model	Software Version
S5720I-SI	S5720I-12X-PWH-SI-DC	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-255 S5720I-12X-PWH-SI-DC appearance



<p>1</p> <p>DC input power socket</p> <p>NOTE</p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	<p>2</p> <p>Monitoring port</p> <p>NOTE</p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p> <p>The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.</p>
--	--

3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One USB port	6	Eight PoE++ 10/100/1000BASE-T ports
7	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • Industrial optical module • 3 m SFP+ high-speed cable • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking) 	8	Ground screw NOTE It is used with a ground cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-652](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-652 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none"> • The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm). • If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-653](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-653 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-654](#).

Table 5-654 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

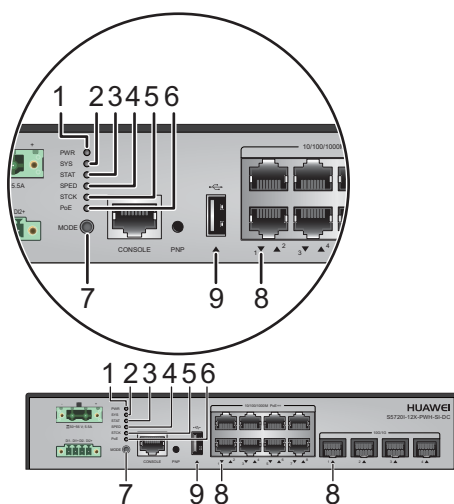
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-256 Indicators on the S5720I-12X-PWH-SI-DC



NOTE

The S5720I-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720I-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-655 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.

No.	Indicator	Name	Color	Status	Description
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
3	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-656 .		
9	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-656 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
		Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
		Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 8 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 8 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720I-12X-PWH-SI-DC has a built-in power module and does not support pluggable power modules. It can directly connect to the external power module with 50 V DC to 56 V DC power or the PAC-260WA-E or PAC240S56-CN power module. [Table 5-657](#) lists its power supply configurations.

Table 5-657 Power supply configurations

Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
External power module with 50 V to 56 V DC power supply	220 W by default; 240 W at most	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 8• 802.3at (30 W per port): 8• 802.3bt (60 W per port): 4
260 W power module (PAC-260WA-E)	220 W by default; 240 W at most	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 8• 802.3at (30 W per port): 8• 802.3bt (60 W per port): 4
240 W power module (PAC240S56-CN)	220 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 8• 802.3at (30 W per port): 7• 802.3bt (60 W per port): 3

NOTE

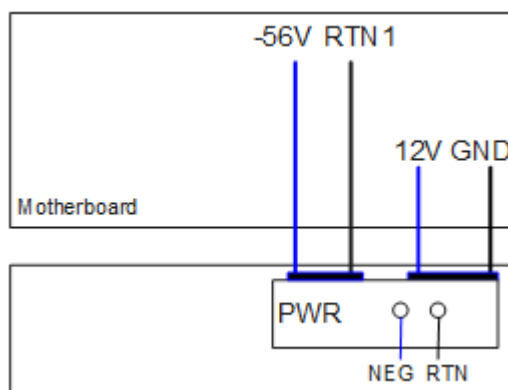
The PoE power supply of S5720I-12X-PWH-SI-DC is in direct mode. The input voltage must meet the PoE standard. If the input voltage does not meet the PoE standard, the voltage on the PD side may be too low.

If the external DC power supply is in grounding design, the non-isolated AP and camera cannot be used. In this case, isolate the AP and camera.

If a non-Huawei external DC power supply is used, ensure that it meets the following requirement:

Maximum power consumption of the device (20 W) + Number of PoE ports in use x PoE consumption of each port

Figure 5-257 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis and -56 V output to the PoE power supply.

Figure 5-257 Power supply connections of a single DC power module

NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN1: -56 V reference ground

Heat Dissipation

The S5720I-12X-PWH-SI-DC has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-658](#) lists technical specifications of the S5720I-12X-PWH-SI-DC.

Table 5-658 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	64.23 years
Mean time to repair (MTTR)	2
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.09 in.)

Item	Description
Weight (with packaging)	2.5 kg (5.51 lb)
Stack ports	Eight 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	50 V DC to 56 V DC
Maximum voltage range	46 V DC to 57 V DC
Maximum power consumption (100% throughput)	<p>Using PAC-260WA-E power module:</p> <ul style="list-style-type: none"> Without PoE: 28.8 W 100% PoE loads: 288.4 W (system power consumption: 48.4 W, PoE: 240 W) <p>Using PAC240S56-CN power module:</p> <ul style="list-style-type: none"> Without PoE: 26.5 W 100% PoE loads: 270.1 W (system power consumption: 50.1 W, PoE: 220 W)
<p>Typical power consumption (30% of traffic load)</p> <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	<p>Using PAC-260WA-E power module: 27.6 W</p> <p>Using PAC240S56-CN power module: 25 W</p>
Operating temperature	<ul style="list-style-type: none"> -40°C to +65°C (-40°F to +149°F) (installed in the sealing cabinet) -40°C to +70°C (-40°F to +158°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) -40°C to +75°C (-40°F to +167°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>

Item	Description
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Protection rating	IP30
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010795

5.13.5 S5720I-28X-SI-AC

Version Mapping

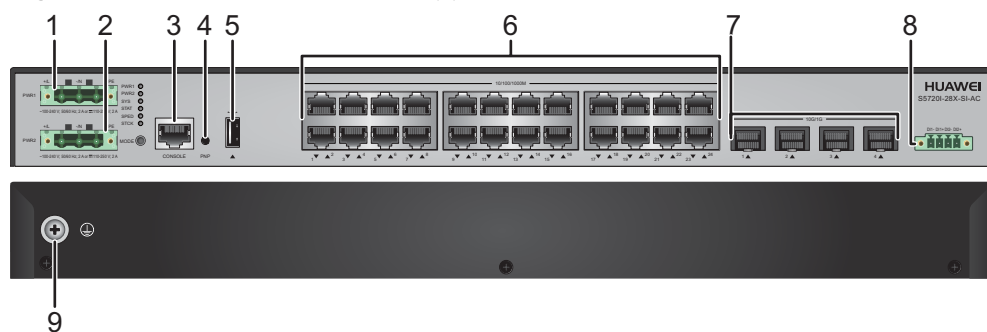
Table 5-659 lists the mapping between the S5720I-28X-SI-AC chassis and software versions.

Table 5-659 Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-28X-SI-AC	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-258 S5720I-28X-SI-AC appearance



1	AC power input port 1 NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.	2	AC power input port 2 NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.
3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One USB port	6	Twenty-four 10/100/1000BASE-T ports
7	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • Industrial optical module • 3 m SFP+ high-speed cable • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking) 	8	Monitoring port NOTE It must be used with the Phoenix connector, which is included in the installation accessory package. The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door. For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.
9	Ground screw NOTE It is used with a ground cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-660** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-660 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none">• The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).• If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-661](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-661 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-662](#).

Table 5-662 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232

Attribute	Description
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

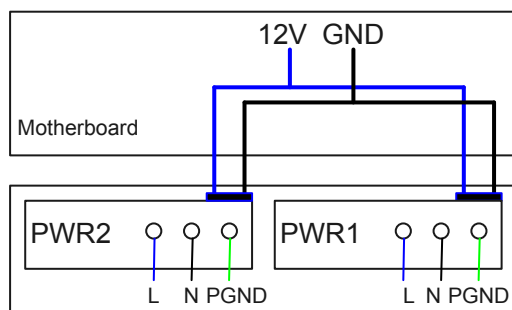
The S5720I-28X-SI-AC has similar indicators to those of the S5720I-28X-PWH-SI-AC except that the S5720I-28X-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720I-28X-SI-AC has two built-in power modules for 1+1 power redundancy and does not support pluggable power modules.

Figure 5-259 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

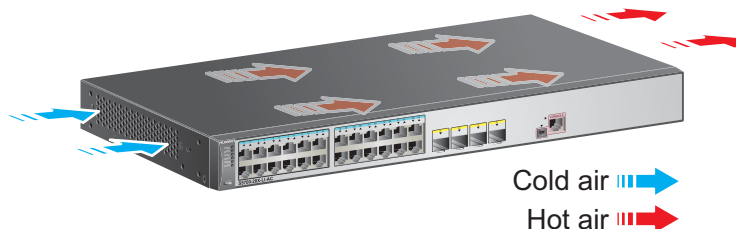
Figure 5-259 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720I-28X-SI-AC has two built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-663](#) lists technical specifications of the S5720I-28X-SI-AC.

Table 5-663 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	72.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Supported
RPS	Not supported

Item	Description
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz 110 V DC to 250 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz 110 V DC to 250 V DC
Maximum power consumption (100% throughput, full speed of fans)	29.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	24.8 W
Operating temperature	-40°C to +65°C (-40°F to +149°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Protection rating	IP20
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification

Item	Description
Part number	98010796

5.13.6 S5720I-28X-PWH-SI-AC

Version Mapping

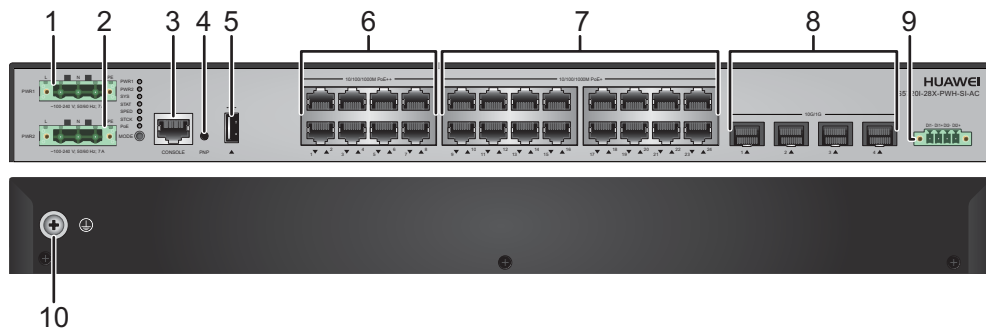
Table 5-664 lists the mapping between the S5720I-28X-PWH-SI-AC chassis and software versions.

Table 5-664 Version mapping

Series	Model	Software Version
S5720I-SI	S5720I-28X-PWH-SI-AC	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-260 S5720I-28X-PWH-SI-AC appearance



1	<p>AC power input port 1</p> <p>NOTE</p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	2	<p>AC power input port 2</p> <p>NOTE</p> <p>It must be used with the Phoenix connector, which is included in the installation accessory package.</p>
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3	One console port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One USB port	6	Eight PoE++ 10/100/1000BASE-T ports
7	Sixteen PoE+ 10/100/1000BASE-T ports	8	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • Industrial optical module • 3 m SFP+ high-speed cable • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
9	Monitoring port NOTE It must be used with the Phoenix connector, which is included in the installation accessory package. The monitoring port detects the status of external devices, for example, monitoring the opening and closing of the cabinet door. For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the CLI-based Configuration Guide - Device Management Configuration Guide.	10	Ground screw NOTE It is used with a ground cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-665](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-665 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	It supports long-distance interconnection with Huawei cameras. For example, it supports the distance of 200 m at 100 Mbit/s and supports the distance of 250 m at 10 Mbit/s. <ul style="list-style-type: none">• The supported camera models are M2220-I, M2221-FL, M2221-VL, M2260-I, and M2220-I(8-32mm).• If the transmission distance exceeds 100 m, Category 5E or higher Ethernet cables are required.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-666](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-666 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-667](#).

Table 5-667 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

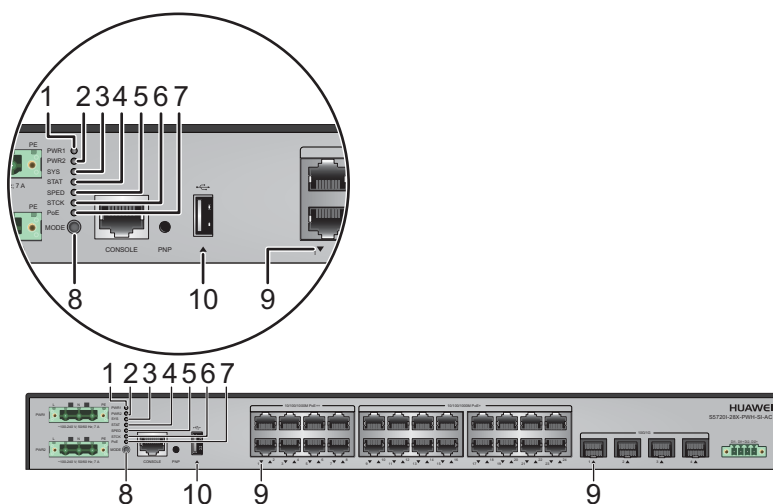
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-261 Indicators on the S5720I-28X-PWH-SI-AC



 **NOTE**

The S5720I-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720I-SI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-668 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none">• A power module is available in this slot but its power switch is in the OFF position.• A power module is available in this slot but it is not connected to a power source.• The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<p>The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> • If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. • If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-669 .		

No.	Indicator	Name	Color	Status	Description
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-669 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> • The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. • The total power consumption of PDs has reached the maximum power of the switch. • The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is blinking, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720I-28X-PWH-SI-AC has two built-in power modules for 1+1 power redundancy and does not support pluggable power modules.

The following two PoE power supply modes are available:

- High-power mode (default): When double power modules are used, they provide 369.6 W PoE power for the eight PoE++ ports and 369.6 W PoE power for the sixteen PoE+ ports (total of 739.2 W PoE power). When either of the two power modules fails, the eight PoE++ ports can supply power for PDs normally; however, the PDs connected to the sixteen PoE+ ports are powered off, and the PoE function is unavailable. When a single power module is used, only the eight PoE++ ports can supply PoE power for PDs.
- PoE backup mode: You can run the **poe-power backup-mode** command to manually switch the PoE power supply mode to the backup mode. In backup mode, the entire system provides 369.6 W PoE power regardless of whether a single power module or double power modules are used. That is, all 24 ports share the 369.6 W power. When double power modules are used, they work in 1+1 redundancy mode.

NOTE

When the power supply mode is manually switched to the PoE backup mode, the PDs connected to all ports are powered off and then powered on again.

When the switch works in PoE backup mode, the PDs connected to all ports are powered off and then powered on again if the switch is restarted.

Table 5-670 lists its power supply configurations.

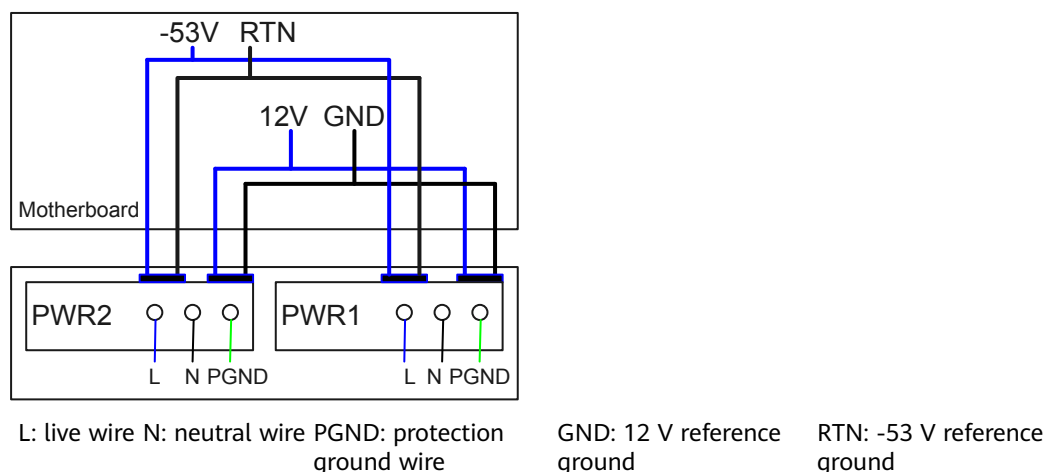
Table 5-670 Power supply configurations

Power Supply Mode	Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
High-power mode	Single power module	369.6 W	Eight PoE++ ports: <ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 8 • 802.3bt (60 W per port): 6 Sixteen PoE+ ports: N/A

Power Supply Mode	Power Supply Configuration	Available PoE Power	Maximum Number of Ports (Fully Loaded)
	Double power modules	739.2 W	Eight PoE++ ports: <ul style="list-style-type: none">• 802.3af (15.4 W per port): 8• 802.3at (30 W per port): 8• 802.3bt (60 W per port): 6 Sixteen PoE+ ports: <ul style="list-style-type: none">• 802.3af (15.4 W per port): 16• 802.3at (30 W per port): 12
PoE backup mode	Single power module	369.6 W	Twenty-four ports: <ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 12• 802.3bt (60 W per port): 6 (Only the eight PoE++ ports support this configuration.)
	Double power modules		

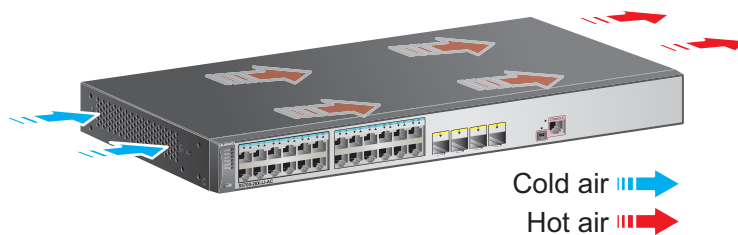
Figure 5-262 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-262 Power supply by dual AC PoE power modules



Heat Dissipation

The S5720I-28X-PWH-SI-AC has four built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-671 lists technical specifications of the S5720I-28X-PWH-SI-AC.

Table 5-671 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45.94 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)
Weight (with packaging)	6.7 kg (14.77 lb)
Stack ports	Twenty-four 10/100/1000BASE-T ports and four 10G SFP+ ports
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Without PoE: 57.8 W 100% PoE loads: 905 W (system power consumption: 165.8 W, PoE: 739.2 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	34.6 W
Operating temperature	-40°C to +65°C (-40°F to +149°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Protection rating	IP20
Noise under normal temperature (27°C, sound power)	< 47 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010797

5.14 S5730-SI

5.14.1 S5730-48C-SI-AC

Version Mapping

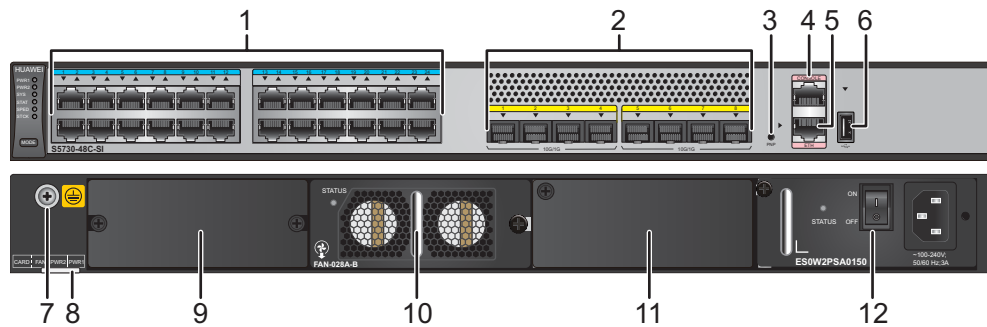
[Table 5-672](#) lists the mapping between the S5730-48C-SI-AC chassis and software versions.

Table 5-672 Version mapping

Series	Model	Software Version
S5730-SI	S5730-48C-SI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-263 S5730-48C-SI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6	One USB port

7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	10	Fan slot NOTE Applicable fan module: FAN-028A-B
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-673](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-673 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-674](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-674 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-675](#).

Table 5-675 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-676](#) describes the attributes of an ETH management port.

Table 5-676 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-48C-SI-AC has similar indicators to those of the S5730-68C-PWR-SI-AC except that the S5730-48C-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-48C-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-264](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-264 Power supply connections of dual DC power modules

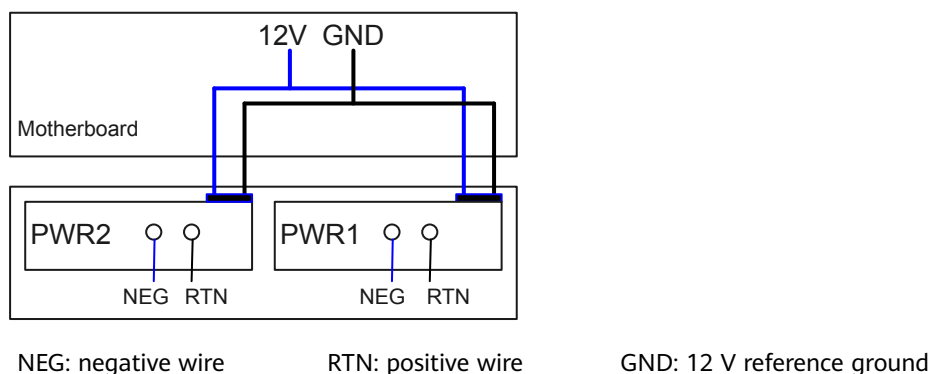
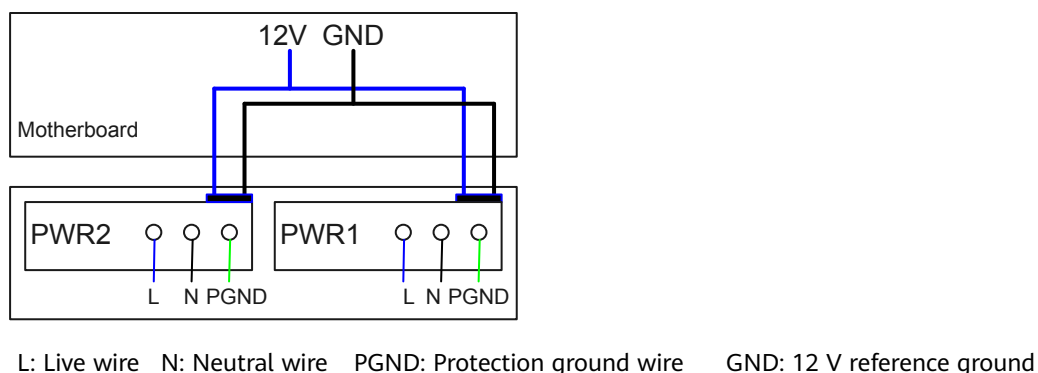


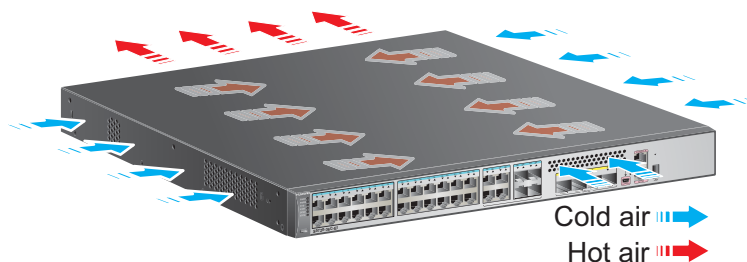
Figure 5-265 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-265 Power supply connections of dual AC power modules



Heat Dissipation

The S5730-48C-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-677](#) lists technical specifications of the S5730-48C-SI-AC.

Table 5-677 Technical specifications

Item	Parameter
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	47.83 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.2 kg (18.08 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	62.4 W (without card)

Item	Parameter
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	39.02 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.4 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Parameter
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010710

5.14.2 S5730-48C-PWR-SI-AC

Version Mapping

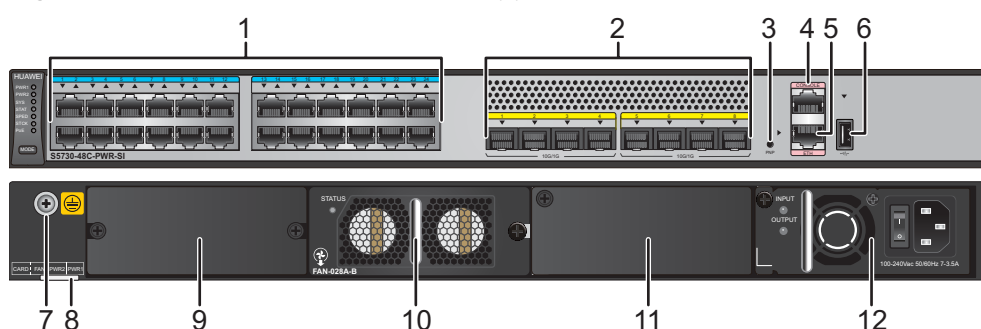
Table 5-678 lists the mapping between the S5730-48C-PWR-SI-AC chassis and software versions.

Table 5-678 Version mapping

Series	Model	Software Version
S5730-SI	S5730-48C-PWR-SI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-266 S5730-48C-PWR-SI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	10	Fan slot NOTE Applicable fan module: FAN-028A-B

1	Power module slot 2	1	Power module slot 1
1	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	2	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-679](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-679 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-680](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-680 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-681](#).

Table 5-681 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-682](#) describes the attributes of an ETH management port.

Table 5-682 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-48C-PWR-SI-AC has the same types of indicators as the S5730-68C-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-48C-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-683](#) lists its power supply configurations.

Table 5-683 Power supply configurations

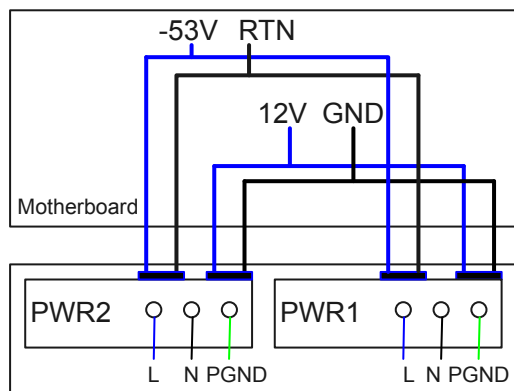
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-267](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

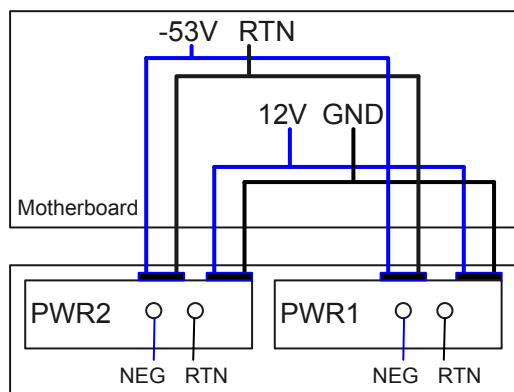
Figure 5-267 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-268 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

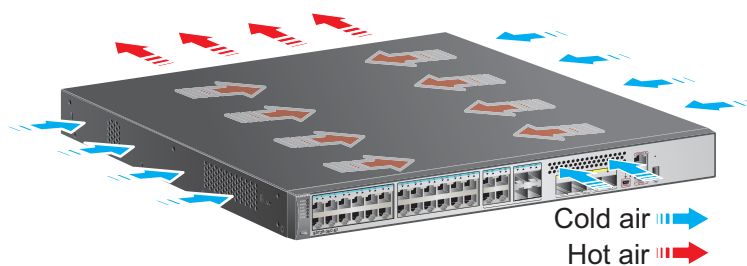
Figure 5-268 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-48C-PWR-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-684 lists technical specifications of the S5730-48C-PWR-SI-AC.

Table 5-684 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.3 kg (18.3 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 83.2 W (without card) • 100% PoE loads: 967 W (system power consumption: 227.8 W, PoE: 739.2 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	44.2 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 57.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010712

5.14.3 S5730-68C-SI-AC

Version Mapping

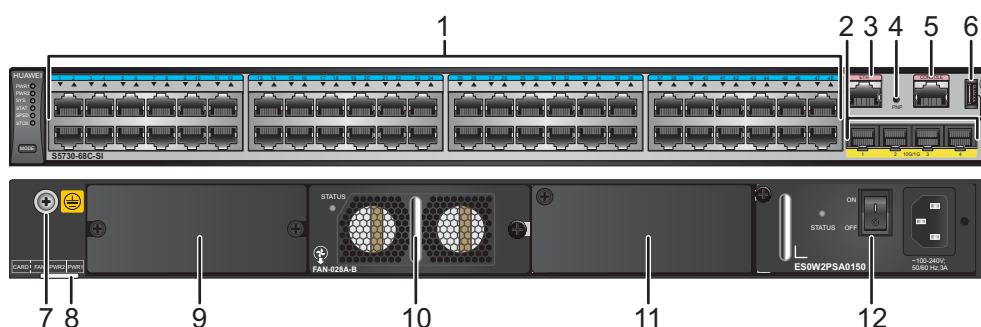
Table 5-685 lists the mapping between the S5730-68C-SI-AC chassis and software versions.

Table 5-685 Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-SI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-269 S5730-68C-SI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>

9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	10	Fan slot NOTE Applicable fan module: FAN-028A-B
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-686](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-686 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-687](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-687 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-688](#).

Table 5-688 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-689](#) describes the attributes of an ETH management port.

Table 5-689 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

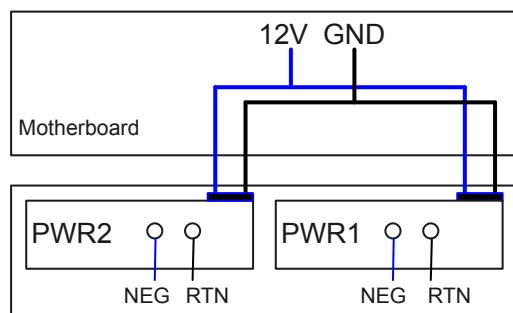
The S5730-68C-SI-AC has similar indicators to those of the S5730-68C-PWR-SI-AC except that the S5730-68C-SI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-SI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-270](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

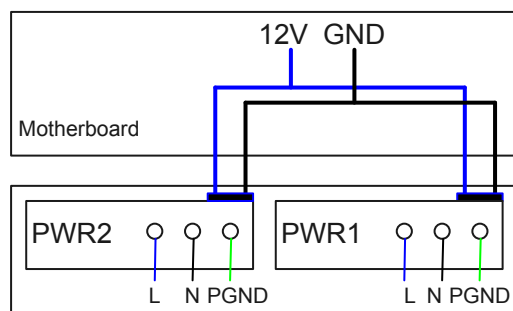
Figure 5-270 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 5-271 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-271 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-68C-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.

NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-690 lists technical specifications of the S5730-68C-SI-AC.

Table 5-690 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	65.4 W (without card)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	42.3 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010713

5.14.4 S5730-68C-PWR-SI-AC

Version Mapping

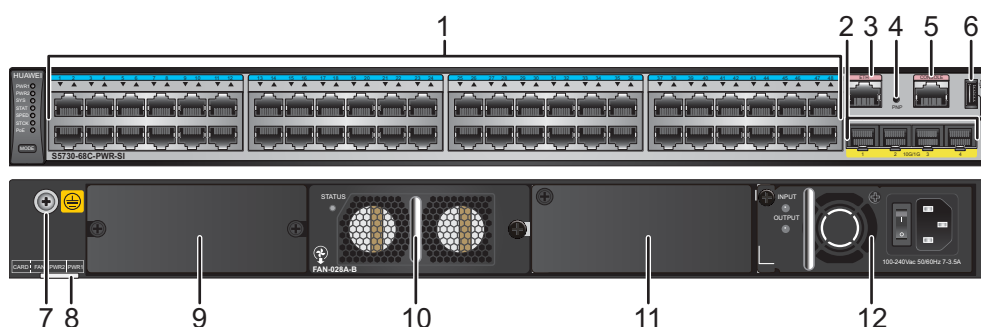
Table 5-691 lists the mapping between the S5730-68C-PWR-SI-AC chassis and software versions.

Table 5-691 Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-PWR-SI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-272 S5730-68C-PWR-SI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>

9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	1 0	Fan slot NOTE Applicable fan module: FAN-028A-B
1 1	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	1 2	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-692](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-692 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-693](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-693 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-694](#).

Table 5-694 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-695](#) describes the attributes of an ETH management port.

Table 5-695 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

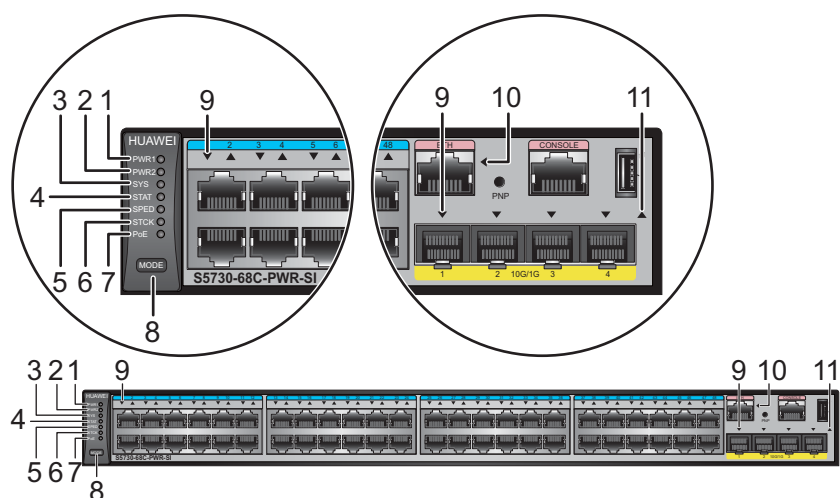
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-273 Indicators on the S5730-68C-PWR-SI-AC



NOTE

The S5730-SI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 5-696 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.

No.	Indicator	Name	Color	Status	Description
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch.If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled.If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-697 .		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-697 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> • The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. • The total power consumption of PDs has reached the maximum power of the switch. • The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is blinking, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730-68C-PWR-SI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-698](#) lists its power supply configurations.

Table 5-698 Power supply configurations

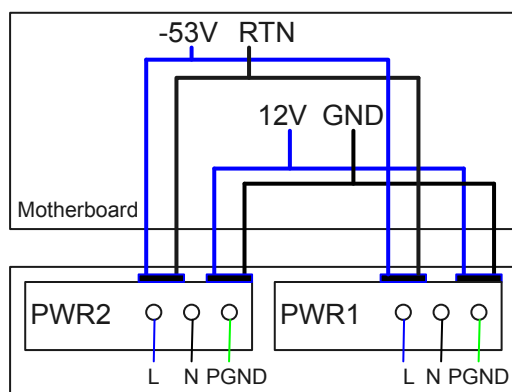
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-274 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

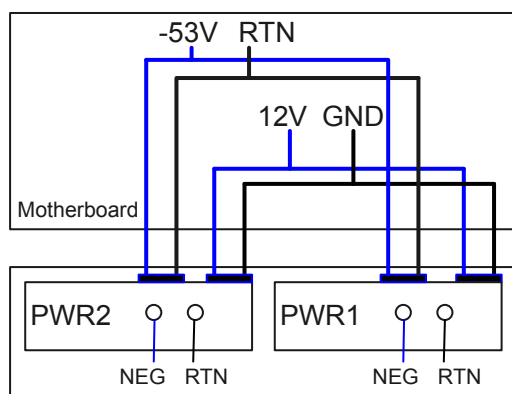
Figure 5-274 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-275 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

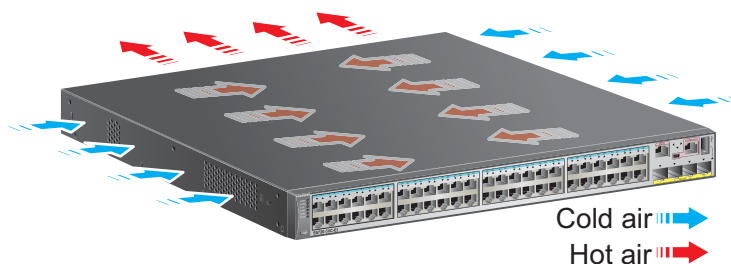
Figure 5-275 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-68C-PWR-SI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-699 lists technical specifications of the S5730-68C-PWR-SI-AC.

Table 5-699 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	43.28 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.8 kg (19.4 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 68.3 W (without card) 100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card)
Typical power consumption (30% of traffic load)	50.1 W (without card)
	<ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption

Item	Description
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.</p>
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010714

5.14.5 S5730-68C-PWR-SI

Version Mapping

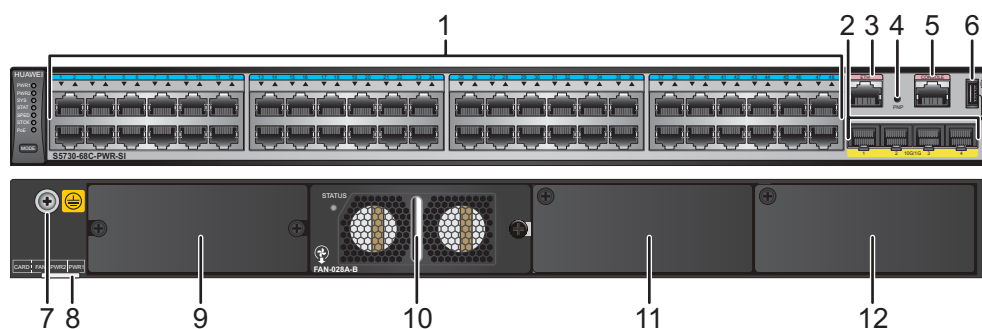
Table 5-700 lists the mapping between the S5730-68C-PWR-SI chassis and software versions.

Table 5-700 Version mapping

Series	Model	Software Version
S5730-SI	S5730-68C-PWR-SI	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-276 S5730-68C-PWR-SI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	10	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: FAN-028A-B</p>

1	Power module slot 2	1	Power module slot 1
1	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module • 1150 W AC PoE power module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions) 	2	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module • 1150 W AC PoE power module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-701](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-701 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-702](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-702 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-703](#).

Table 5-703 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-704](#) describes the attributes of an ETH management port.

Table 5-704 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to

the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-68C-PWR-SI has the same types of indicators as the S5730-68C-PWR-SI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-PWR-SI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. [Table 5-705](#) lists its power supply configurations.

Table 5-705 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 24
1150 W (220 V)	–	785.4 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 48

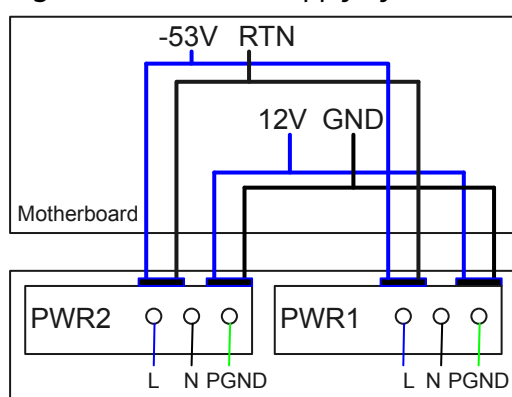
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 29 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-277 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

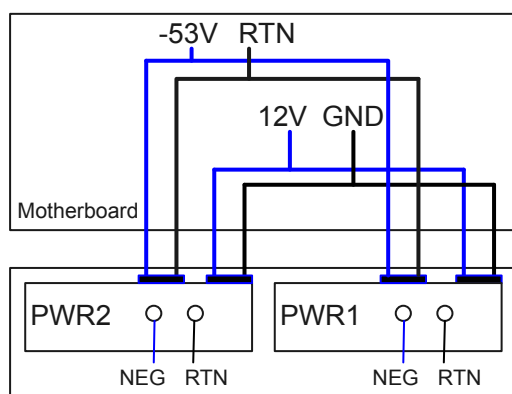
Figure 5-277 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-278 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

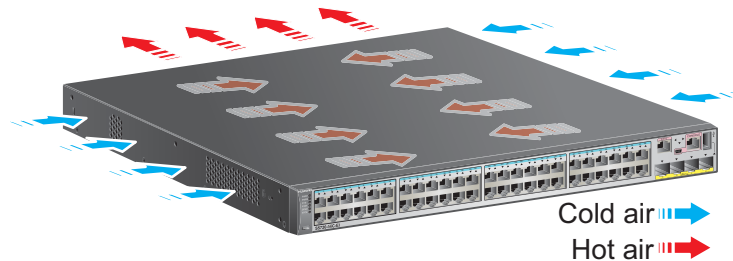
Figure 5-278 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-68C-PWR-SI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-706](#) lists technical specifications of the S5730-68C-PWR-SI.

Table 5-706 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	43.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<p>44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)</p> <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).</p>

Item	Description
Weight (with packaging)	8 kg (17.64 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Using 650 W DC power modules or 500 W AC power modules <ul style="list-style-type: none"> - Not providing the PoE function: 68.3 W (without card) - 100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card) ● Using 1150 W AC power modules or 1000 W AC power modules <ul style="list-style-type: none"> - Not providing the PoE function: 68.3 W (without card) - 100% PoE loads: 1733 W (system power consumption: 293 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	50.1 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 64.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010779

5.15 S5700-EI

5.15.1 S5700-28C-EI

Version Mapping

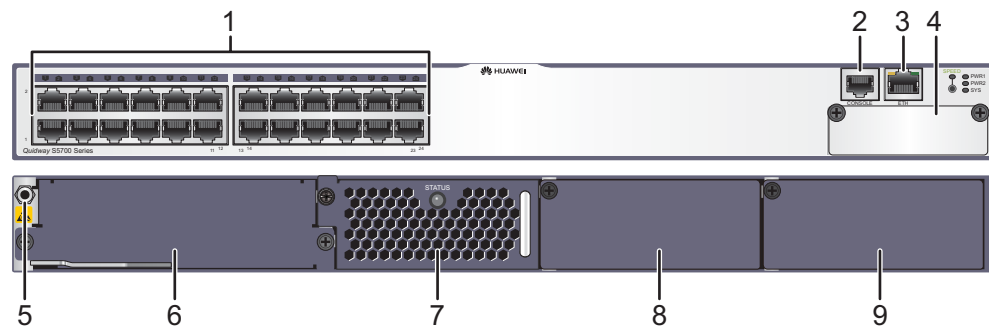
[Table 5-707](#) lists the mapping between the S5700-28C-EI and software versions.

Table 5-707 Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-EI	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 5-279 S5700-28C-EI appearance



1	Twenty-four 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
5	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 9.27 ES5D00ETPC00 (Stack Rear Card) 9.28 ES5D00ETPB00 (Extended Rear Card)
7	Fan slot NOTE Applicable fan module: CX7E1FANA fan module	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module

9	Power module slot 1	-	-
	NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-708](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-708 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-709](#).

Table 5-709 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 5-710** describes the attributes of an ETH management port.

Table 5-710 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

Figure 5-280 Indicators on the S5700-28C-EI

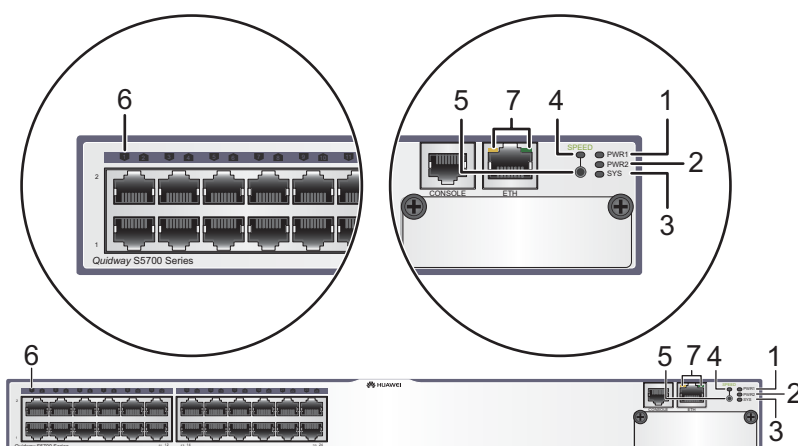


Table 5-711 Indicator Description

No.	Indicator/ Button	Color	Description
1	PWR1: power module indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none">• A power module is available in this slot but its power switch is in the OFF position.• A power module is available in this slot but it is not connected to a power source.• The power module in this slot has failed.
2	PWR2: power module indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none">• A power module is available in this slot but its power switch is in the OFF position.• A power module is available in this slot but it is not connected to a power source.• The power module in this slot has failed.

No.	Indicator/ Button	Color	Description
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is not running normally or is starting. Slow blinking: The system is running normally.
		Yellow	Steady on: The system is performing self-check during startup.
		Red	Steady on: The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	MODE: mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. When you press this button a third time, the mode indicator turns off. <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-712 .	

No.	Indicator/ Button	Color	Description
7	ETH indicator	-	Off: No link is established on the port.
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 5-712 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28C-EI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

Figure 5-281 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-281 Power supply connections of dual DC power modules

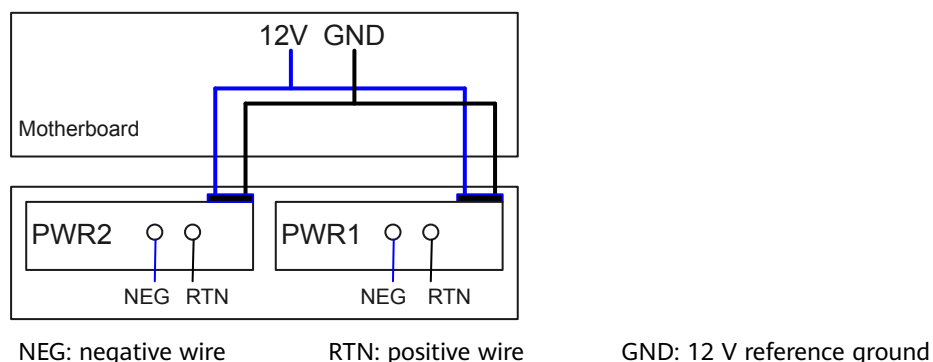
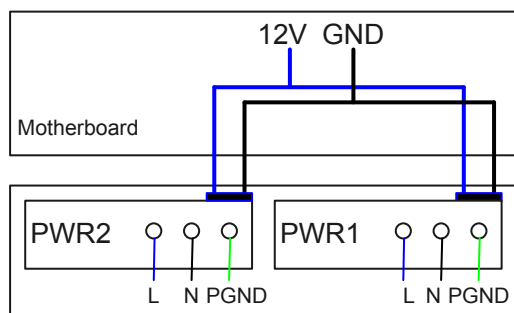


Figure 5-282 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-282 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

Table 5-713 lists technical specifications of the S5700-28C-EI.

Table 5-713 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	53.11 years when a 2-port 10GE interface card is configured, 68.33 years when a 4-port GE front card is configured, 25.52 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±2 kV in common mode

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	60 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02352338

5.15.2 S5700-28C-EI-24S

Version Mapping

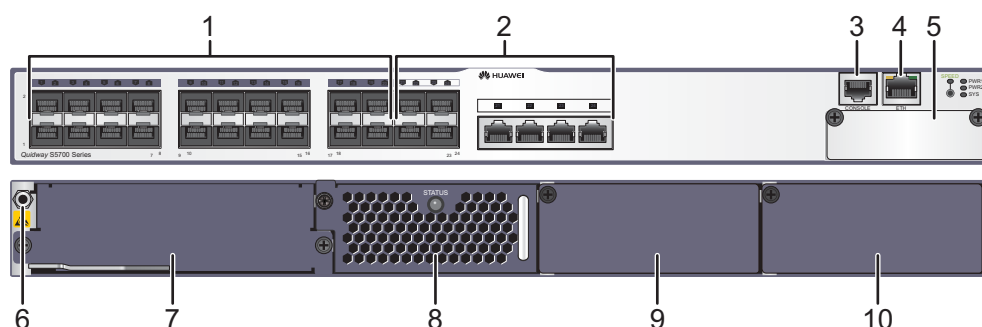
Table 5-714 lists the mapping between the S5700-28C-EI-24S and software versions.

Table 5-714 Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-EI-24S	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 5-283 S5700-28C-EI-24S appearance



1	<p>Twenty 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	One console port	4	One ETH management port

5	<p>Front card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> 9.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card) 	6	<p>ESD jack</p> <p>NOTE</p> <p>Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.</p>
7	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> 9.27 ES5D00ETPC00 (Stack Rear Card) 9.28 ES5D00ETPB00 (Extended Rear Card) 	8	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module:</p> <p>CX7E1FANA fan module</p>
9	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module 	10	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-715](#) describes the attributes of a 100/1000BASE-X port.

Table 5-715 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or

an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-716](#).

Table 5-716 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the

Configuration Guide - Basic Configurations. [Table 5-717](#) describes the attributes of an ETH management port.

Table 5-717 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

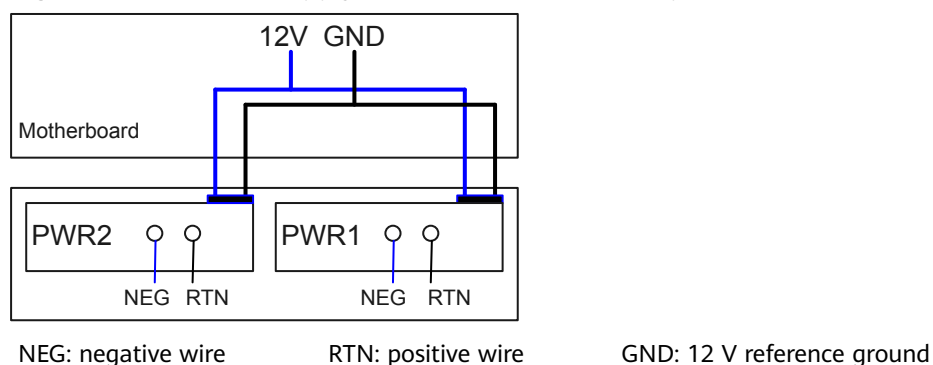
The S5700-28C-EI-24S has the same types of indicators as the S5700-28C-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28C-EI-24S can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the AC and DC power modules cannot be configured on the same device, while in V200R005C00 and later versions, they can be configured on the same device.

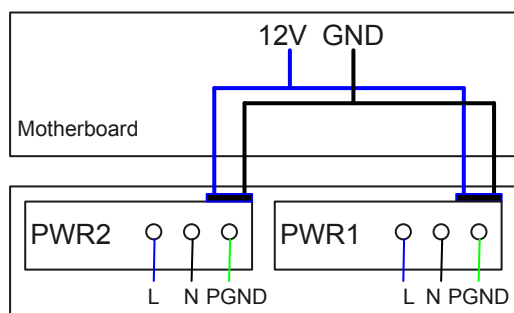
[Figure 5-284](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-284 Power supply connections of dual DC power modules



[Figure 5-285](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-285 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-EI-24S uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-718 lists technical specifications of the S5700-28C-EI-24S.

Table 5-718 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	52.80 years when no interface card is configured, 41.33 years when a 2-port 10GE interface card is configured, 50.00 years when a 4-port GE front card is configured, 26.52 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	±2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode Using DC power modules: ±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	63 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification

Item	Description
Part number	02352350

5.15.3 S5700-28C-PWR-EI

Version Mapping

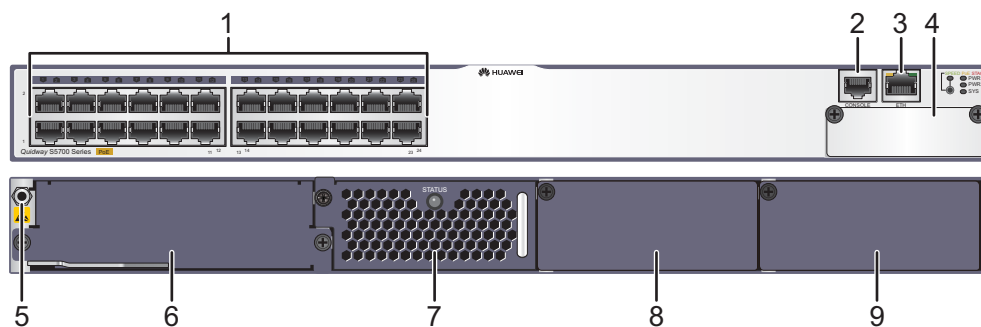
Table 5-719 lists the mapping between the S5700-28C-PWR-EI and software versions.

Table 5-719 Version mapping

Series	Model	Software Version
S5700-EI	S5700-28C-PWR-EI	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 5-286 S5700-28C-PWR-EI appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)

5	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) • 9.28 ES5D00ETPB00 (Extended Rear Card)
7	Fan slot NOTE Applicable fan module: CX7E1FANA fan module	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-720](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-720 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-721](#).

Table 5-721 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 5-722** describes the attributes of an ETH management port.

Table 5-722 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

Figure 5-287 Indicators on the S5700-28C-PWR-EI

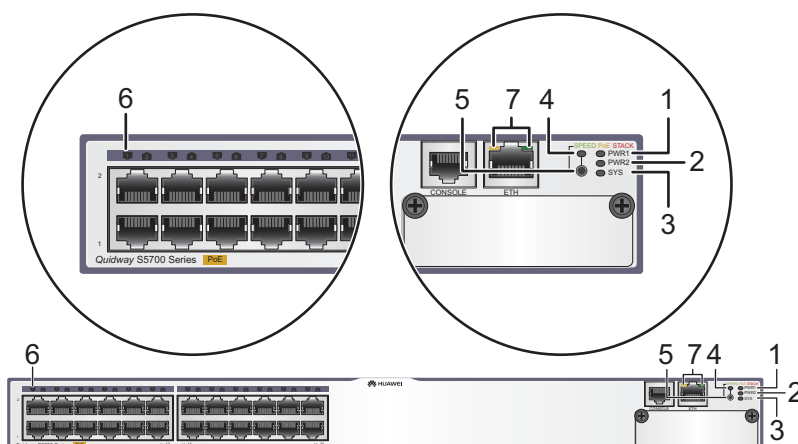


Table 5-723 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The system power and PoE power are faulty.

Number	Indicator/Button	Color	Description
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none">• A power module is available in this slot but its power switch is in the OFF position.• A power module is available in this slot but it is not connected to a power source.• The system power and PoE power are faulty.
		Yellow	Steady on: If a single power module is installed, the PoE power is out of range. If dual power modules are installed, the system power or PoE power is out of range.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none">• Steady on: The system is not operating properly or is starting.• Slow blinking: The system is running normally.
		Yellow	Steady on: The system is performing self-check during startup.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.

Number	Indicator/ Button	Color	Description
4	Mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
		Yellow	Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. When you press this button a second time, the mode indicator turns red and the service port indicators show the stack status. When you press this button a third time, the mode indicator turns yellow and the service port indicators show the PoE status. When you press this button a fourth time, the mode indicator turns off. <p>If you do not press the button within 45 seconds, the mode indicator restores to status mode.</p>
6	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-724 .	
7	ETH indicator	-	Off: No link is established on the port.

Number	Indicator/Button	Color	Description
		Green	Steady on: The port is connected.
		Yellow	Blinking: The port is sending or receiving data.

Table 5-724 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none">• Off: The port is not connected or has been shut down.• Steady on: The port is connected.• Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none">• Off: The port is not connected or has been shut down.• Steady on:<ul style="list-style-type: none">10M/100M/1000M port: The port is operating at 10/100 Mbit/s.1000M/10GE port: The port is operating at 1000 Mbit/s.• Blinking:<ul style="list-style-type: none">10M/100M/1000M port: The port is operating at 1000 Mbit/s.1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	Green	<ul style="list-style-type: none">• Off: The port does not provide PoE power.• Steady on: The port is providing PoE power.• Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.

Display Mode	Color	Description
Stack	Green	<ul style="list-style-type: none"> • Off: The STCK mode is not selected. • If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> - If the indicator of a port is steady on, the number of this port is the stack ID of the switch. - If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. • If the indicator is blinking, the switch is a master switch: <ul style="list-style-type: none"> - If the indicator of a port is blinking, the number of this port is the stack ID of the switch. - If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 5-725](#) lists its power supply configurations.

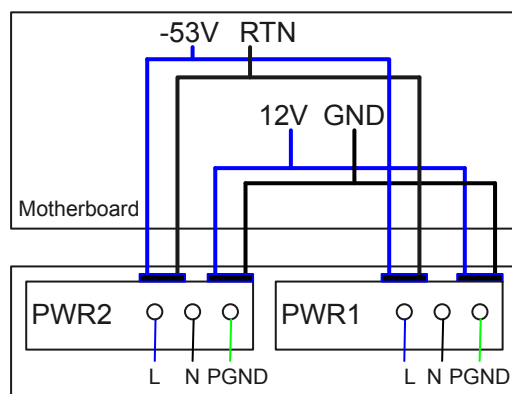
Table 5-725 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	-	123.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 8 • 802.3at (30 W per port): 4
500 W	-	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	250 W	246.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 16 802.3at (30 W per port): 8
500 W	500 W	369.6 W (with PCB of version A for the S5700-28C-PWR-EI)	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
		739.2 W (with PCB of version B for the S5700-28C-PWR-EI)	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

Figure 5-288 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-288 Power supply by dual AC PoE power modules



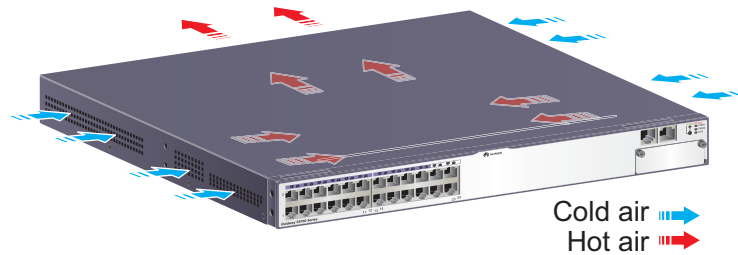
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5700-28C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

Table 5-726 lists technical specifications of the S5700-28C-PWR-EI.

Table 5-726 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	52 years when a 2-port 10GE interface card is configured, 55.4 years when a 4-port GE front card is configured, 32.92 years when a 4-port 10GE front card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1 kV in common mode
Power supply surge protection	±2 kV in differential mode, ±4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz

Item	Description
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	842 W (system power consumption: 102 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02352361

5.15.4 S5700-52C-EI

Version Mapping

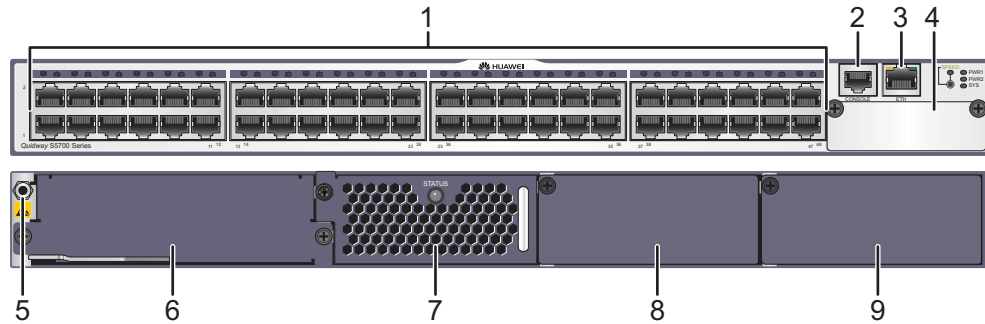
[Table 5-727](#) lists the mapping between the S5700-52C-EI and software versions.

Table 5-727 Version mapping

Series	Model	Software Version
S5700-EI	S5700-52C-EI	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 5-289 S5700-52C-EI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)
5	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 9.27 ES5D00ETPC00 (Stack Rear Card) 9.28 ES5D00ETPB00 (Extended Rear Card)
7	Fan slot NOTE Applicable fan module: CX7E1FANA fan module	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-728](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-728 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-729](#).

Table 5-729 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-730](#) describes the attributes of an ETH management port.

Table 5-730 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

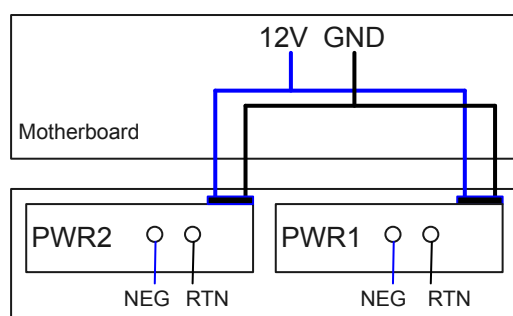
Indicator Description

The S5700-52C-EI has the same types of indicators as the S5700-28C-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52C-EI can use a single power module or double power modules for 1+1 power redundancy. In versions prior to V200R005C00, the switch cannot use pluggable AC and DC power modules simultaneously. In V200R005C00 and later versions, the switch supports mixing of pluggable AC and DC power modules.

[Figure 5-290](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-290 Power supply connections of dual DC power modules

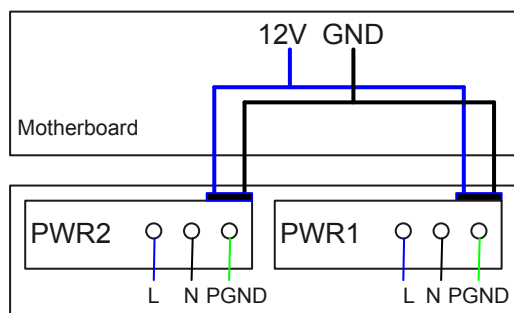
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

[Figure 5-291](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-291 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-52C-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-731 lists technical specifications of the S5700-52C-EI.

Table 5-731 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	46.05 years when a 2-port 10GE interface card is configured, 57.08 years when a 4-port GE front card is configured, 25.58 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 years
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none">Empty: ≤ 5 kg (11.02 lb)Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	88 W
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 41 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">AC power modules configured: 0-5000 m (0-16404 ft.)DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">EMC certificationSafety certificationManufacturing certification

Item	Description
Part number	02352354

5.15.5 S5700-52C-PWR-EI

Version Mapping

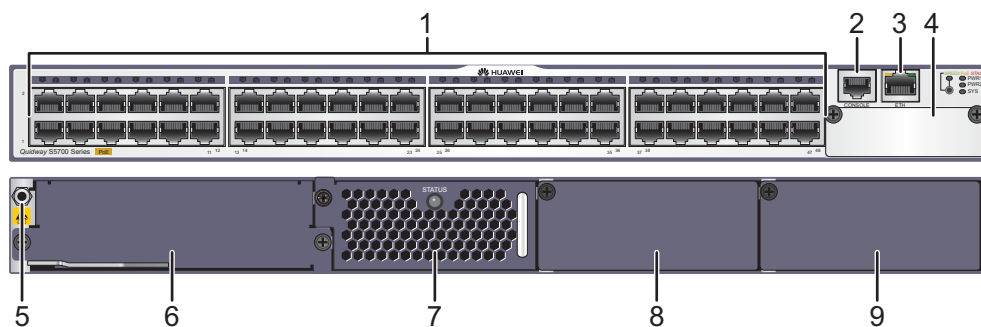
Table 5-732 lists the mapping between the S5700-52C-PWR-EI and software versions.

Table 5-732 Version mapping

Series	Model	Software Version
S5700-EI	S5700-52C-PWR-EI	V100R005C01 to V200R005C03 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 5-292 S5700-52C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	One console port
3	One ETH management port	4	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card) 9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card) 9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)

5	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	6	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.27 ES5D00ETPC00 (Stack Rear Card) • 9.28 ES5D00ETPB00 (Extended Rear Card)
7	Fan slot NOTE Applicable fan module: CX7E1FANA fan module	8	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module
9	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 250 W AC PoE power module • 500 W AC PoE power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-733](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-733 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-734](#).

Table 5-734 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-735](#) describes the attributes of an ETH management port.

Table 5-735 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

The S5700-52C-PWR-EI has the same types of indicators as the S5700-28C-PWR-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-52C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 250 W power module installed. A power module can provide 369.6 W or 123.2 W of PoE power for powered devices (PDs). [Table 5-736](#) lists its power supply configurations.

Table 5-736 Power supply configurations

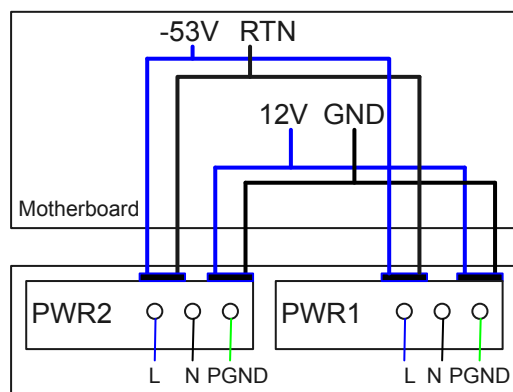
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
250 W	–	123.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 8• 802.3at (30 W per port): 4
500 W	–	369.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 12
250 W	250 W	246.4 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 16• 802.3at (30 W per port): 8
500 W	500 W	739.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-293 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-293 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5700-52C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-737 lists technical specifications of the S5700-52C-PWR-EI.

Table 5-737 Technical specifications

Item	Description
Memory (RAM)	256 MB
Flash	32 MB
Mean time between failures (MTBF)	44.8 years when a 2-port 10GE interface card is configured, 66.8 years when a 4-port GE front card is configured, 29.89 years when a 4x10GE front card is configured
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> • Empty: ≤ 5 kg (11.02 lb) • Fully configured: ≤ 8.5 kg (18.74 lb)
Stack ports	Two stack ports available on each stack card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	930 W (system power consumption: 190 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 45 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification

Item	Description
Part number	02352366

5.16 S5710-EI

5.16.1 S5710-28C-EI

Version Mapping

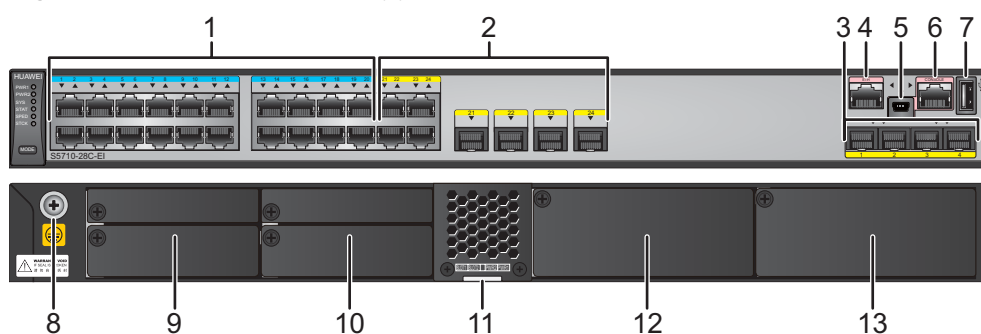
Table 5-738 lists the mapping between the S5710-28C-EI chassis and software versions.

Table 5-738 Version mapping

Series	Model	Software Version
S5710-EI	S5710-28C-EI	V200R001C00 to V200R005C02 NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-294 S5710-28C-EI appearance



1	Twenty 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions) 	4	One ETH management port
5	One mini USB port	6	One console port
7	One USB port	8	Ground screw NOTE It is used with a ground cable .
9	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 	10	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
11	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

1	Power module slot 1	-	-
3	NOTE Applicable power modules: <ul style="list-style-type: none">• 150 W AC power module• 150 W DC power module		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-739** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-739 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-740](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-740 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-741](#).

Table 5-741 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-742](#) describes the attributes of an ETH management port.

Table 5-742 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-295 Indicators on the S5710-28C-EI

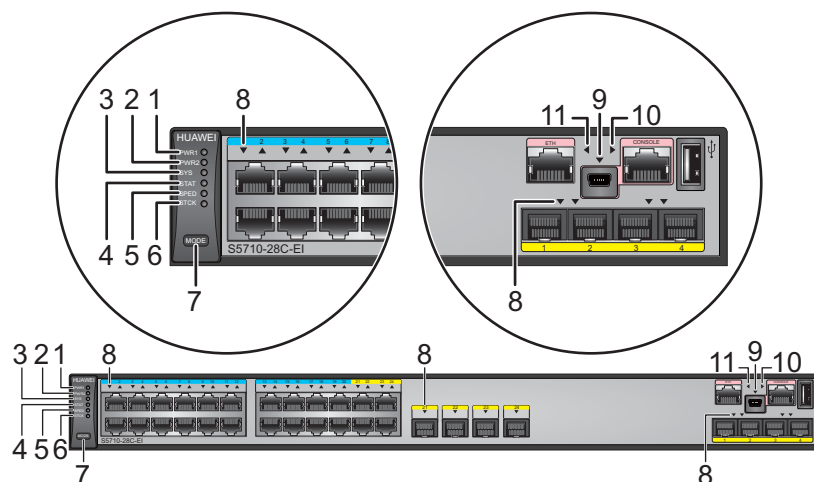


Table 5-743 Description of indicators on the switch

Number	Indicator	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.

Number	Indicator	Color	Description
		Yellow	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1:</p> <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in power module slot 1 fails.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Yellow	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in power module slot 2 fails.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> • Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive. • Slow blinking: The system is running properly.

Number	Indicator	Color	Description
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none">Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.
4	STAT: status indicator	Green	<ul style="list-style-type: none">Off: The status mode is not selected.Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none">Off: The speed mode is not selected.Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none">Off: The stack mode is not selected.Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode.Blinking: The switch is the master switch in a stack or a standalone switch.

Number	Indicator	Color	Description
	<p>STCK: stack indicator</p> <p>NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.</p>	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> ● Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. ● Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled. <hr/> <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> ● Off: The stack mode is not selected. ● Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. ● Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

Number	Indicator	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none">• When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.• When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.• When you press this button a third time, the STAT indicator turns green and the service port indicators restore to the default mode. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	Service port indicator <ul style="list-style-type: none">• GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.• GE/10GE optical ports: Each port has an indicator above it.		Meanings of service port indicators vary in different modes. For details, see Table 5-744 .

Number	Indicator	Color	Description
9	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. <p>When this indicator is on, the console indicator is off.</p>
10	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. <p>When this LED is on, the Mini USB port indicator is off.</p>
11	ETH indicator	Green	<ul style="list-style-type: none"> Off: No link is established on the port. Steady on: The port is connected. Blinking: The port is sending or receiving data.

Table 5-744 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>

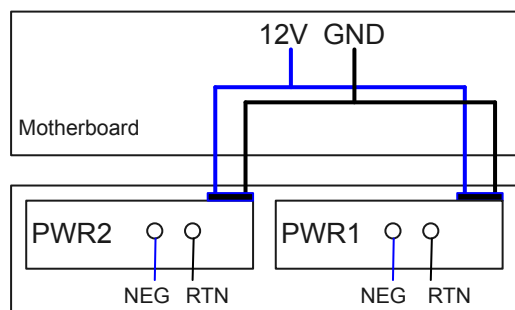
Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5710-28C-EI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-296 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-296 Power supply connections of dual DC power modules



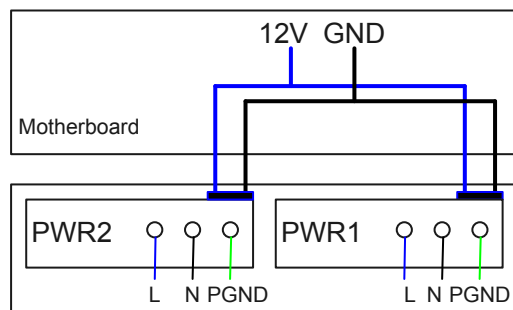
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-297 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-297 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5710-28C-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-745 lists technical specifications of the S5710-28C-EI.

Table 5-745 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	<ul style="list-style-type: none">V200R001: 64 MBV200R002 and later versions: 200 MB
Mean time between failures (MTBF)	55.98 years when an 8-port GE optical card is configured, 54.93 years when an 8-port GE electrical card is configured, 52.69 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 6 kg (13.23 lb) Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	98 W
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353170

5.16.2 S5710-28C-PWR-EI-AC

Version Mapping

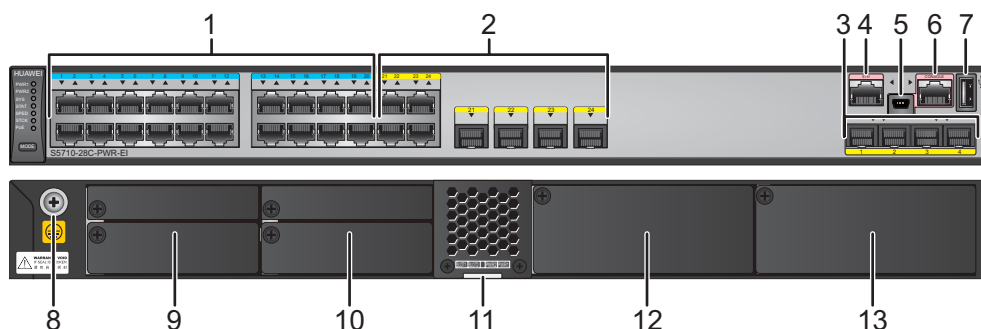
Table 5-746 lists the mapping between the S5710-28C-PWR-EI-AC chassis and software versions.

Table 5-746 Version mapping

Series	Model	Software Version
S5710-EI	S5710-28C-PWR-EI-AC	V200R002C00 to V200R005C02 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-298 S5710-28C-PWR-EI-AC appearance



1	Twenty PoE+ 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions) 	4	One ETH management port
5	One mini USB port	6	One console port
7	One USB port	8	Ground screw NOTE It is used with a ground cable .
9	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 	10	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
11	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	12	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 580 W AC PoE power module

1	Power module slot 1	-	-
3	NOTE Applicable power module: <ul style="list-style-type: none">• 580 W AC PoE power module		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-747](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-747 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-748](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-748 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-749](#).

Table 5-749 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-750](#) describes the attributes of an ETH management port.

Table 5-750 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-299 Indicators on the S5710-28C-PWR-EI-AC

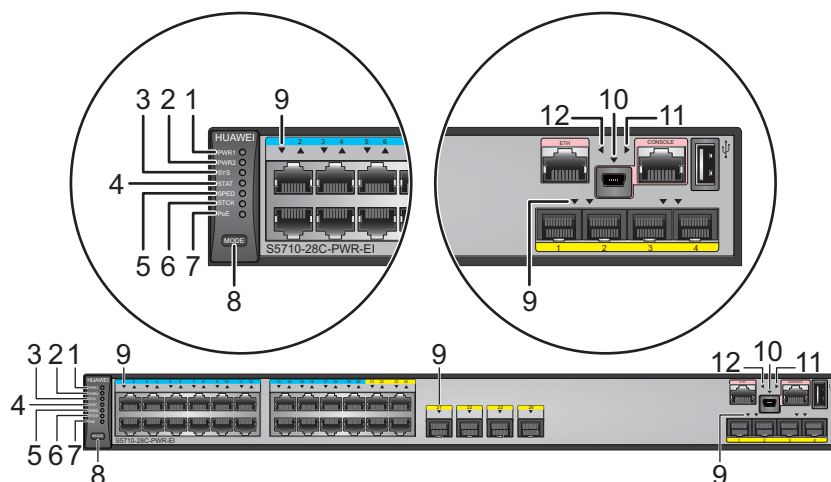


Table 5-751 Description of indicators on the switch

Number	Indicator	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.

Number	Indicator	Color	Description
		Yellow	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1:</p> <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in power module slot 1 fails.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Yellow	<p>Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in power module slot 2 fails.
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> • Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive. • Slow blinking: The system is running properly.

Number	Indicator	Color	Description
		Yellow	Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.
4	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The speed mode is selected. If the speed mode is selected, the service port indicator shows the port speed state. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK: stack indicator NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in versions earlier than V200R003C00.	Green	<ul style="list-style-type: none"> Off: The stack mode is not selected. Steady on: The service port indicators show the stack information. After 45 seconds, the service port indicators automatically restore to the status mode. Blinking: The switch is the master switch in a stack or a standalone switch.

Number	Indicator	Color	Description
	<p>STCK: stack indicator</p> <p>NOTE This indicator has different states and meanings in different versions. Here are the indicator states and meaning in V200R003C00 and later versions.</p>	Green	<p>If you are not changing the indicator mode (default):</p> <ul style="list-style-type: none"> • Off: The switch is in stack standby or slave state or the stacking function is not enabled on the switch. • Blinking: The switch is a stack master switch or a standalone switch with the stacking function enabled. <p>If you are changing the indicator mode:</p> <ul style="list-style-type: none"> • Off: The stack mode is not selected. • Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch. • Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE: PoE indicator	Green	<ul style="list-style-type: none"> • Off: The PoE mode is not selected. • Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator	Color	Description
8	MODE: mode switch button	-	<ul style="list-style-type: none">• When you press this button once, the service port indicators change to the speed mode and show the speed of each service port.• When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch.• When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports.• When you press this button a fourth time, the STAT indicator turns green and the service port indicators restore to the default mode. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	Service port indicator <ul style="list-style-type: none">• GE electrical ports: The ports are numbered from bottom to top and left to right, starting with 1.• GE/10GE optical ports: Each port has an indicator above it.		Meanings of service port indicators vary in different modes. For details, see Table 5-752 .

Number	Indicator	Color	Description
10	Mini USB indicator	Green	<ul style="list-style-type: none"> Off: The Mini USB port is not active, and the console port is active. Steady on: The Mini USB port is active. When this indicator is on, the console indicator is off.
11	Console indicator	Green	<ul style="list-style-type: none"> Off: The console port is not active, and the Mini USB port is active. Steady on (default): The console port is active. When this LED is on, the Mini USB port indicator is off.
12	ETH indicator	Green	<ul style="list-style-type: none"> Off: No link is established on the port. Steady on: The port is connected. Blinking: The port is sending or receiving data.

Table 5-752 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> • The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. • The total power consumption of PDs has reached the maximum power of the switch. • The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is blinking, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5710-28C-PWR-EI-AC is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. [Table 5-753](#) lists its power supply configurations.

Table 5-753 Power supply configurations

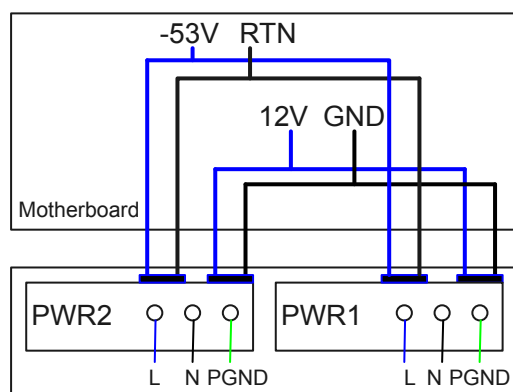
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
580 W	580 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-300](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-300 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5710-28C-PWR-EI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

[Table 5-754](#) lists technical specifications of the S5710-28C-PWR-EI-AC.

Table 5-754 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB
Mean time between failures (MTBF)	51.28 years when an 8-port GE optical card is configured, 50.31 years when an 8-port GE electrical card is configured, 48.25 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 6 kg (13.23 lb) Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none">• No card: 920 W (system power consumption: 180 W, PoE: 740 W)• Two 8-port GE electrical card: 934 W (system power consumption: 194 W, PoE: 740 W)• Two 8-port GE optical card: 942 W (system power consumption: 202 W, PoE: 740 W)• Two 2-port 10GE optical card: 941 W (system power consumption: 201 W, PoE: 740 W)
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354038

5.16.3 S5710-52C-EI

Version Mapping

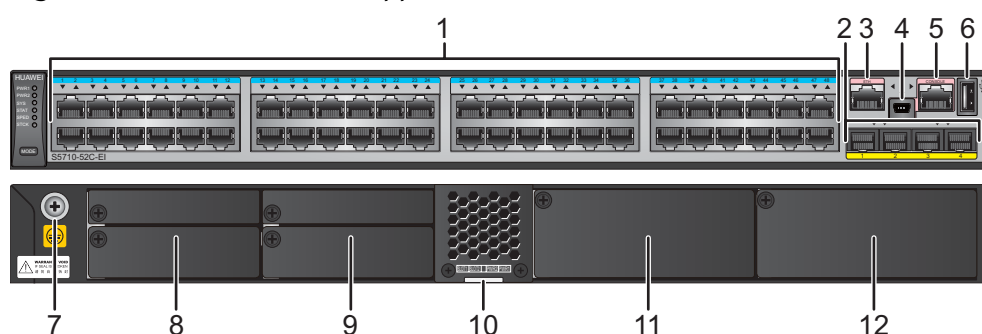
[Table 5-755](#) lists the mapping between the S5710-52C-EI chassis and software versions.

Table 5-755 Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-EI	V200R001C00 to V200R005C02 NOTE This model does not match V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-301 S5710-52C-EI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port

7	Ground screw NOTE It is used with a ground cable .	8	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
9	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 	10	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-756](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-756 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-757](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-757 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-758](#).

Table 5-758 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the

console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-759](#) describes the attributes of an ETH management port.

Table 5-759 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

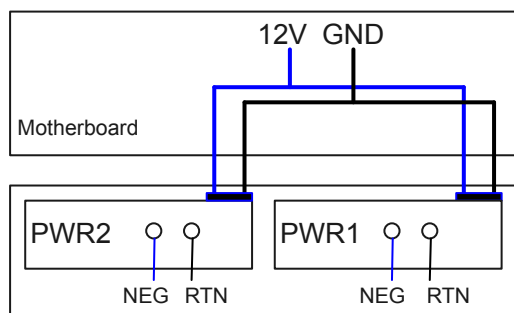
The S5710-52C-EI has the same types of indicators as the S5710-28C-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-EI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-302](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

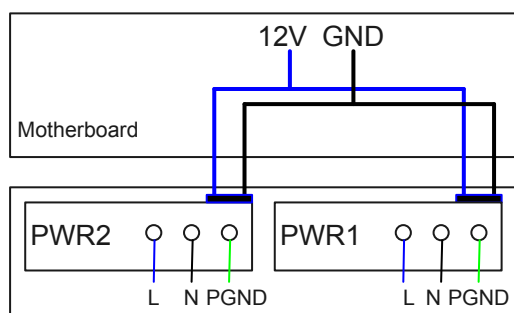
Figure 5-302 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 5-303 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-303 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5710-52C-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-760 lists technical specifications of the S5710-52C-EI.

Table 5-760 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	<ul style="list-style-type: none"> V200R001: 64 MB V200R002 and later versions: 200 MB
Mean time between failures (MTBF)	45.57 years when an 8-port GE optical card is configured, 44.85 years when an 8-port GE electrical card is configured, 43.33 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 6 kg (13.23 lb) Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	146.9 W

Item	Description
Operating temperature	0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353169

5.16.4 S5710-52C-PWR-EI

Version Mapping

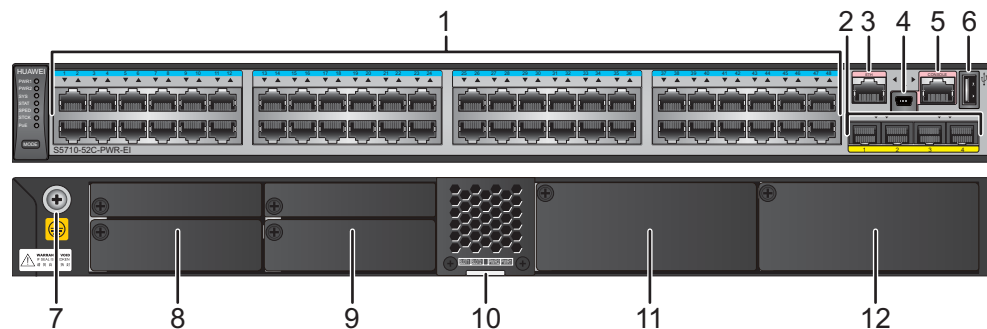
Table 5-761 lists the mapping between the S5710-52C-PWR-EI chassis and software versions.

Table 5-761 Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-PWR-EI	V200R002C00 to V200R005C02 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-304 S5710-52C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)

9	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 	1 0	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
1 1	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 580 W AC PoE power module • 1150 W AC PoE power module 	1 2	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 580 W AC PoE power module • 1150 W AC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-762](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-762 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-763](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-763 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-764](#).

Table 5-764 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-765](#) describes the attributes of an ETH management port.

Table 5-765 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-52C-PWR-EI has the same types of indicators as the S5710-28C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-PWR-EI is a PoE switch and uses 580 W or 1150 W AC PoE power modules. It has two power module slots. [Table 5-766](#) lists its power supply configurations.

Table 5-766 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
580 W	580 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

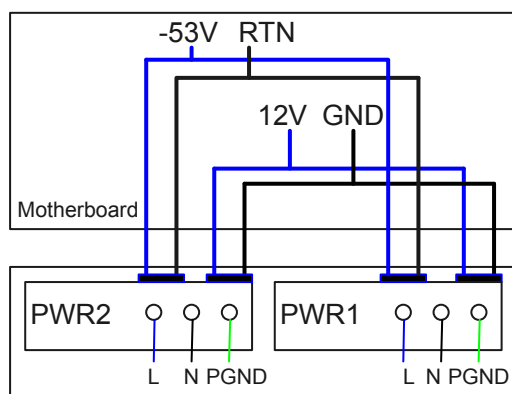
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W	–	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26
1150 W	1150 W	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-305 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-305 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5710-52C-PWR-EI has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-767 lists technical specifications of the S5710-52C-PWR-EI.

Table 5-767 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB
Mean time between failures (MTBF)	36.86 years when an 8-port GE optical card is configured, 36.35 years when an 8-port GE electrical card is configured, 35.27 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 580 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight	<ul style="list-style-type: none"> Empty: ≤ 6 kg (13.23 lb) Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<p>Using two 580 W power modules</p> <ul style="list-style-type: none"> • No card: 1023 W (system power consumption: 283 W, PoE: 740 W) • Two 8-port GE electrical card: 1035 W (system power consumption: 295 W, PoE: 740 W) • Two 8-port GE optical card: 1043 W (system power consumption: 303 W, PoE: 740 W) • Two 2-port 10GE optical card: 1040 W (system power consumption: 300 W, PoE: 740 W) <p>Using two 1150 W power modules</p> <ul style="list-style-type: none"> • No card: 1605 W (system power consumption: 165 W, PoE: 1440 W) • Two 8-port GE electrical card: 1625 W (system power consumption: 185 W, PoE: 1440 W) • Two 8-port GE optical card: 1635 W (system power consumption: 195 W, PoE: 1440 W) • Two 2-port 10GE optical card: 1633 W (system power consumption: 193 W, PoE: 1440 W)
Operating temperature	<p>0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification

Item	Description
Part number	02355886

5.16.5 S5710-52C-PWR-EI-AC

Version Mapping

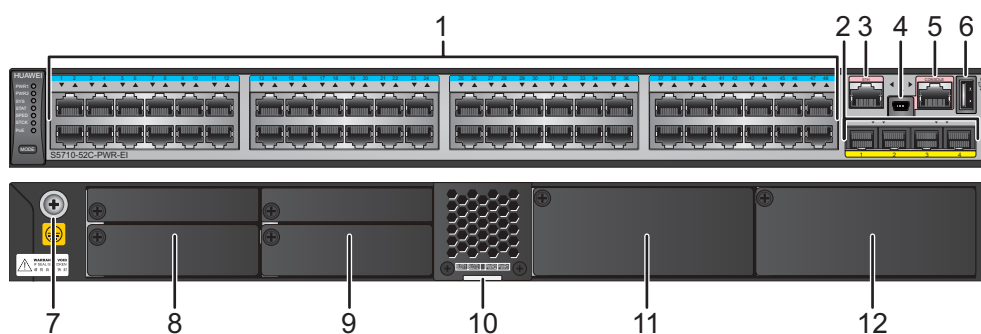
Table 5-768 lists the mapping between the S5710-52C-PWR-EI-AC chassis and software versions.

Table 5-768 Version mapping

Series	Model	Software Version
S5710-EI	S5710-52C-PWR-EI-AC	V200R002C00 to V200R005C02 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-306 S5710-52C-PWR-EI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	Rear card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)
9	Rear card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card) • 9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card) • 9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card) 	10	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 580 W AC PoE power module 	12	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 580 W AC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-769](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-769 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-770](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-770 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-771](#).

Table 5-771 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-772](#) describes the attributes of an ETH management port.

Table 5-772 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5710-52C-PWR-EI-AC has the same types of indicators as the S5710-28C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5710-52C-PWR-EI-AC is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. [Table 5-773](#) lists its power supply configurations.

Table 5-773 Power supply configurations

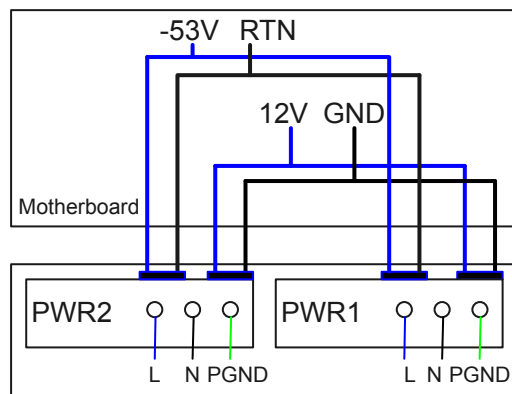
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	–	369.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 12
580 W	580 W	739.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-307](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-307 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5710-52C-PWR-EI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-774 lists technical specifications of the S5710-52C-PWR-EI-AC.

Table 5-774 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	200 MB
Mean time between failures (MTBF)	36.86 years when an 8-port GE optical card is configured, 36.35 years when an 8-port GE electrical card is configured, 35.27 years when a 2-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 6 kg (13.23 lb) Fully configured: ≤ 10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 2-port 10GE rear card
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none"> No card: 1023 W (system power consumption: 283 W, PoE: 740 W) Two 8-port GE electrical card: 1035 W (system power consumption: 295 W, PoE: 740 W) Two 8-port GE optical card: 1043 W (system power consumption: 303 W, PoE: 740 W) Two 2-port 10GE optical card: 1040 W (system power consumption: 300 W, PoE: 740 W)
Operating temperature	<p>0°C to 50°C (32°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02354042

5.17 S5720-EI

5.17.1 S5720-36C-EI-AC

Version Mapping

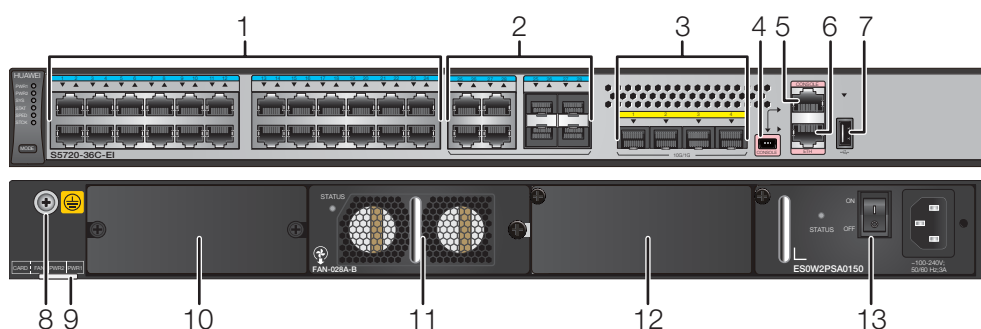
[Table 5-775](#) lists the mapping between the S5720-36C-EI-AC chassis and software versions.

Table 5-775 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-308 S5720-36C-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

9	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	1 0	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
1 1	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-776](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-776 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-777](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-777 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-778](#).

Table 5-778 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-779](#) describes the attributes of an ETH management port.

Table 5-779 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

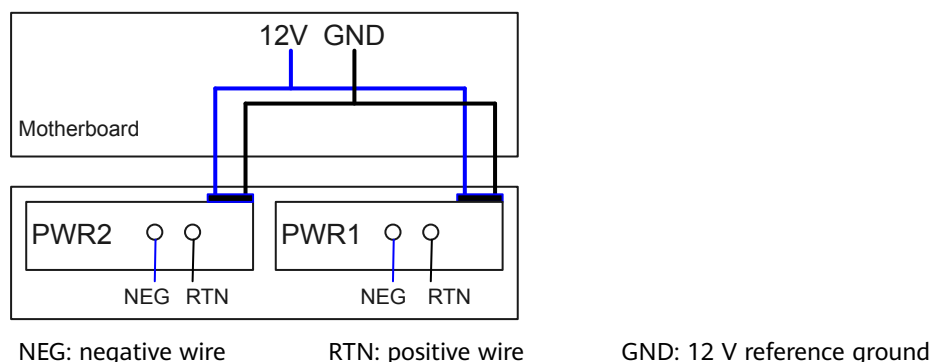
The S5720-36C-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-36C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

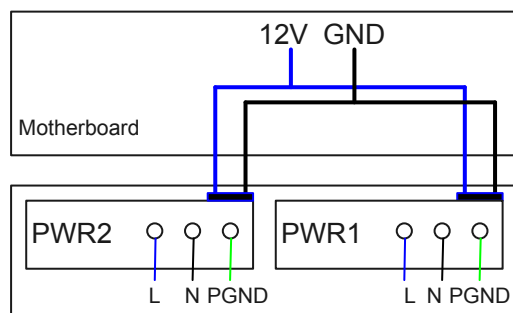
[Figure 5-309](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-309 Power supply connections of dual DC power modules



[Figure 5-310](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

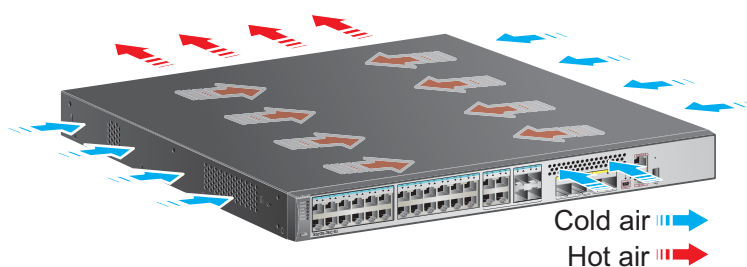
Figure 5-310 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-36C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



Technical Specifications

Table 5-780 lists technical specifications of the S5720-36C-EI-AC.

Table 5-780 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	<ul style="list-style-type: none"> • Service ports on front panel: ±6 kV in common mode • Ports on the 2-port 10GE RJ45 rear interface card: ±2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> • Using AC power modules: ±6 kV in differential mode, ±6 kV in common mode • Using DC power modules: ±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.8 kg (21.61 lb)
Stack ports	<ul style="list-style-type: none"> • Ports on the 2-port 10GE SFP+ rear interface card • Ports on the 2-port 10GE RJ45 rear interface card • Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	75.8 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	<ul style="list-style-type: none"> • 39.5 W (without subcard) • 47.28 W (with 2*10G optical subcards) • 52.17 W (2*QSFP+ stack cards) • 55.14 W (with 2*10G electrical subcards)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359562

5.17.2 S5720-36C-EI-DC

Version Mapping

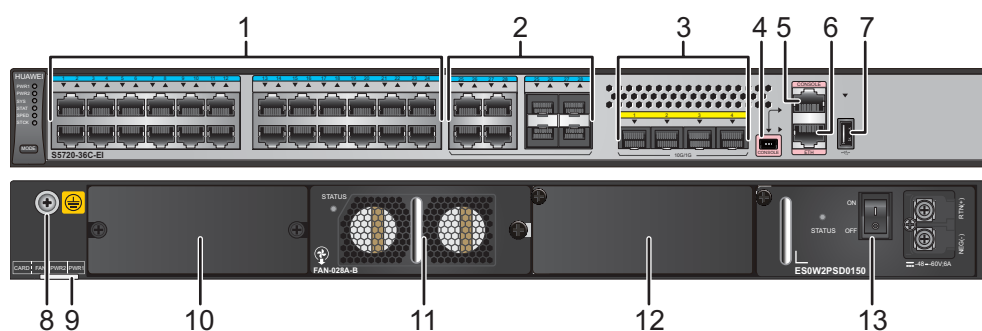
Table 5-781 lists the mapping between the S5720-36C-EI-DC chassis and software versions.

Table 5-781 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-311 S5720-36C-EI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
---	-------------------------------------	---	--

3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	<p>One mini USB port</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One ETH management port</p>
7	<p>One USB port</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)

1 1	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-782](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-782 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-783](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-783 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-784](#).

Table 5-784 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-785** describes the attributes of an ETH management port.

Table 5-785 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not

support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

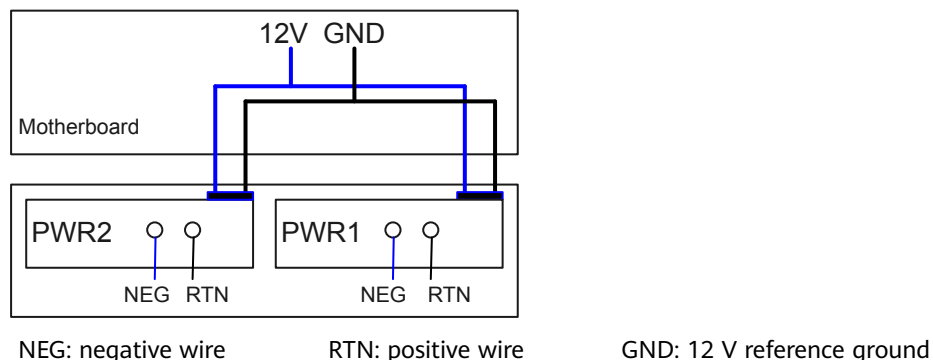
The S5720-36C-EI-DC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36C-EI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

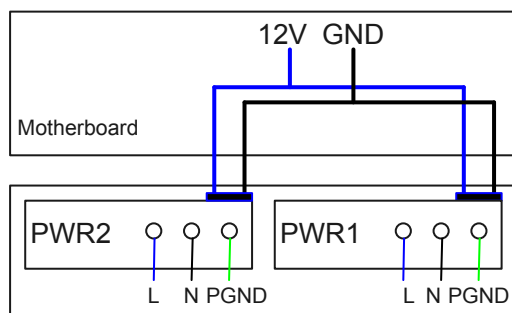
[Figure 5-312](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-312 Power supply connections of dual DC power modules



[Figure 5-313](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-313 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-36C-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



Technical Specifications

Table 5-786 lists technical specifications of the S5720-36C-EI-DC.

Table 5-786 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	<ul style="list-style-type: none"> • Service ports on front panel: ± 6 kV in common mode • Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> • Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode • Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.6 kg (21.17 lb)
Stack ports	<ul style="list-style-type: none"> • Ports on the 2-port 10GE SFP+ rear interface card • Ports on the 2-port 10GE RJ45 rear interface card • Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	75.8 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	<ul style="list-style-type: none"> • 39.5 W (without card) • 47.28 W (with 2*10GE optical card) • 52.17 W (with 2*QSFP+ stack card) • 55.14 W (with 2*10GE electrical card)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHJ

5.17.3 S5720-36C-EI-28S-AC

Version Mapping

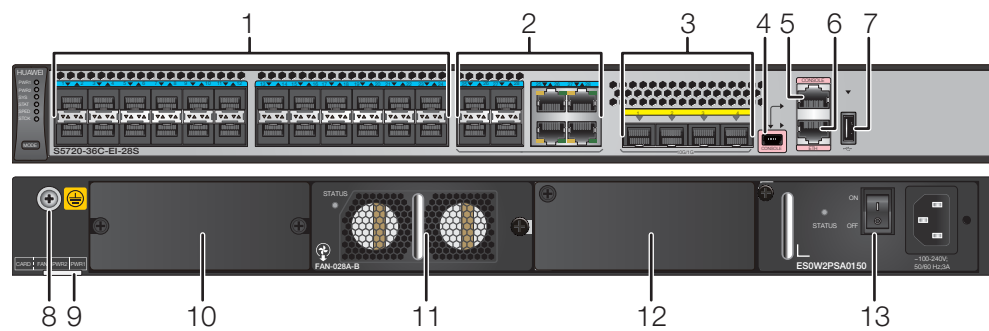
Table 5-787 lists the mapping between the S5720-36C-EI-28S-AC chassis and software versions.

Table 5-787 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-28S-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-314 S5720-36C-EI-28S-AC appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	<p>One mini USB port</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One ETH management port</p>
7	<p>One USB port</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)

1 1	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-788](#) describes the attributes of a 100/1000BASE-X port.

Table 5-788 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-789](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-789 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-790](#).

Table 5-790 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-791** describes the attributes of an ETH management port.

Table 5-791 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not

support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

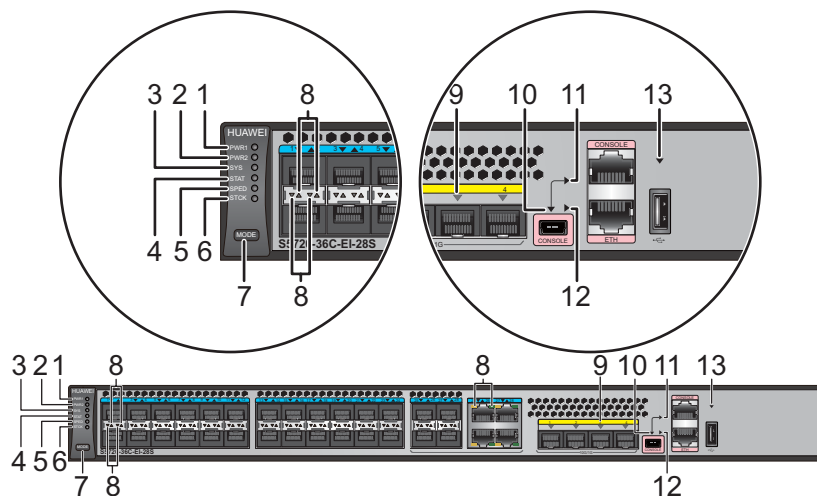
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-315 Indicators on the S5720-36C-EI-28S-AC



NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-792 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator (two indicators for each port)	Meanings of service port indicators vary in different modes. For details, see Table 5-793 .		
9	-	Service port indicator (one indicator for each port)	Meanings of service port indicators vary in different modes. For details, see Table 5-794 .		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-793 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-794 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.

Display Mode	Color	Status	Description
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is blinking, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-36C-EI-28S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-316 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-316 Power supply connections of dual DC power modules

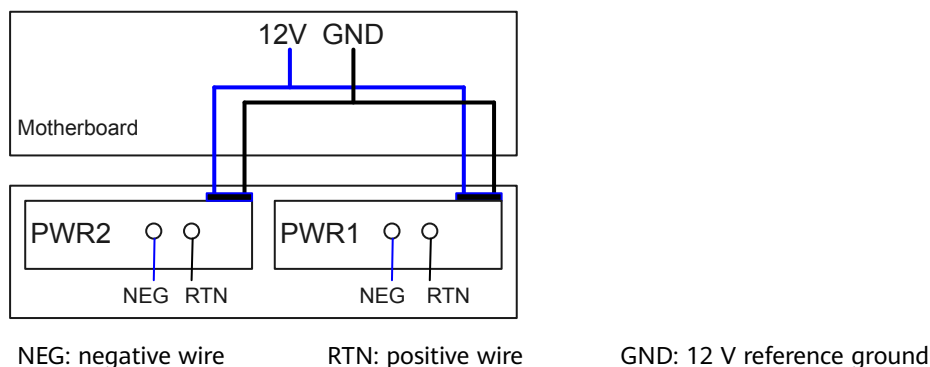
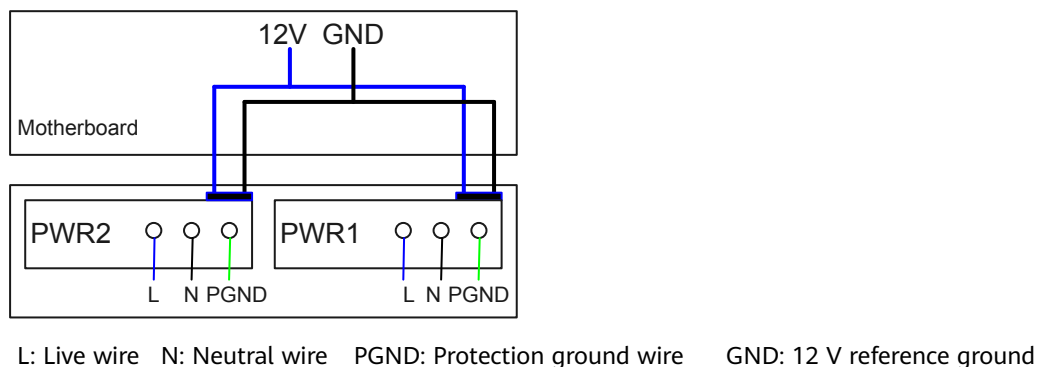


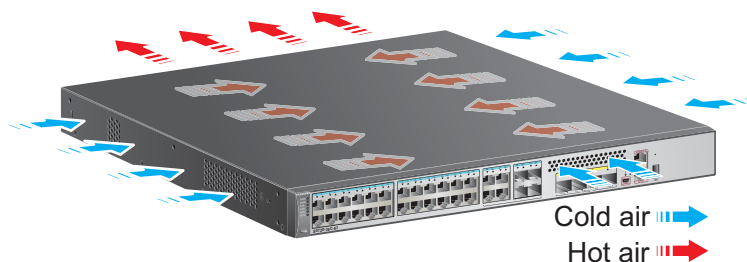
Figure 5-317 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-317 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-36C-EI-28S-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-795 lists technical specifications of the S5720-36C-EI-28S-AC.

Table 5-795 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.45 years when no card is configured; 78.2 years when a 2-port 10GE SFP+ interface card is configured; 75.87 years when a 2-port 10GE RJ45 interface card is configured; 76.05 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none">• Service ports on front panel: ± 6 kV in common mode• Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">• Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode• Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	83.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	<ul style="list-style-type: none">• 47.86 W (without card)• 55.35 W (with 2*10GE optical card)• 60.25 W (with 2*QSFP+ stack card)• 63.5 W (with 2*10GE electrical card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02359503

5.17.4 S5720-36C-EI-28S-DC

Version Mapping

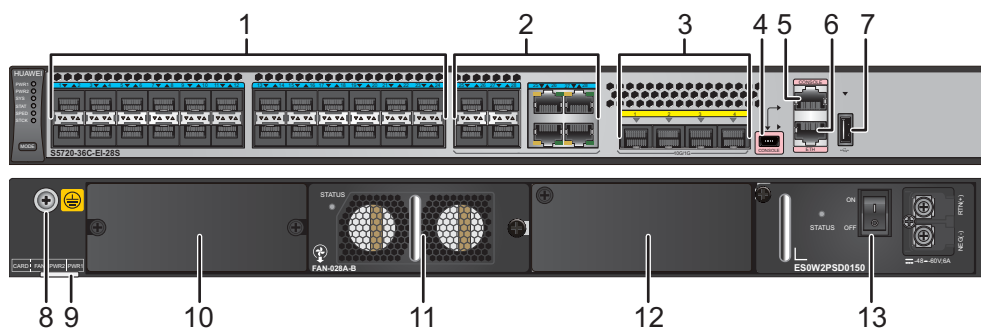
Table 5-796 lists the mapping between the S5720-36C-EI-28S-DC chassis and software versions.

Table 5-796 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-EI-28S-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-318 S5720-36C-EI-28S-DC appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	<p>One mini USB port</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One ETH management port</p>
7	<p>One USB port</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>

9	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	1 0	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
1 1	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 150 W AC power module 150 W DC power module 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-797](#) describes the attributes of a 100/1000BASE-X port.

Table 5-797 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The

electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-798](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-798 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-799](#).

Table 5-799 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-800](#) describes the attributes of an ETH management port.

Table 5-800 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

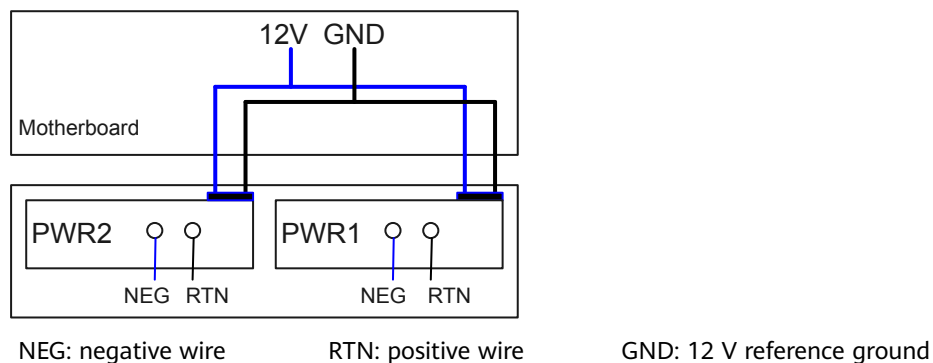
The S5720-36C-EI-28S-DC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36C-EI-28S-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

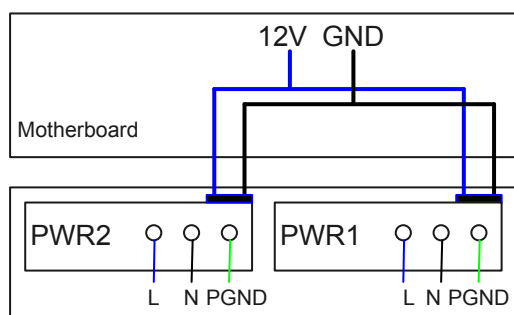
[Figure 5-319](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-319 Power supply connections of dual DC power modules



[Figure 5-320](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

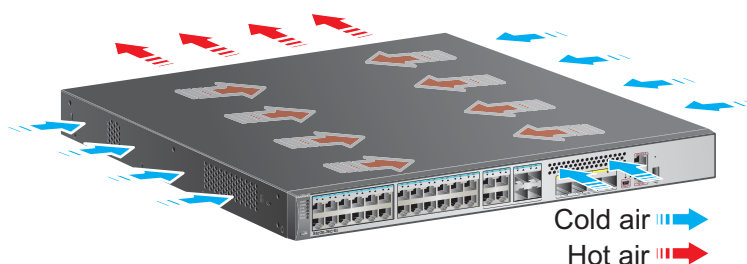
Figure 5-320 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-36C-EI-28S-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-801 lists technical specifications of the S5720-36C-EI-28S-DC.

Table 5-801 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.45 years when no card is configured; 78.2 years when a 2-port 10GE SFP+ interface card is configured; 75.87 years when a 2-port 10GE RJ45 interface card is configured; 76.05 years when a stack card is configured
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.7 kg (21.39 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	83.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	<ul style="list-style-type: none"> 47.86 W (without card) 55.35 W (with 2*10GE optical card) 60.25 W (with 2*QSFP+ stack card) 63.5 W (with 2*10GE electrical card)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NHN

5.17.5 S5720-36C-PWR-EI-AC

Version Mapping

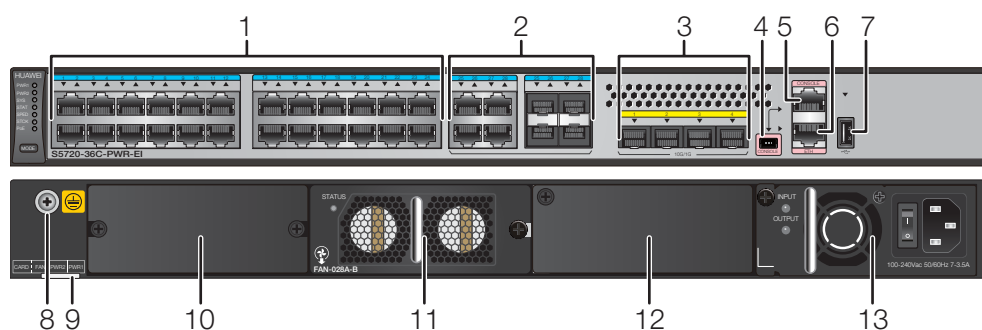
Table 5-802 lists the mapping between the S5720-36C-PWR-EI-AC chassis and software versions.

Table 5-802 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-PWR-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-321 S5720-36C-PWR-EI-AC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)

1 1	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-803](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-803 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-804](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-804 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-805](#).

Table 5-805 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-806](#) describes the attributes of an ETH management port.

Table 5-806 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not

support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

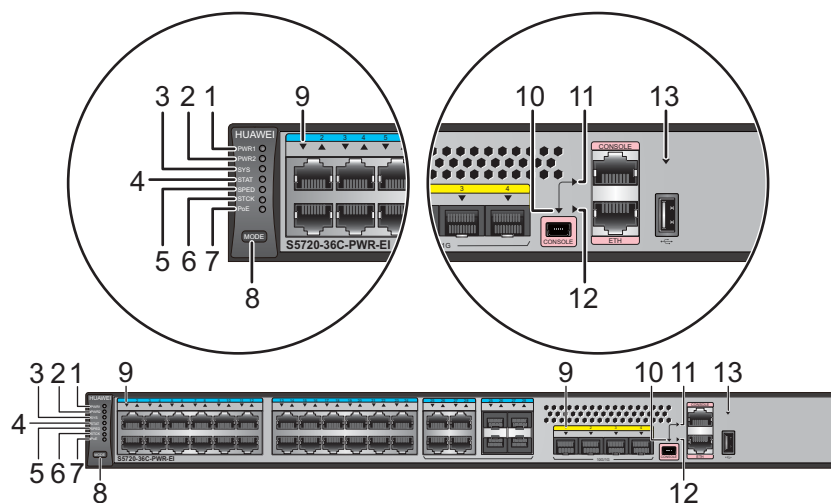
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-322 Indicators on the S5720-36C-PWR-EI-AC



NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-807 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-808 .		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.

No.	Indicator	Name	Color	Status	Description
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-808 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.

Display Mode	Color	Status	Description
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> • The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. • The total power consumption of PDs has reached the maximum power of the switch. • The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> • If the indicator of a port is blinking, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-36C-PWR-EI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-809](#) lists its power supply configurations.

Table 5-809 Power supply configurations

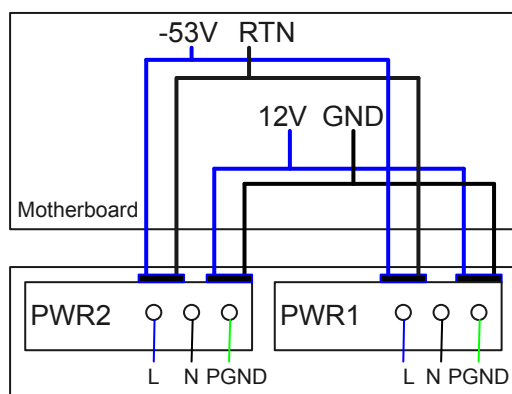
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 28 • 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-323](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

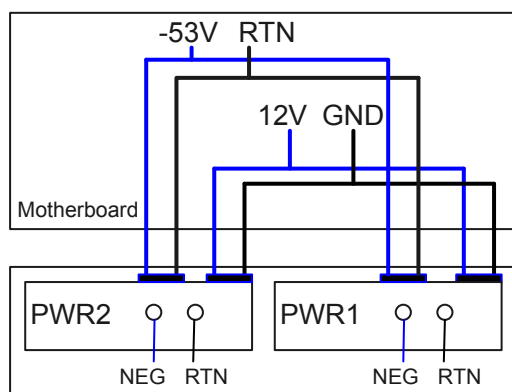
Figure 5-323 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
 GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-324 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

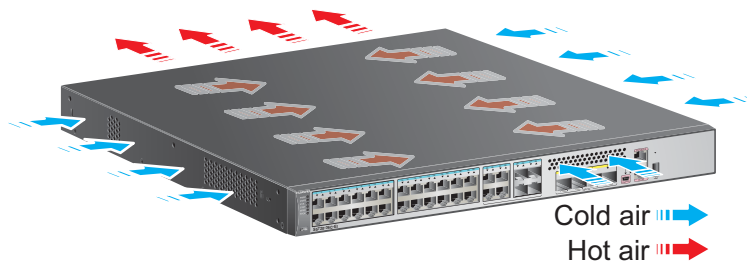
Figure 5-324 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-36C-PWR-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



Technical Specifications

Table 5-810 lists technical specifications of the S5720-36C-PWR-EI-AC.

Table 5-810 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	60.72 years when no card is configured; 56.97 years when a 2-port 10GE SFP+ interface card is configured; 55.72 years when a 2-port 10GE RJ45 interface card is configured; 55.82 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported

Item	Description
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Not providing the PoE function: 78 W ● 100% PoE loads: 864.3 W (system power consumption: 124.3 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	<ul style="list-style-type: none"> ● 48.45 W (without card) ● 56.14 W (with 2*10GE optical card) ● 60.76 W (with 2*QSFP+ stack card) ● 64.8 W (with 2*10GE electrical card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359573

5.17.6 S5720-36C-PWR-EI-DC

Version Mapping

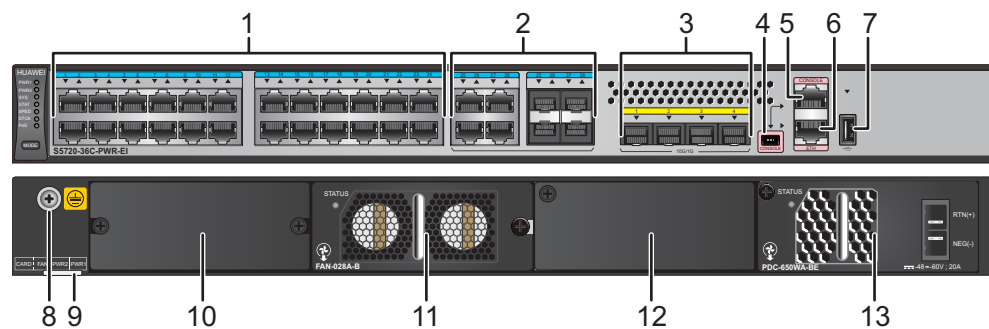
Table 5-811 lists the mapping between the S5720-36C-PWR-EI-DC chassis and software versions.

Table 5-811 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-36C-PWR-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-325 S5720-36C-PWR-EI-DC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T (PoE+) + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)

1 1	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-812](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-812 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-813](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-813 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-814](#).

Table 5-814 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-815** describes the attributes of an ETH management port.

Table 5-815 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not

support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-36C-PWR-EI-DC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36C-PWR-EI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-816](#) lists its power supply configurations.

Table 5-816 Power supply configurations

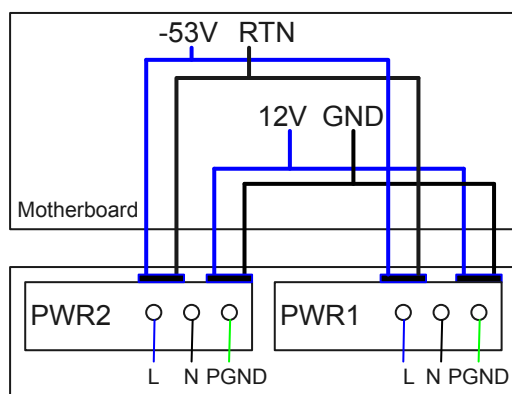
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 28 • 802.3at (30 W per port): 24

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-326](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

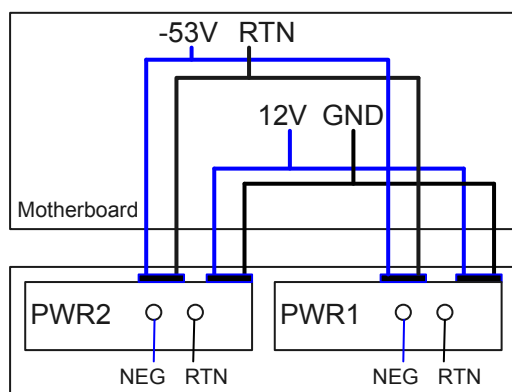
Figure 5-326 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-327 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

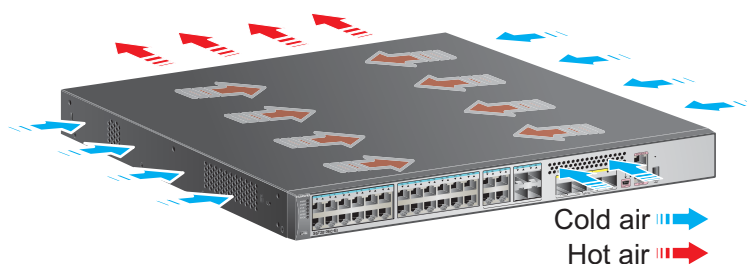
Figure 5-327 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-36C-PWR-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



Technical Specifications

[Table 5-817](#) lists technical specifications of the S5720-36C-PWR-EI-DC.

Table 5-817 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	60.72 years when no card is configured; 56.97 years when a 2-port 10GE SFP+ interface card is configured; 55.72 years when a 2-port 10GE RJ45 interface card is configured; 55.82 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported

Item	Description
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 78 W• 100% PoE loads: 864.3 W (system power consumption: 124.3 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	<ul style="list-style-type: none">• 48.45 W (without card)• 56.14 W (with 2*10GE optical card)• 60.76 W (with 2*QSFP+ stack card)• 64.8 W (with 2*10GE electrical card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHL

5.17.7 S5720-56C-EI-AC

Version Mapping

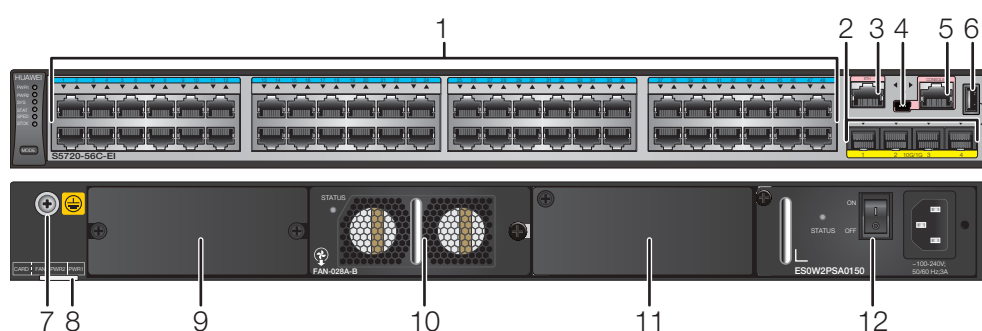
Table 5-818 lists the mapping between the S5720-56C-EI-AC chassis and software versions.

Table 5-818 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-328 S5720-56C-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
3	One ETH management port	4	One mini USB port

5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-819](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-819 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-820](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-820 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-821](#).

Table 5-821 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the

software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-822](#) describes the attributes of an ETH management port.

Table 5-822 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-329 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-329 Power supply connections of dual DC power modules

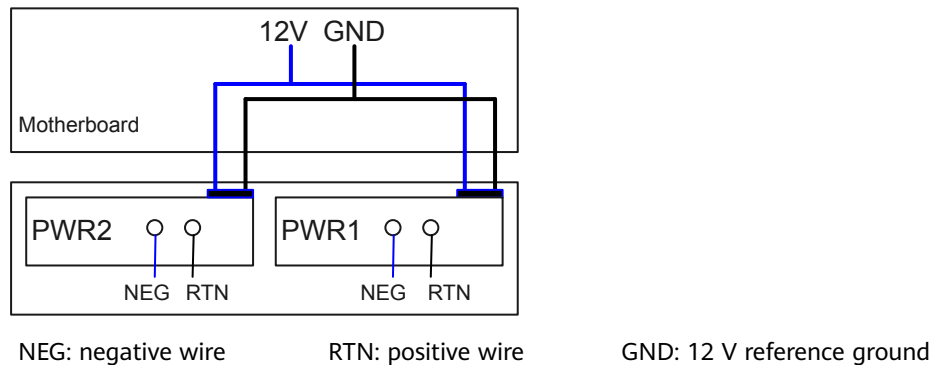
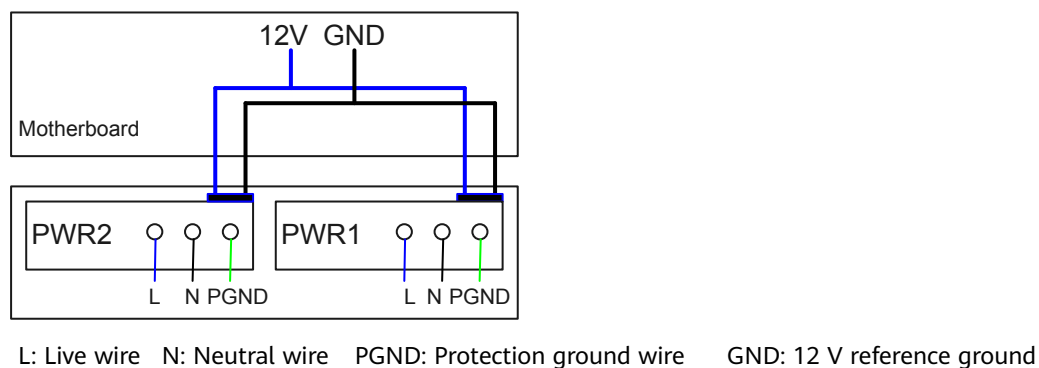


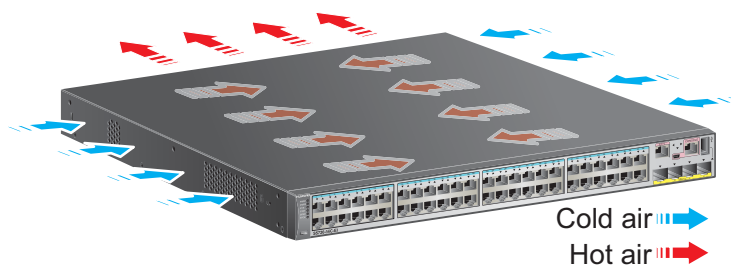
Figure 5-330 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-330 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-56C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

Table 5-823 lists technical specifications of the S5720-56C-EI-AC.

Table 5-823 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	86.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	<ul style="list-style-type: none"> • 40.45 W (without card) • 47.78 W (with 2*10GE optical card) • 52.87 W (with 2*QSFP+ stack card) • 55.85 W (with 2*10GE electrical card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02359504

5.17.8 S5720-56C-EI-DC

Version Mapping

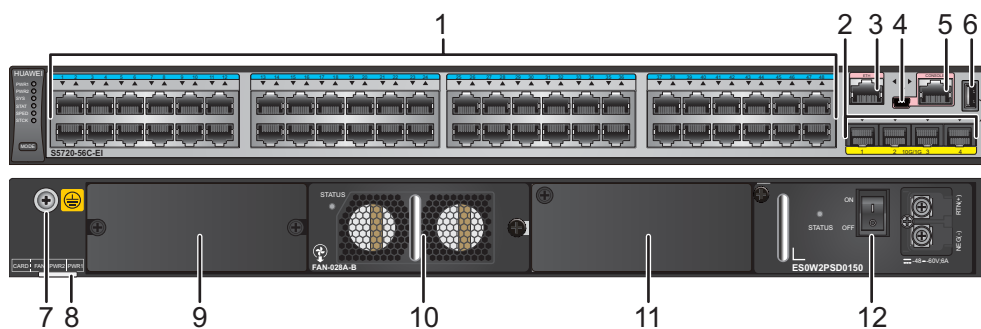
Table 5-824 lists the mapping between the S5720-56C-EI-DC chassis and software versions.

Table 5-824 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-331 S5720-56C-EI-DC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module

1 1	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	1 2	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-825](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-825 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-826](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-826 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-827](#).

Table 5-827 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-828](#) describes the attributes of an ETH management port.

Table 5-828 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see

"First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

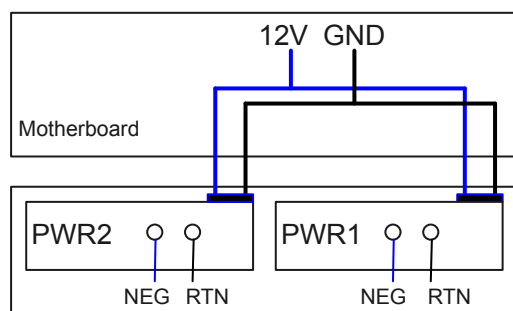
The S5720-56C-EI-DC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56C-EI-DC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-EI-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-332](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-332 Power supply connections of dual DC power modules



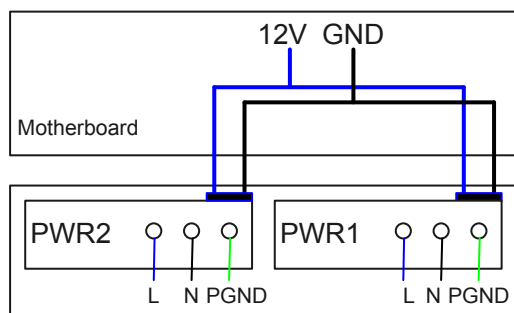
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

[Figure 5-333](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

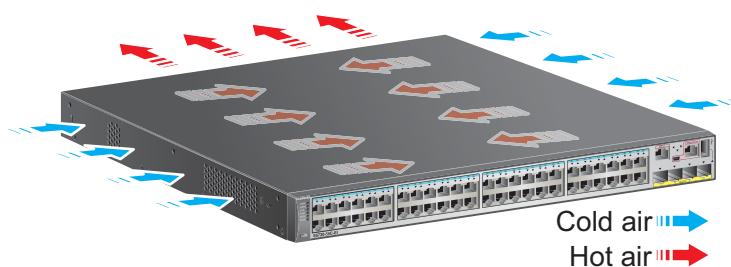
Figure 5-333 Power supply connections of dual AC power modules





L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-56C-EI-DC has pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Cold air 
Hot air 

Technical Specifications

Table 5-829 lists technical specifications of the S5720-56C-EI-DC.

Table 5-829 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	<ul style="list-style-type: none"> • Service ports on front panel: ± 6 kV in common mode • Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> • Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode • Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.8 kg (21.61 lb)
Stack ports	<ul style="list-style-type: none"> • Ports on the 2-port 10GE SFP+ rear interface card • Ports on the 2-port 10GE RJ45 rear interface card • Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	86.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	<ul style="list-style-type: none"> • 40.45 W (without card) • 47.78 W (with 2*10GE optical card) • 52.87 W (with 2*QSFP+ stack card) • 55.85 W (with 2*10GE electrical card)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHK

5.17.9 S5720-56C-EI-48S-AC

Version Mapping

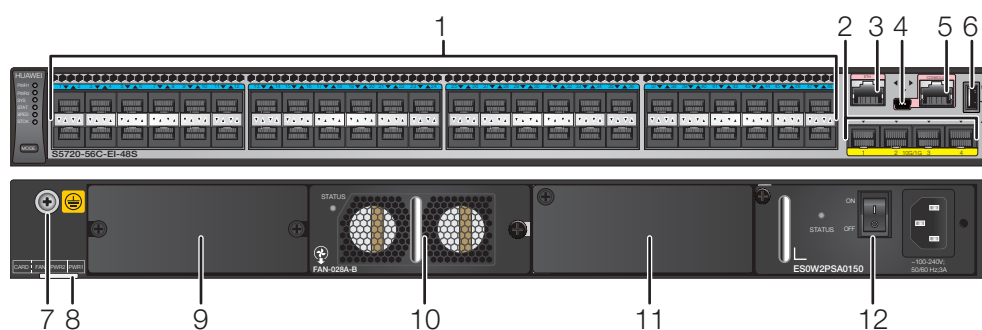
Table 5-830 lists the mapping between the S5720-56C-EI-48S-AC chassis and software versions.

Table 5-830 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-48S-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-334 S5720-56C-EI-48S-AC appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
3	One ETH management port	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: 8.3 FAN-028A-B Fan Module</p>

1	Power module slot 2	1	Power module slot 1
1	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	2	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-831](#) describes the attributes of a 100/1000BASE-X port.

Table 5-831 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-832](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-832 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-833](#).

Table 5-833 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-834](#) describes the attributes of an ETH management port.

Table 5-834 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE

button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

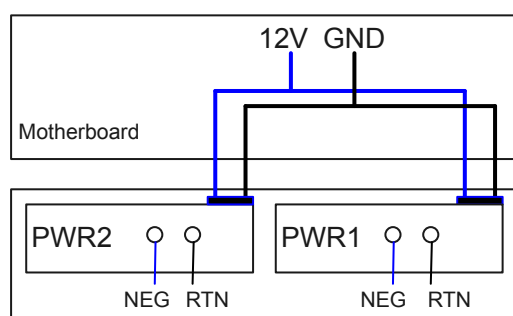
The S5720-56C-EI-48S-AC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-EI-48S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-335](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-335 Power supply connections of dual DC power modules



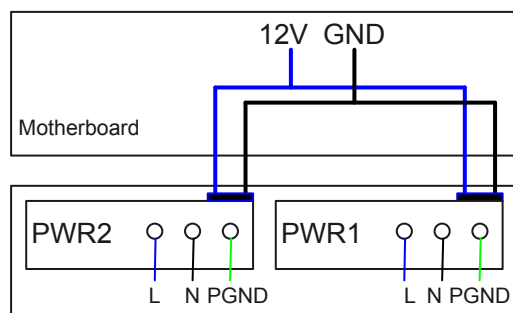
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

[Figure 5-336](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

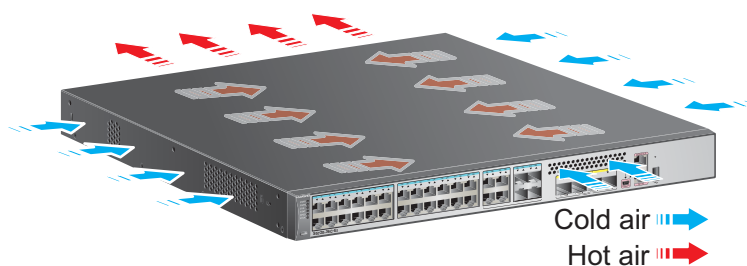
Figure 5-336 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-56C-EI-48S-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-835 lists technical specifications of the S5720-56C-EI-48S-AC.

Table 5-835 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.91 years when no card is configured; 68.42 years when a 2-port 10GE SFP+ interface card is configured; 66.63 years when a 2-port 10GE RJ45 interface card is configured; 66.77 years when a stack card is configured
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	10.1 kg (22.27 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	104 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	<ul style="list-style-type: none"> 68.82 W (without card) 76.55 W (with 2*10GE optical card) 81.23 W (with 2*QSFP+ stack card) 83.78 W (with 2*10GE electrical card)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359558

5.17.10 S5720-56C-EI-48S-DC

Version Mapping

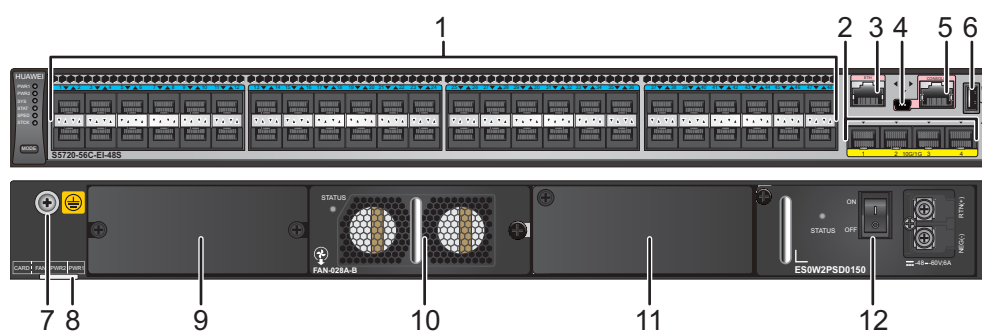
Table 5-836 lists the mapping between the S5720-56C-EI-48S-DC chassis and software versions.

Table 5-836 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-EI-48S-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-337 S5720-56C-EI-48S-DC appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
3	One ETH management port	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: 8.3 FAN-028A-B Fan Module</p>

1	Power module slot 2	1	Power module slot 1
1	NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	2	NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-837](#) describes the attributes of a 100/1000BASE-X port.

Table 5-837 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-838](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-838 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-839](#).

Table 5-839 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-840](#) describes the attributes of an ETH management port.

Table 5-840 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE

button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

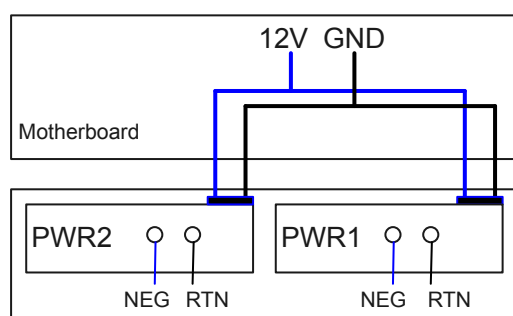
The S5720-56C-EI-48S-DC has the same types of indicators as the S5720-36C-EI-28S-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-EI-48S-DC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-338](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-338 Power supply connections of dual DC power modules



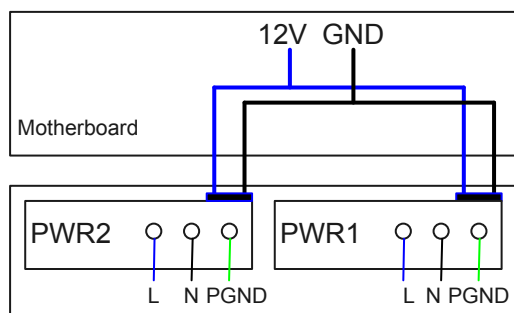
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

[Figure 5-339](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-339 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-56C-EI-48S-DC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-841 lists technical specifications of the S5720-56C-EI-48S-DC.

Table 5-841 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.91 years when no card is configured; 68.42 years when a 2-port 10GE SFP+ interface card is configured; 66.63 years when a 2-port 10GE RJ45 interface card is configured; 66.77 years when a stack card is configured
Mean time to repair (MTTR)	2

Item	Description
Availability	> 0.99999
Service port surge protection	Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	104 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	<ul style="list-style-type: none"> 68.82 W (without card) 76.55 W (with 2*10GE optical card) 81.23 W (with 2*QSFP+ stack card) 83.78 W (with 2*10GE electrical card)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHP

5.17.11 S5720-56C-PWR-EI-AC

Version Mapping

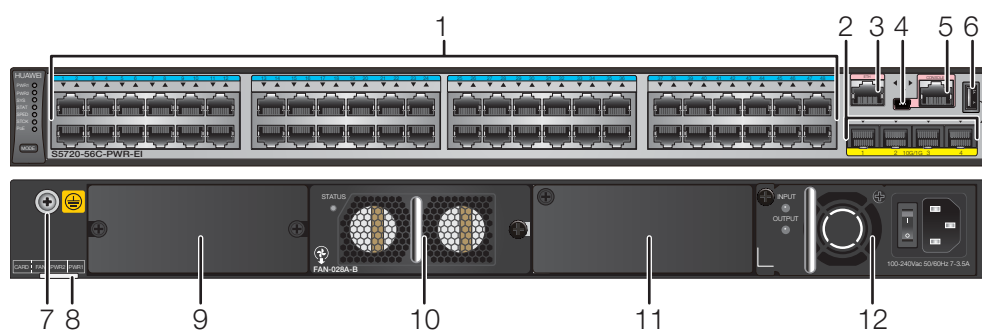
Table 5-842 lists the mapping between the S5720-56C-PWR-EI-AC chassis and software versions.

Table 5-842 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-340 S5720-56C-PWR-EI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
3	One ETH management port	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: 8.3 FAN-028A-B Fan Module</p>

1 1	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	1 2	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-843](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-843 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-844](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-844 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-845](#).

Table 5-845 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-846](#) describes the attributes of an ETH management port.

Table 5-846 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see

"First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-PWR-EI-AC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-PWR-EI-AC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-847](#) lists its power supply configurations.

Table 5-847 Power supply configurations

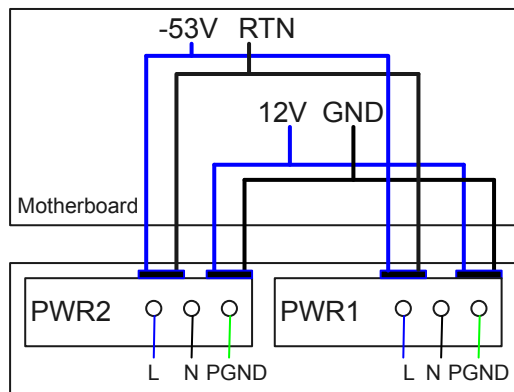
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-341 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

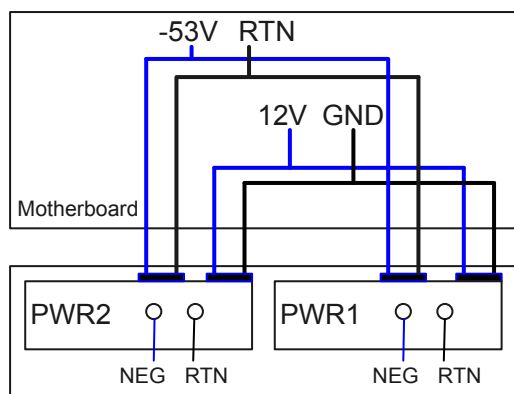
Figure 5-341 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
 GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-342 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

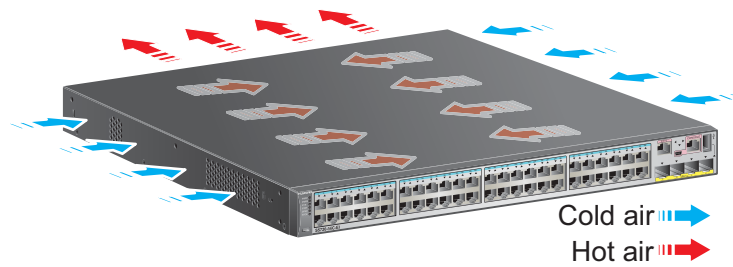
Figure 5-342 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

Table 5-848 lists technical specifications of the S5720-56C-PWR-EI-AC.

Table 5-848 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	51.34 years when no card is configured; 48.63 years when a 2-port 10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	10.4 kg (22.93 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported

Item	Description
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Not providing the PoE function: 91.6 W ● 100% PoE loads: 889.4 W (system power consumption: 149.4 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	<ul style="list-style-type: none"> ● 53.5 W (without card) ● 61.12 W (with 2*10GE optical card) ● 65.85 W (with 2*QSFP+ stack card) ● 69.3 W (with 2*10GE electrical card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02359576

5.17.12 S5720-56C-PWR-EI-DC

Version Mapping

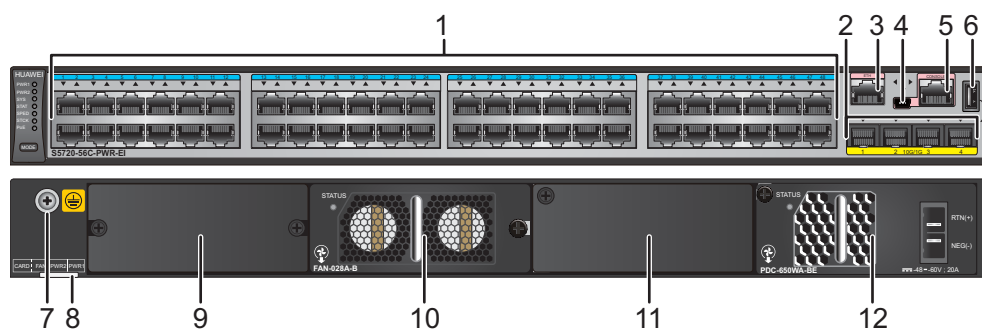
[Table 5-849](#) lists the mapping between the S5720-56C-PWR-EI-DC chassis and software versions.

Table 5-849 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-343 S5720-56C-PWR-EI-DC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
3	One ETH management port	4	One mini USB port

5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE Card supported:</p> <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	<p>Fan slot</p> <p>NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-850](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-850 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-851](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-851 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-852](#).

Table 5-852 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the

software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-853](#) describes the attributes of an ETH management port.

Table 5-853 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-PWR-EI-DC has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-PWR-EI-DC is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-854](#) lists its power supply configurations.

Table 5-854 Power supply configurations

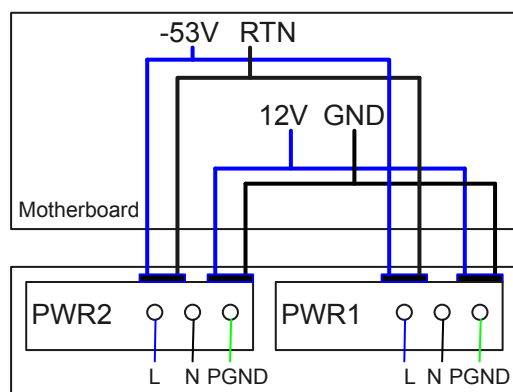
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-344 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

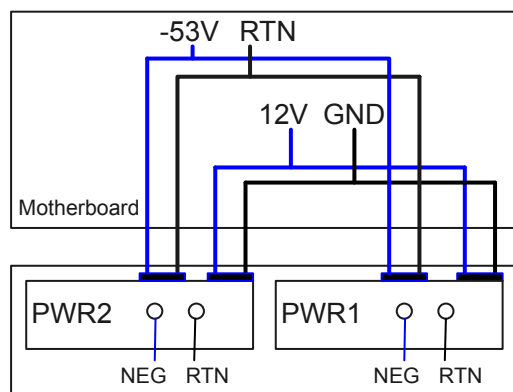
Figure 5-344 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-345 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

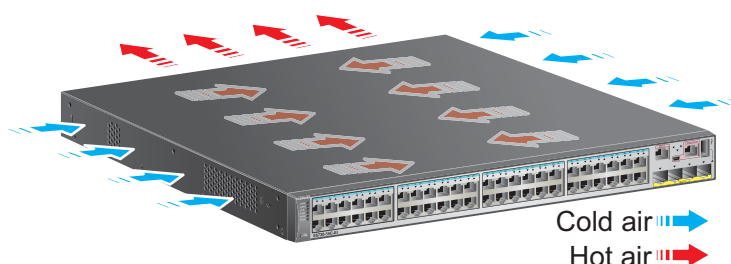
Figure 5-345 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-EI-DC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

Table 5-855 lists technical specifications of the S5720-56C-PWR-EI-DC.

Table 5-855 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	51.34 years when no card is configured; 48.63 years when a 2-port 10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	<ul style="list-style-type: none"> • Service ports on front panel: ± 6 kV in common mode • Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> • Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode • Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	10.3 kg (22.71 lb)
Stack ports	<ul style="list-style-type: none"> • Ports on the 2-port 10GE SFP+ rear interface card • Ports on the 2-port 10GE RJ45 rear interface card • Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 98 W • 100% PoE loads: 913 W (system power consumption: 173 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	<ul style="list-style-type: none"> • 56.68 W (without card) • 63.63 W (with 2*10GE optical card) • 68.56 W (with 2*QSFP+ stack card) • 72.61 W (with 2*10GE electrical card)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHM

5.17.13 S5720-56C-PWR-EI-AC1

Version Mapping

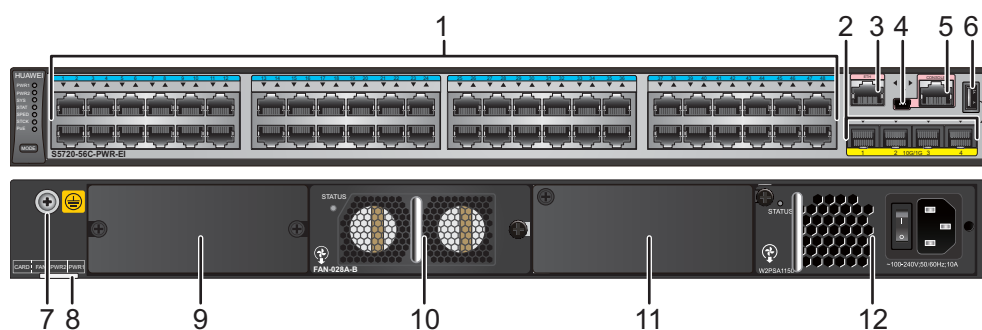
Table 5-856 lists the mapping between the S5720-56C-PWR-EI-AC1 chassis and software versions.

Table 5-856 Version mapping

Series		Model	Software Version
S5720-EI	S5720-C-EI	S5720-56C-PWR-EI-AC1	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-346 S5720-56C-PWR-EI-AC1 appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
3	One ETH management port	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>

9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	1 0	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module
1 1	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 1150 W AC PoE power module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions) 	1 2	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 1150 W AC PoE power module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-857](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-857 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-858](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-858 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-859](#).

Table 5-859 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-860](#) describes the attributes of an ETH management port.

Table 5-860 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-PWR-EI-AC1 has the same types of indicators as the S5720-36C-PWR-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-PWR-EI-AC1 is a PoE switch. It has two power module slots and uses 1150 W AC PoE power modules or 1000 W AC PoE power modules (applicable in V200R013C00 and later versions). A 1150 W AC PoE power module and a 1000 W AC PoE power module can be used together. [Table 5-861](#) lists its power supply configurations.

Table 5-861 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 29 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48

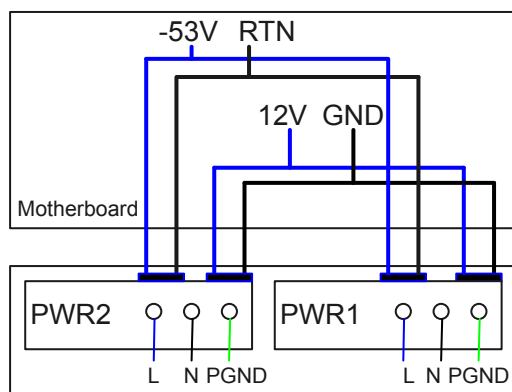
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-347 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-347 Power supply by dual AC PoE power modules



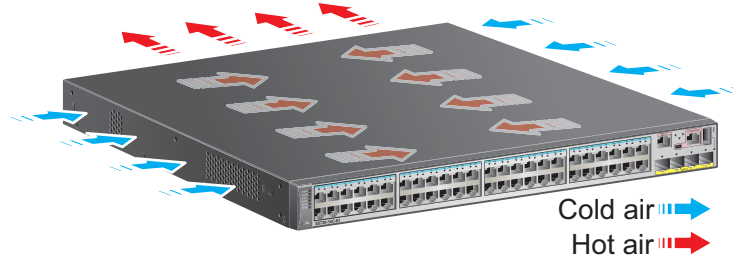
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-EI-AC1 uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

[Table 5-862](#) lists technical specifications of the S5720-56C-PWR-EI-AC1.

Table 5-862 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	51.34 years when no card is configured; 48.63 years when a 2-port 10GE SFP+ interface card is configured; 47.71 years when a 2-port 10GE RJ45 interface card is configured; 47.79 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight (with packaging)	10.9 kg (24.03 lb)

Item	Description
Stack ports	<ul style="list-style-type: none"> ● Ports on the 2-port 10GE SFP+ rear interface card ● Ports on the 2-port 10GE RJ45 rear interface card ● Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Not providing the PoE function: 91.6 W ● 100% PoE loads: 1564.8 W (system power consumption: 124.8 W, PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	<ul style="list-style-type: none"> ● 53.5 W (without subcard) ● 61.12 W (with 2*10G optical subcards) ● 65.85 W (2*QSFP+ stack cards) ● 69.3 W (with 2*10G electrical subcards)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 61.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02359578

5.17.14 S5720-36PC-EI-AC

Version Mapping

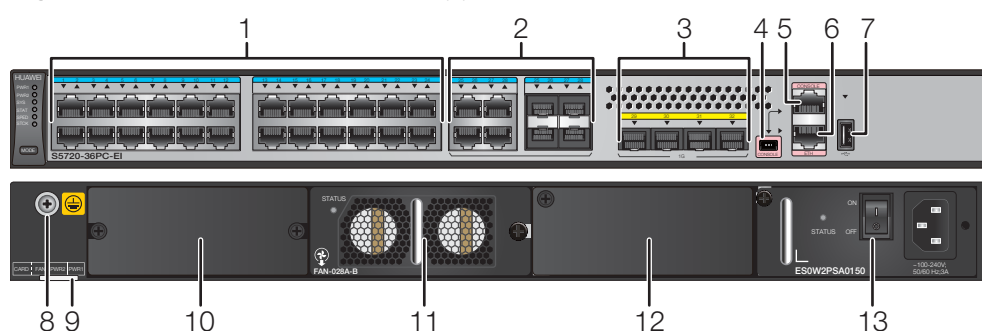
[Table 5-863](#) lists the mapping between the S5720-36PC-EI-AC chassis and software versions.

Table 5-863 Version mapping

Series		Model	Software Version
S5720-EI	S5720-PC-EI	S5720-36PC-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-348 S5720-36PC-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four combo ports (10/100/1000BASE-T + 100/1000BASE-X) Modules applicable to combo optical ports: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module
3	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) 	4	One mini USB port

5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	Ground screw NOTE It is used with a ground cable .
9	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.	10	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface)
11	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-864](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-864 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Attribute	Description
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Combo port

A combo port refers to a pair of ports consisting of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. A combo port can be configured as an electrical port or an optical port, but only one port can be active at a time. When one port is active, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. [Table 5-865](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-865 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z

Attribute	Description
Working mode	1000 Mbit/s

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-866](#).

Table 5-866 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-867](#) describes the attributes of an ETH management port.

Table 5-867 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-36PC-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-36PC-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-36PC-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-349](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-349 Power supply connections of dual DC power modules

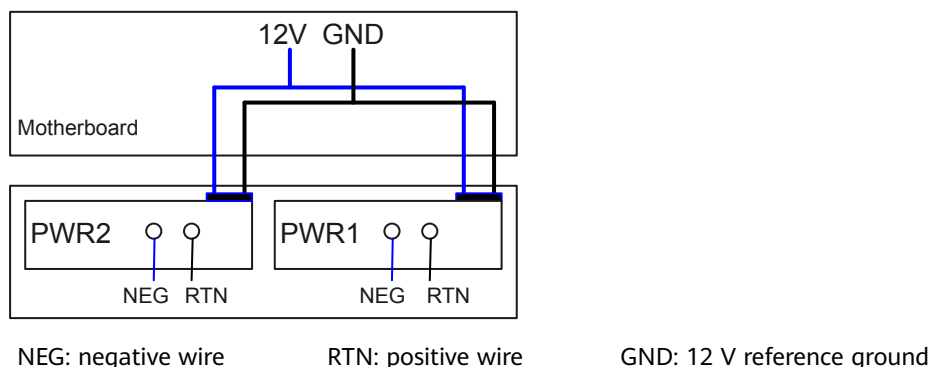
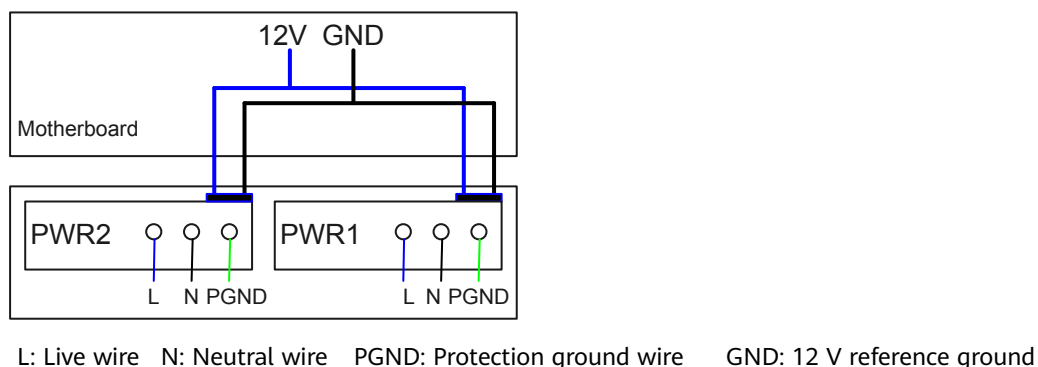


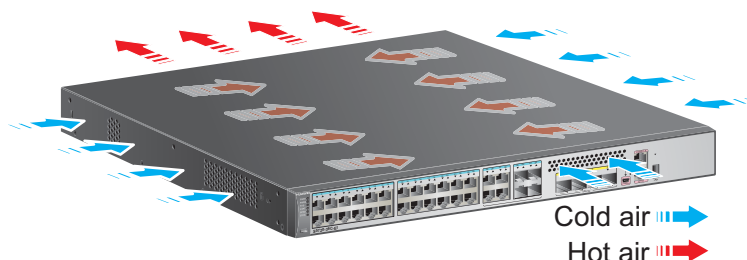
Figure 5-350 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-350 Power supply connections of dual AC power modules



Heat Dissipation

The S5720-36PC-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



Technical Specifications

Table 5-868 lists technical specifications of the S5720-36PC-EI-AC.

Table 5-868 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.05 years when no card is configured; 73.65 years when a 2-port 10GE SFP+ interface card is configured; 71.58 years when a 2-port 10GE RJ45 interface card is configured; 71.74 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	<ul style="list-style-type: none"> Service ports on front panel: ± 6 kV in common mode Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.8 kg (21.61 lb)
Stack ports	<ul style="list-style-type: none"> Ports on the 2-port 10GE SFP+ rear interface card Ports on the 2-port 10GE RJ45 rear interface card Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	74.6 W

Item	Description
<p>Typical power consumption (30% of traffic load)</p> <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	<ul style="list-style-type: none"> • 39.5 W (without card) • 47.28 W (with 2*10GE optical card) • 52.17 W (with 2*QSFP+ stack card) • 55.14 W (with 2*10GE electrical card)
<p>Operating temperature</p>	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
<p>Short-term operating temperature</p>	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
<p>Storage temperature</p>	<p>-40°C to +70°C (-40°F to +158°F)</p>
<p>Noise under normal temperature (27°C, sound power)</p>	<p>< 51.2 dB(A)</p>
<p>Relative humidity</p>	<p>5% to 95%, noncondensing</p>
<p>Operating altitude</p>	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350BDQ

5.17.15 S5720-56PC-EI-AC

Version Mapping

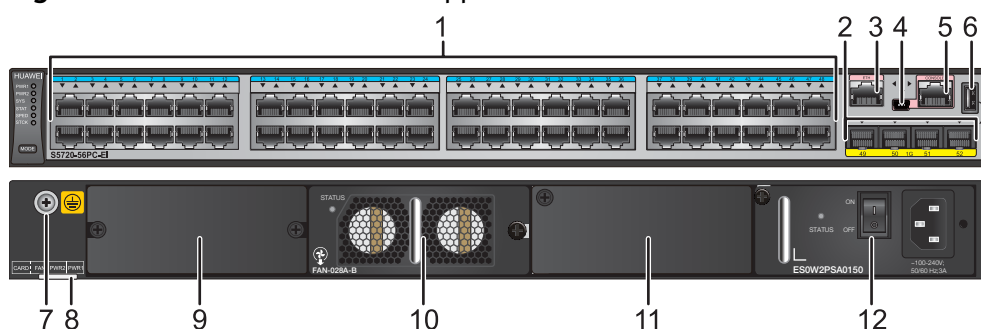
[Table 5-869](#) lists the mapping between the S5720-56PC-EI-AC chassis and software versions.

Table 5-869 Version mapping

Series		Model	Software Version
S5720-EI	S5720-PC-EI	S5720-56PC-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-351 S5720-56PC-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported)
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series) • 9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series) • 9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP+ Interface) 	10	Fan slot NOTE Applicable fan module: 8.3 FAN-028A-B Fan Module
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-870](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-870 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. [Table 5-871](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-871 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-872](#).

Table 5-872 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-873** describes the attributes of an ETH management port.

Table 5-873 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

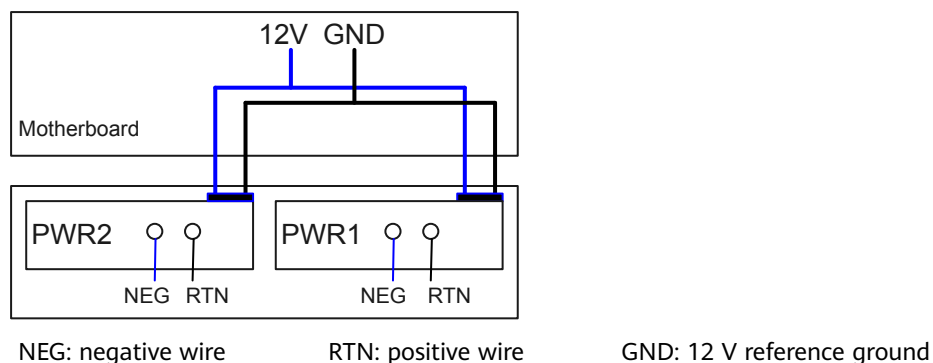
The S5720-56PC-EI-AC has similar indicators to those on the S5720-36C-PWR-EI-AC, except that the S5720-56PC-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56PC-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

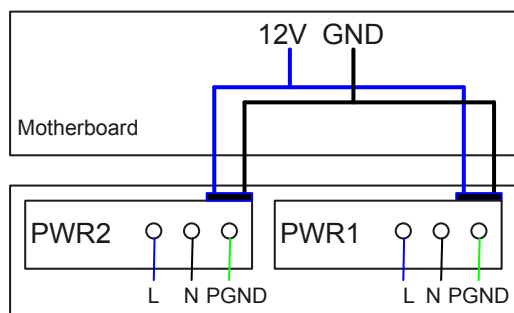
[Figure 5-352](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-352 Power supply connections of dual DC power modules



[Figure 5-353](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

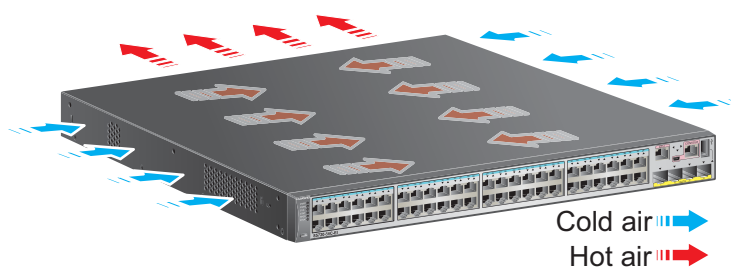
Figure 5-353 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-56PC-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



Technical Specifications

Table 5-874 lists technical specifications of the S5720-56PC-EI-AC.

Table 5-874 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	71.18 years when no card is configured; 66.07 years when a 2-port 10GE SFP+ interface card is configured; 66.40 years when a 2-port 10GE RJ45 interface card is configured; 64.53 years when a stack card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	<ul style="list-style-type: none">• Service ports on front panel: ± 6 kV in common mode• Ports on the 2-port 10GE RJ45 rear interface card: ± 2 kV in common mode
Power supply surge protection	<ul style="list-style-type: none">• Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode• Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	<ul style="list-style-type: none">• Ports on the 2-port 10GE SFP+ rear interface card• Ports on the 2-port 10GE RJ45 rear interface card• Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	85.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	<ul style="list-style-type: none">• 40.45 W (without card)• 47.78 W (with 2*10GE optical card)• 52.87 W (with 2*QSFP+ stack card)• 55.85 W (with 2*10GE electrical card)

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 51.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350BDV

5.17.16 S5720-32X-EI-AC

Version Mapping

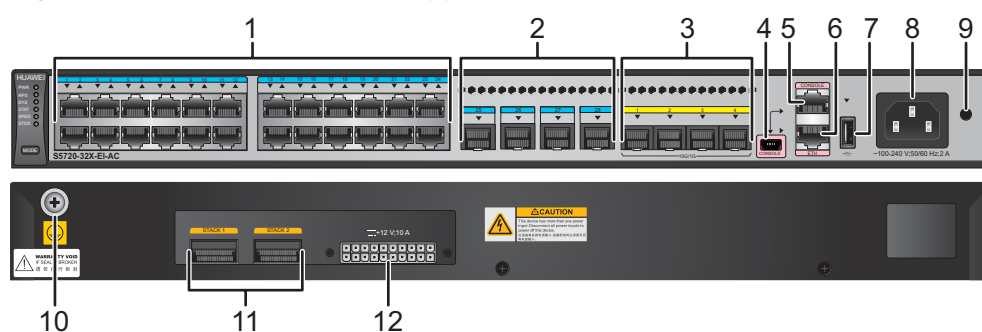
Table 5-875 lists the mapping between the S5720-32X-EI-AC chassis and software versions.

Table 5-875 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-354 S5720-32X-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	One mini USB port
5	<p>One console port</p> <p>NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>	10	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
11	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables 	12	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-876](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-876 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-877](#) describes the attributes of a 100/1000BASE-X port.

Table 5-877 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-878](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-878 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-879](#) describes the attributes of a QSFP+ stack optical port.

Table 5-879 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-880](#).

Table 5-880 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-881** describes the attributes of an ETH management port.

Table 5-881 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

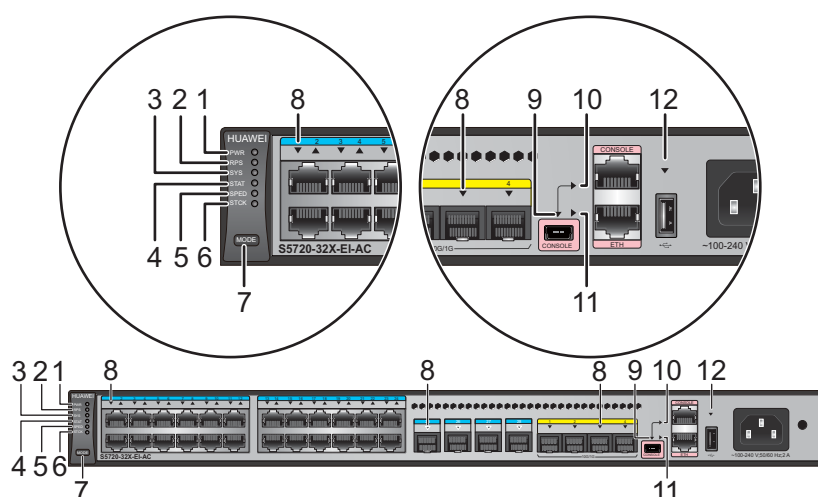
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-355 Indicators on the S5720-32X-EI-AC



NOTE

The S5720-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5720-EI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-882 Description of indicators on the switch

No.	Indicator/ Button	Name	Color	Status	Description
1	PWR	Power module	-	Off	The switch is powered off.

No.	Indicator/ Button	Name	Color	Status	Description
		indicator	Green	Steady on	The system power supply is normal.
			Yellow	Steady on	The built-in power module has failed, and the switch is receiving power from a redundant power supply (RPS).
2	RPS	RPS indicator	-	Off	The switch is not connected to an RPS.
			Green	Steady on	The RPS is in cold standby state.
			Green	Blinking	The RPS is supplying power to another switch.
			Yellow	Blinking	The RPS is supplying power to the local switch, and the built-in power module of the switch has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator/ Button	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>

No.	Indicator/ Button	Name	Color	Status	Description
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-883 .		
9	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
10	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
11	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
12	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.

No.	Indicator/ Button	Name	Color	Status	Description
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-883 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

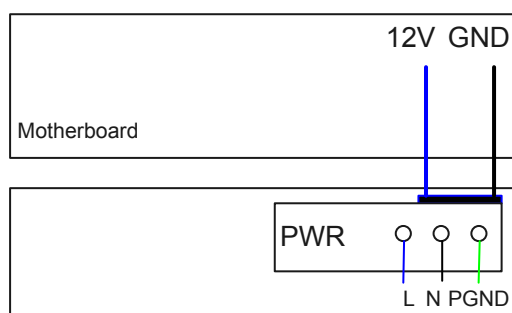
Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">If the indicator of a port is blinking, the number of this port is the stack ID of the switch.If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-32X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-356 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

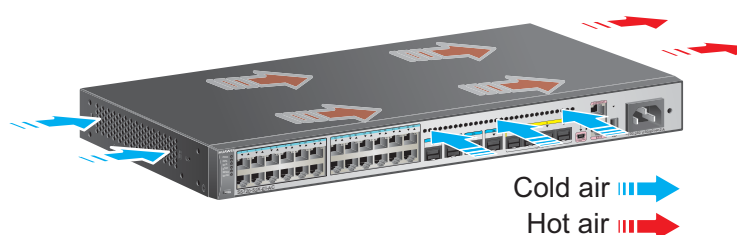
Figure 5-356 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-32X-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-884 lists technical specifications of the S5720-32X-EI-AC.

Table 5-884 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	80.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none">Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	51.9 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	40.85 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359586

5.17.17 S5720-32X-EI-DC

Version Mapping

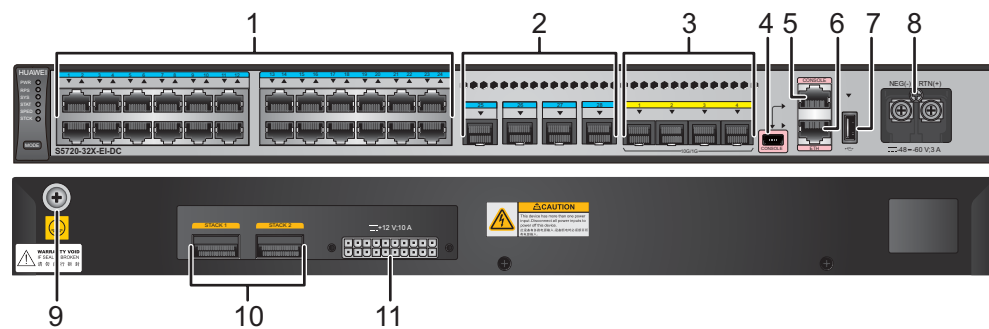
[Table 5-885](#) lists the mapping between the S5720-32X-EI-DC chassis and software versions.

Table 5-885 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-357 S5720-32X-EI-DC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>DC power terminal</p> <p>NOTE</p> <p>It is used together with a DC Power Cable.</p>
9	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	10	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables
11	<p>RPS socket</p> <p>NOTE</p> <p>It is used with an RPS cable, which is not hot swappable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-886](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-886 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-887](#) describes the attributes of a 100/1000BASE-X port.

Table 5-887 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-888](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-888 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-889](#) describes the attributes of a QSFP+ stack optical port.

Table 5-889 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-890](#).

Table 5-890 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-891](#) describes the attributes of an ETH management port.

Table 5-891 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

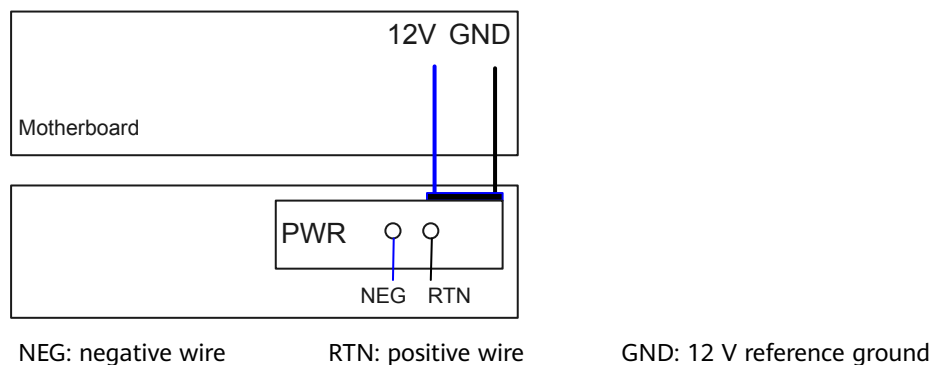
The S5720-32X-EI-DC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-32X-EI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

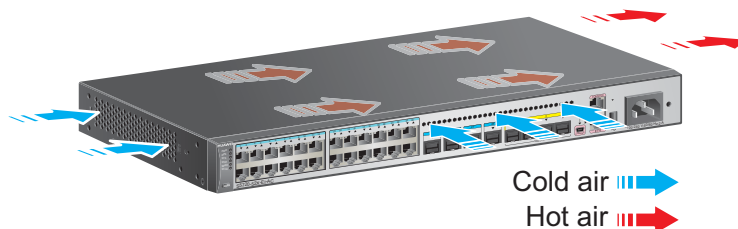
Figure 5-358 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-358 Power supply by a single DC power module



Heat Dissipation

The S5720-32X-EI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-892 lists technical specifications of the S5720-32X-EI-DC.

Table 5-892 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	80.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.3 kg (9.48 lb)
Stack ports	<ul style="list-style-type: none">• Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	51.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	40.85 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NHC

5.17.18 S5720-32X-EI-24S-AC

Version Mapping

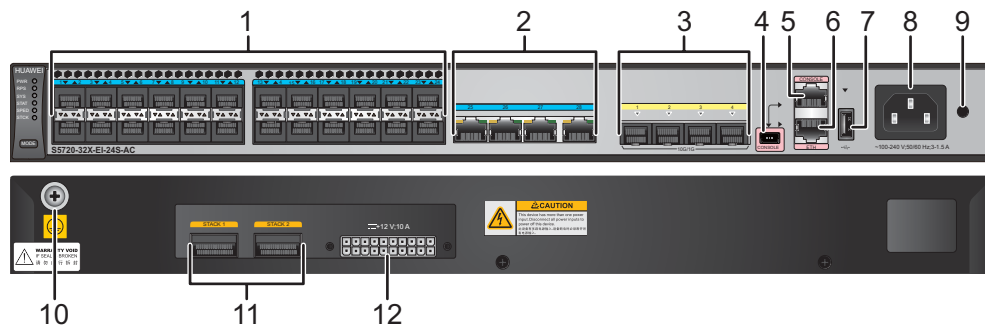
[Table 5-893](#) lists the mapping between the S5720-32X-EI-24S-AC chassis and software versions.

Table 5-893 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-24S-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-359 S5720-32X-EI-24S-AC appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	Four 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	One mini USB port

5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	AC socket NOTE It is used with an AC power cable .
9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	10	Ground screw NOTE It is used with a ground cable .
11	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables 	12	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-894](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-894 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-895](#) describes the attributes of a 100/1000BASE-X port.

Table 5-895 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-896](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-896 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-897](#) describes the attributes of a QSFP+ stack optical port.

Table 5-897 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-898](#).

Table 5-898 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-899](#) describes the attributes of an ETH management port.

Table 5-899 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see

"First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

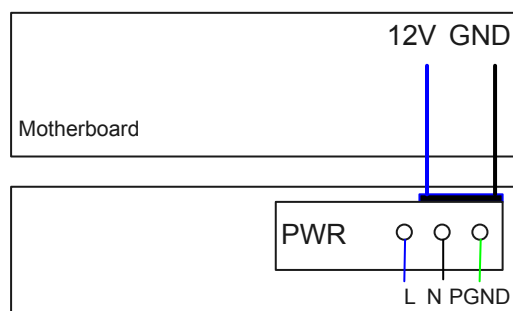
The S5720-32X-EI-24S-AC has 24 downlink optical port indicators, whereas the S5720-32X-EI-AC has 24 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-32X-EI-24S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-360](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

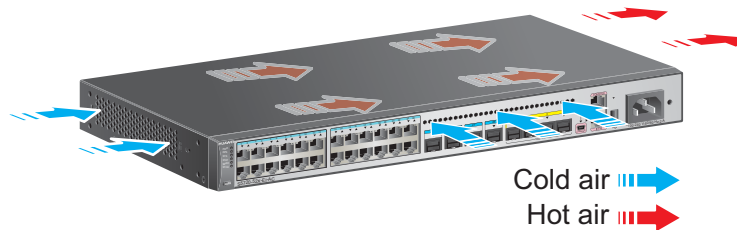
Figure 5-360 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-32X-EI-24S-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-900](#) lists technical specifications of the S5720-32X-EI-24S-AC.

Table 5-900 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	82.54 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported

Item	Description
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	58.9 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	55.46 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359579

5.17.19 S5720-32X-EI-24S-DC

Version Mapping

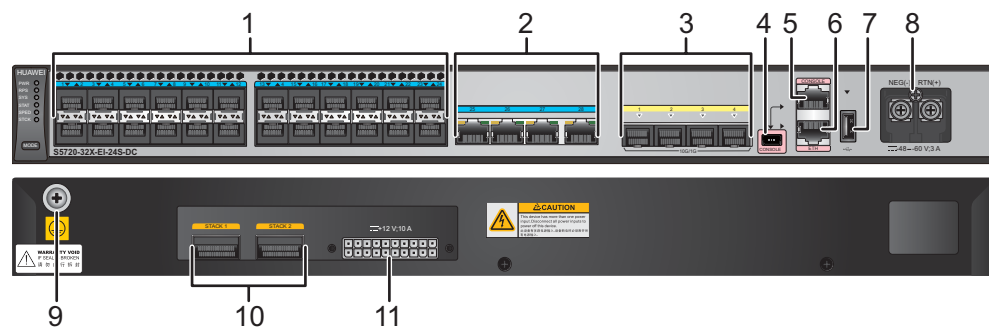
Table 5-901 lists the mapping between the S5720-32X-EI-24S-DC chassis and software versions.

Table 5-901 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-32X-EI-24S-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-361 S5720-32X-EI-24S-DC appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four 10/100/1000BASE-T ports</p>
---	--	---	-------------------------------------

3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables 	4	One mini USB port
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One ETH management port
7	One USB port	8	<p>DC power terminal</p> <p>NOTE</p> <p>It is used together with a DC Power Cable.</p>
9	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	10	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables
11	<p>RPS socket</p> <p>NOTE</p> <p>It is used with an RPS cable, which is not hot swappable.</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-902](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-902 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-903](#) describes the attributes of a 100/1000BASE-X port.

Table 5-903 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-904](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-904 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-905](#) describes the attributes of a QSFP+ stack optical port.

Table 5-905 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-906](#).

Table 5-906 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-907](#) describes the attributes of an ETH management port.

Table 5-907 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-32X-EI-24S-DC has 24 downlink optical port indicators, whereas the S5720-32X-EI-AC has 24 downlink electrical port indicators. Symbols and

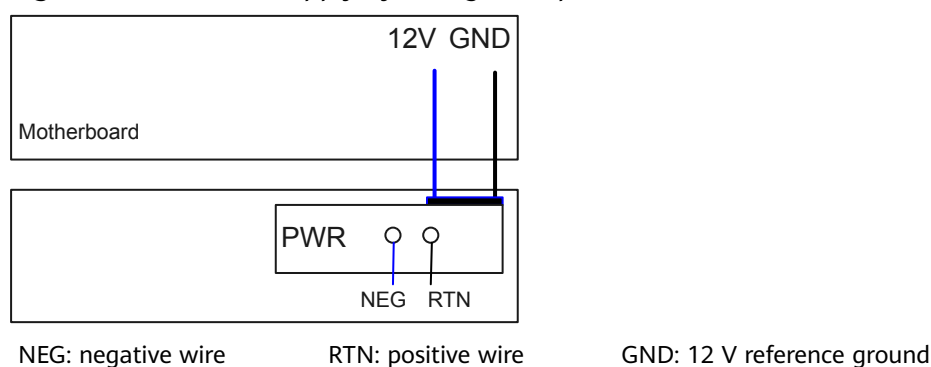
meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-32X-EI-24S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-362 shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-362 Power supply by a single DC power module



Heat Dissipation

The S5720-32X-EI-24S-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-908 lists technical specifications of the S5720-32X-EI-24S-DC.

Table 5-908 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	82.54 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.2 kg (9.26 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	58.9 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	55.46 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350NHE

5.17.20 S5720-50X-EI-AC

Version Mapping

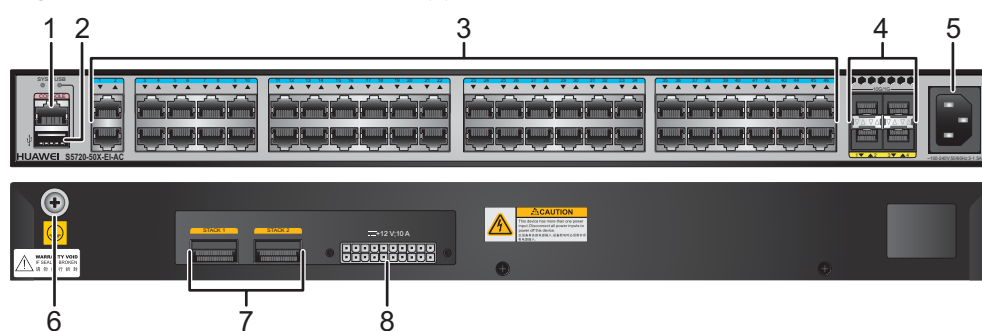
[Table 5-909](#) lists the mapping between the S5720-50X-EI-AC chassis and software versions.

Table 5-909 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-363 S5720-50X-EI-AC appearance



1	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	2	One USB port
---	--	---	--------------

3	Forty-six 10/100/1000BASE-T ports	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
5	<p>AC socket</p> <p>NOTE It is used with an AC power cable.</p>	6	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables 	8	<p>RPS socket</p> <p>NOTE It is used with an RPS cable, which is not hot swappable.</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-910** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-910 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-911](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-911 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-912](#) describes the attributes of a QSFP+ stack optical port.

Table 5-912 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-913](#).

Table 5-913 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-364 Indicators on the S5720-50X-EI-AC

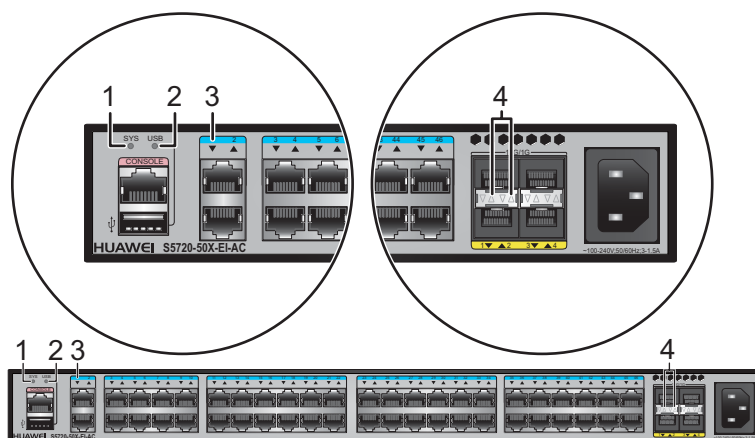


Table 5-914 Description of indicators on the switch

No.	Indicator / Button	Name	Color	Status	Description
1	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
2	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
3	-	Service port indicator (one indicator for each port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	The port is connected.
			Green	Blinking	The port is sending or receiving data.

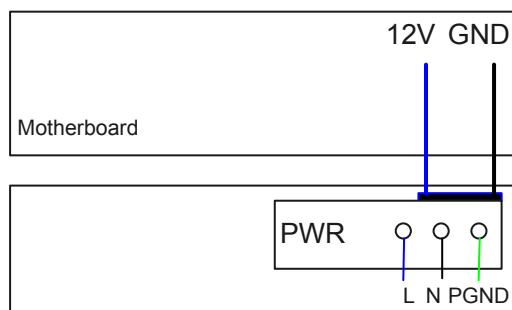
No.	Indicator / Button	Name	Color	Status	Description
4	-	Service port indicator (two indicators for each port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	The port is connected.
			Yellow	Blinking	The port is sending or receiving data.

Power Supply Configuration

The S5720-50X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-365 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

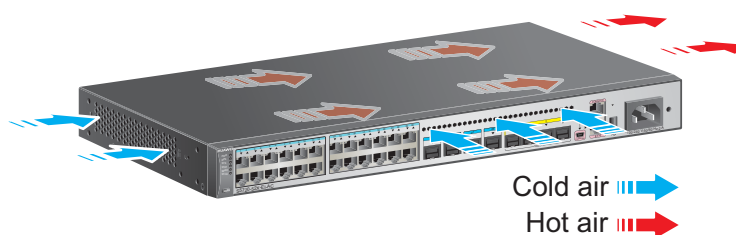
Figure 5-365 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-50X-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-915 lists technical specifications of the S5720-50X-EI-AC.

Table 5-915 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.9 kg (10.81 lb)
Stack ports	<ul style="list-style-type: none">Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	55.3 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	47.45 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359592

5.17.21 S5720-50X-EI-DC

Version Mapping

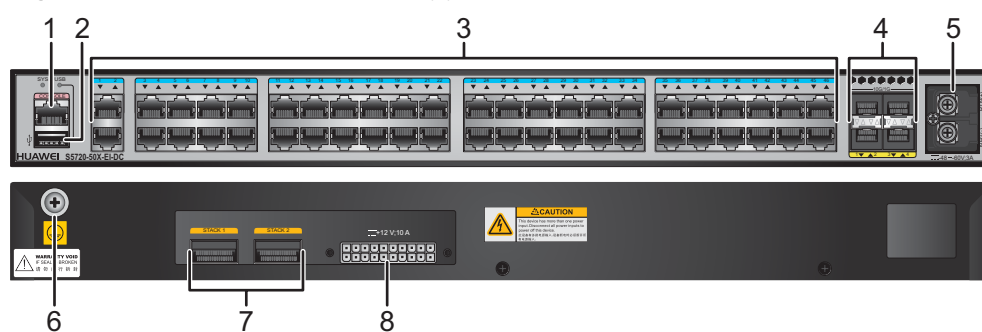
Table 5-916 lists the mapping between the S5720-50X-EI-DC chassis and software versions.

Table 5-916 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-366 S5720-50X-EI-DC appearance



1	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	2	One USB port
---	---	---	--------------

3	Forty-six 10/100/1000BASE-T ports	4	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
5	DC power terminal NOTE It is used together with a DC Power Cable .	6	Ground screw NOTE It is used with a ground cable .
7	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables 	8	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-917](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-917 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-918](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-918 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-919](#) describes the attributes of a QSFP+ stack optical port.

Table 5-919 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-920](#).

Table 5-920 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

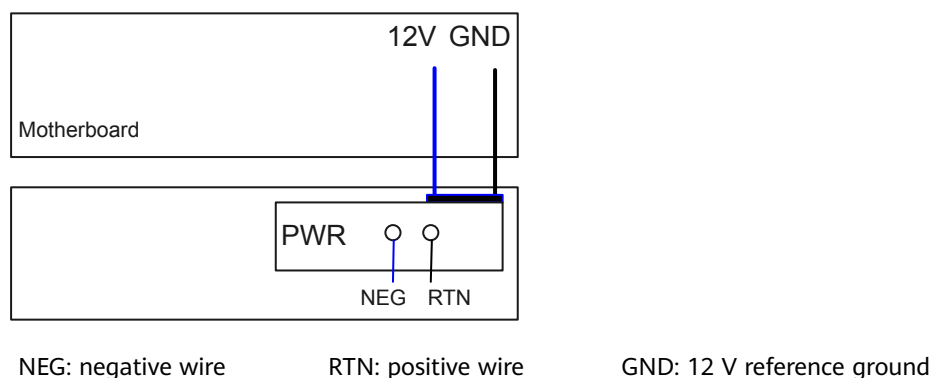
The S5720-50X-EI-DC has the same types of indicators as the S5720-50X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-50X-EI-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

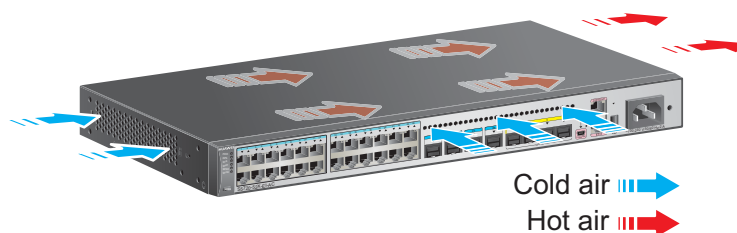
[Figure 5-367](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-367 Power supply by a single DC power module



Heat Dissipation

The S5720-50X-EI-DC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-921](#) lists technical specifications of the S5720-50X-EI-DC.

Table 5-921 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.31 years
Mean time to repair (MTTR)	2
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	<ul style="list-style-type: none">Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	55.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	47.45 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NHD

5.17.22 S5720-50X-EI-46S-AC

Version Mapping

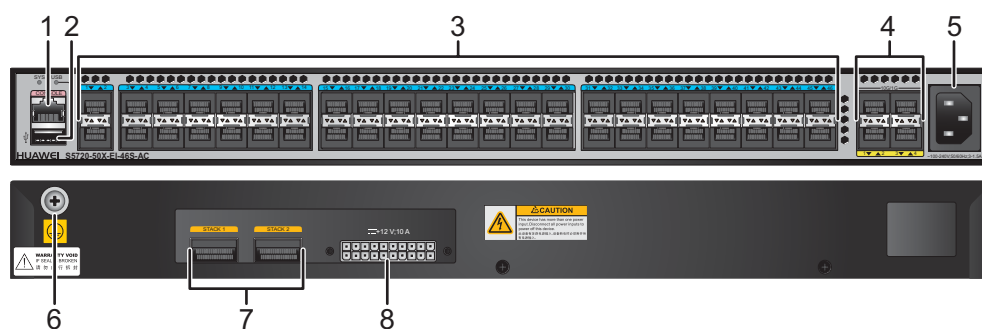
[Table 5-922](#) lists the mapping between the S5720-50X-EI-46S-AC chassis and software versions.

Table 5-922 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-46S-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-368 S5720-50X-EI-46S-AC appearance



1	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	2	<p>One USB port</p>
3	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
5	<p>AC socket</p> <p>NOTE</p> <p>It is used with an AC power cable.</p>	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables 	8	<p>RPS socket</p> <p>NOTE</p> <p>It is used with an RPS cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-923](#) describes the attributes of a 100/1000BASE-X port.

Table 5-923 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-924](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-924 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-925](#) describes the attributes of a QSFP+ stack optical port.

Table 5-925 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-926](#).

Table 5-926 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

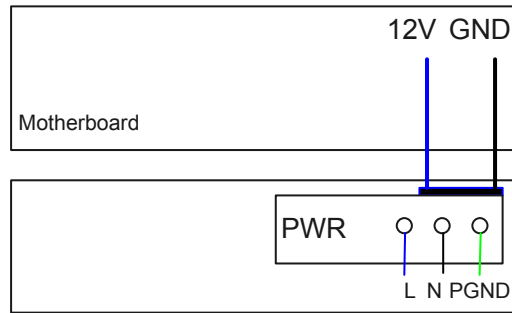
The S5720-50X-EI-46S-AC has 46 downlink optical port indicators, whereas the S5720-50X-EI-AC has 46 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-50X-EI-46S-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-369](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

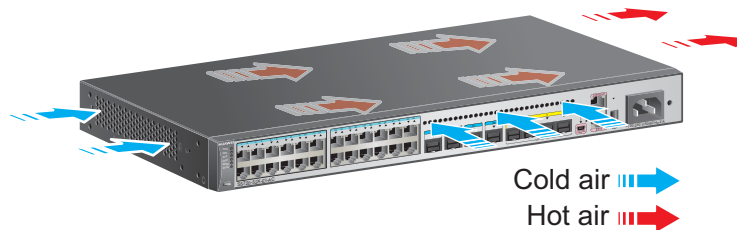
Figure 5-369 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-50X-EI-46S-AC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-927](#) lists technical specifications of the S5720-50X-EI-46S-AC.

Table 5-927 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	67.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	NA
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	5 kg (11.03 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	81.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	73.75 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 51.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359583

5.17.23 S5720-50X-EI-46S-DC

Version Mapping

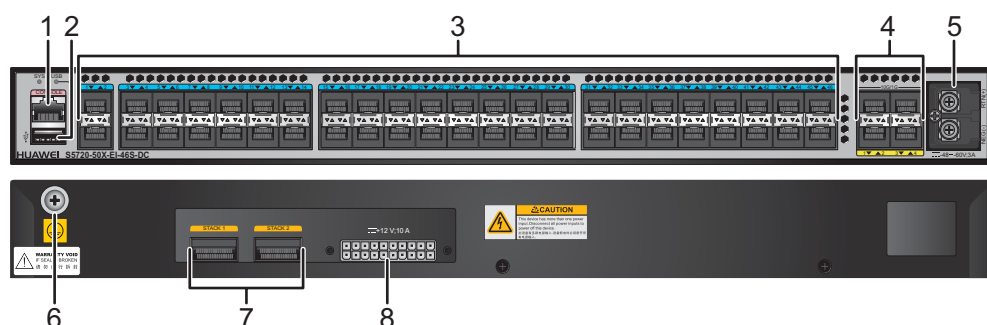
Table 5-928 lists the mapping between the S5720-50X-EI-46S-DC chassis and software versions.

Table 5-928 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-50X-EI-46S-DC	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-370 S5720-50X-EI-46S-DC appearance



1	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	2	<p>One USB port</p>
3	<p>Forty-six 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	4	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
5	<p>DC power terminal</p> <p>NOTE</p> <p>It is used together with a DC Power Cable.</p>	6	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
7	<p>Two QSFP+ stack optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables 	8	<p>RPS socket</p> <p>NOTE</p> <p>It is used with an RPS cable, which is not hot swappable.</p>

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-929](#) describes the attributes of a 100/1000BASE-X port.

Table 5-929 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-930](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-930 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-931](#) describes the attributes of a QSFP+ stack optical port.

Table 5-931 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-932](#).

Table 5-932 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

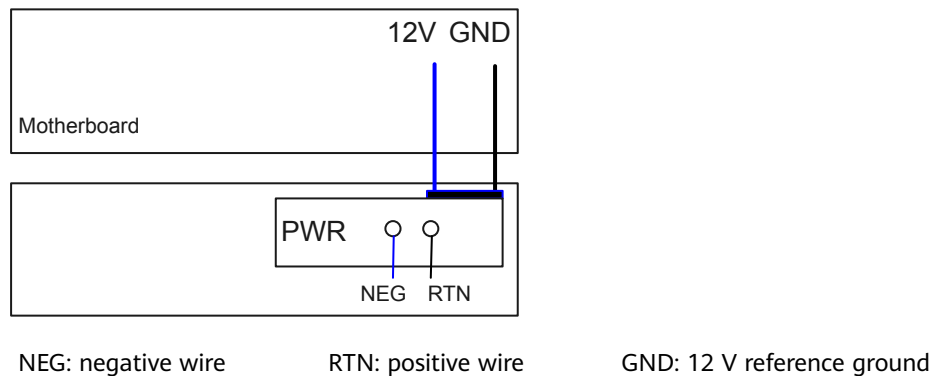
The S5720-50X-EI-46S-DC has 46 downlink optical port indicators, whereas the S5720-50X-EI-AC has 46 downlink electrical port indicators. Symbols and meanings of other indicators on the two switch models are the same. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-50X-EI-46S-DC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-371](#) shows the power supply mode of a single DC power module. The built-in DC power module (PWR) receives DC power from an external power source and provides a 12 V output to the chassis.

Figure 5-371 Power supply by a single DC power module



Heat Dissipation

The S5720-50X-EI-46S-DC has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-933 lists technical specifications of the S5720-50X-EI-46S-DC.

Table 5-933 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	67.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	NA
Power supply surge protection	±1 kV in differential mode, ±2 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.8 kg (10.59 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	-48 V DC to -60 V DC
Maximum voltage range	-36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	81.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	73.75 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 51.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350NHF

5.17.24 S5720-52X-EI-AC

Version Mapping

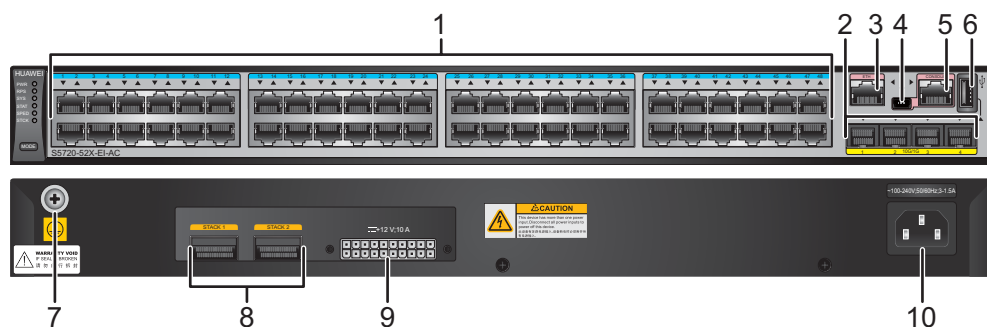
[Table 5-934](#) lists the mapping between the S5720-52X-EI-AC chassis and software versions.

Table 5-934 Version mapping

Series		Model	Software Version
S5720-EI	S5720-X-EI	S5720-52X-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-372 S5720-52X-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables
9	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	10	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-935](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-935 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-936](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-936 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-937](#) describes the attributes of a QSFP+ stack optical port.

Table 5-937 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-938](#).

Table 5-938 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-939](#) describes the attributes of an ETH management port.

Table 5-939 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

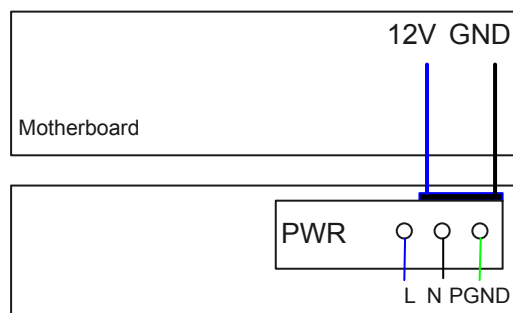
The S5720-52X-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52X-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-373](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-373 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52X-EI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-940 lists technical specifications of the S5720-52X-EI-AC.

Table 5-940 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV

Item	Description
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	<ul style="list-style-type: none"> Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	61.5 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	52.25 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02359589

5.17.25 S5720-32P-EI-AC

Version Mapping

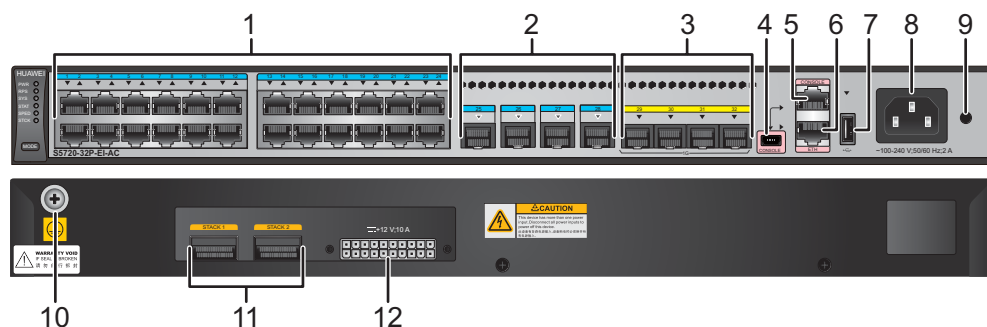
[Table 5-941](#) lists the mapping between the S5720-32P-EI-AC chassis and software versions.

Table 5-941 Version mapping

Series		Model	Software Version
S5720-EI	S5720-P-EI	S5720-32P-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-374 S5720-32P-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
3	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported) 	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One ETH management port
7	One USB port	8	AC socket NOTE It is used with an AC power cable .
9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	10	Ground screw NOTE It is used with a ground cable .
11	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables 	12	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-942](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-942 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-943](#) describes the attributes of a 100/1000BASE-X port.

Table 5-943 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. [Table 5-944](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-944 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-945](#) describes the attributes of a QSFP+ stack optical port.

Table 5-945 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-946](#).

Table 5-946 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-947](#) describes the attributes of an ETH management port.

Table 5-947 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

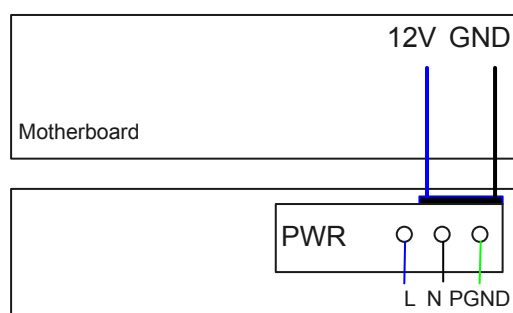
The S5720-32P-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-32P-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

Figure 5-375 shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

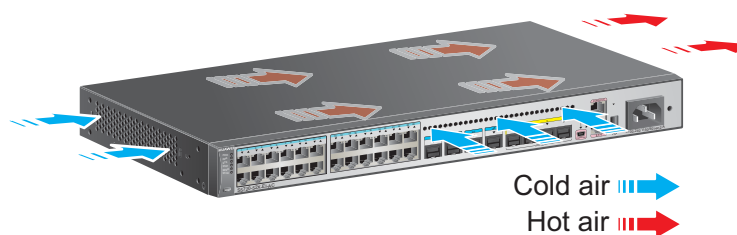
Figure 5-375 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-32P-EI-AC has a built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



Technical Specifications

Table 5-948 lists technical specifications of the S5720-32P-EI-AC.

Table 5-948 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	80.32 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.5 kg (9.92 lb)
Stack ports	<ul style="list-style-type: none">Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	50.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	39.75 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350BDY

5.17.26 S5720-52P-EI-AC

Version Mapping

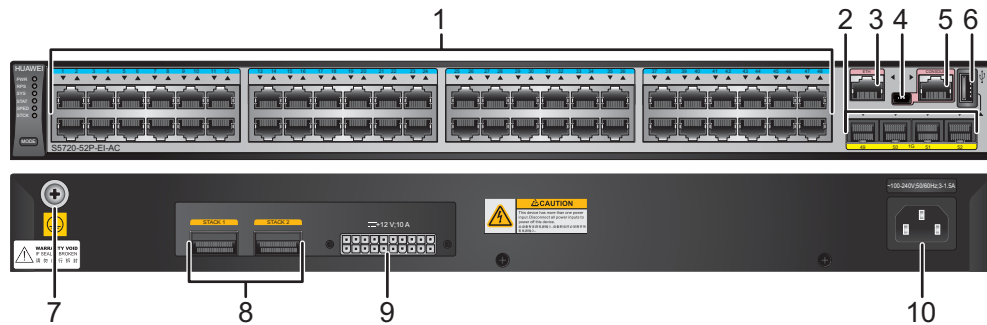
[Table 5-949](#) lists the mapping between the S5720-52P-EI-AC chassis and software versions.

Table 5-949 Version mapping

Series		Model	Software Version
S5720-EI	S5720-P-EI	S5720-52P-EI-AC	V200R007C00 to V200R019C10 versions NOTE This model does not match V200R007C10.

Appearance and Structure

Figure 5-376 S5720-52P-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (only 1000 Mbit/s supported)
3	One ETH management port	4	One mini USB port
5	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	Two QSFP+ stack optical ports Applicable modules and cables: <ul style="list-style-type: none"> • QSFP+ optical module (only QSFP-40G-SR4 and QSFP-40G-iSR supported) • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables
9	RPS socket NOTE It is used with an RPS cable , which is not hot swappable.	10	AC socket NOTE It is used with an AC power cable .

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-950](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-950 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

A 1000BASE-X Ethernet optical port sends and receives service data at 1000 Mbit/s. [Table 5-951](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-951 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	1000 Mbit/s

QSFP+ stack optical port

QSFP+ stack optical ports can only be used for stack connection. [Table 5-952](#) describes the attributes of a QSFP+ stack optical port.

Table 5-952 Attributes of a QSFP+ stack optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-953](#).

Table 5-953 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-954](#) describes the attributes of an ETH management port.

Table 5-954 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port of the S5720-EI does not support USB 1.1 and can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

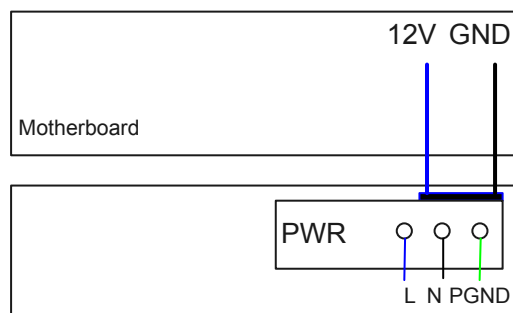
The S5720-52P-EI-AC has the same types of indicators as the S5720-32X-EI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-52P-EI-AC has a built-in power module and does not support pluggable power modules. It can connect to an RPS1800 power supply for power redundancy.

[Figure 5-377](#) shows the power supply mode of a built-in AC power module. The built-in AC power module (PWR) receives power from an external power source and provides a 12 V output to the chassis.

Figure 5-377 Power supply mode of a built-in AC power module



L: live wire N: neutral wire PGND: protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-52P-EI-AC has a built-in fan for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-955 lists technical specifications of the S5720-52P-EI-AC.

Table 5-955 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	73.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV

Item	Description
Power supply surge protection	±6 kV in differential mode, ±6 kV in common mode
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)
Weight (with packaging)	4.7 kg (10.36 lb)
Stack ports	<ul style="list-style-type: none">• Two fixed QSFP+ stack ports on the rear card
RTC	Supported
RPS	Supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, full speed of fans)	60.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	51.14 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 49.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02350BEC

5.18 S5730S-EI

5.18.1 S5730S-48C-EI-AC

Version Mapping

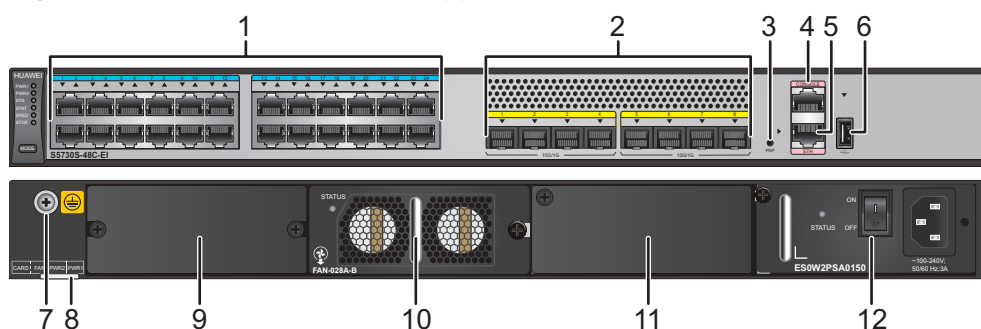
[Table 5-956](#) lists the mapping between the S5730S-48C-EI-AC chassis and software versions.

Table 5-956 Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-48C-EI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-378 S5730S-48C-EI-AC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	10	Fan slot NOTE Applicable fan module: FAN-028A-B

1	Power module slot 2	1	Power module slot 1
1	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	2	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-957](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-957 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-958](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-958 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-959](#).

Table 5-959 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-960](#) describes the attributes of an ETH management port.

Table 5-960 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730S-48C-EI-AC has similar indicators to those of the S5730S-68C-PWR-EI except that the S5730S-48C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730S-48C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-379 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-379 Power supply connections of dual DC power modules

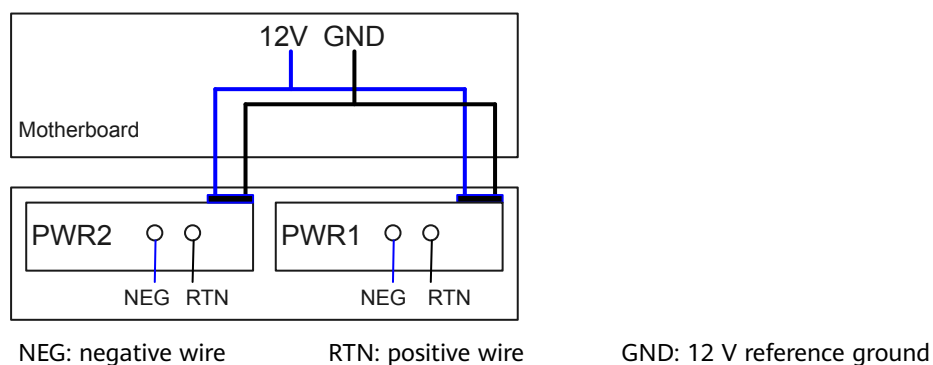
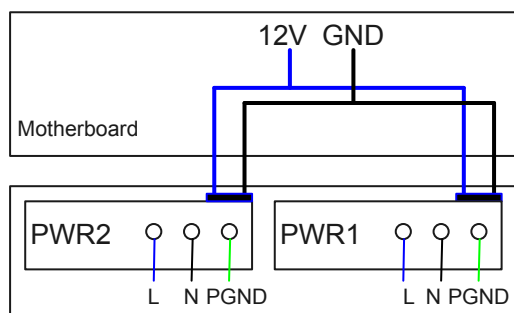


Figure 5-380 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

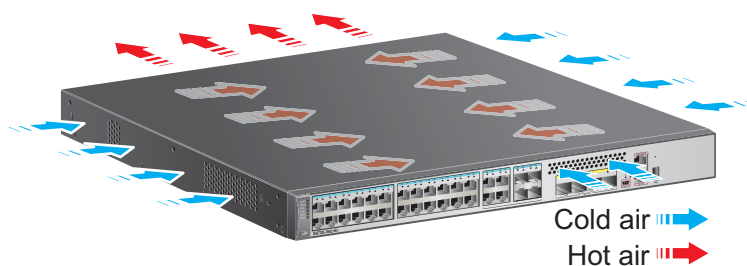
Figure 5-380 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730S-48C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-961 lists technical specifications of the S5730S-48C-EI-AC.

Table 5-961 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	47.83 years
Mean time to repair (MTTR)	2 years
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.2 kg (18.08 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	62.4 W (without card)
Typical power consumption (30% of traffic load)	39.02 W (without card)
	<ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption

Item	Description
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.</p>
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010790

5.18.2 S5730S-48C-PWR-EI

Version Mapping

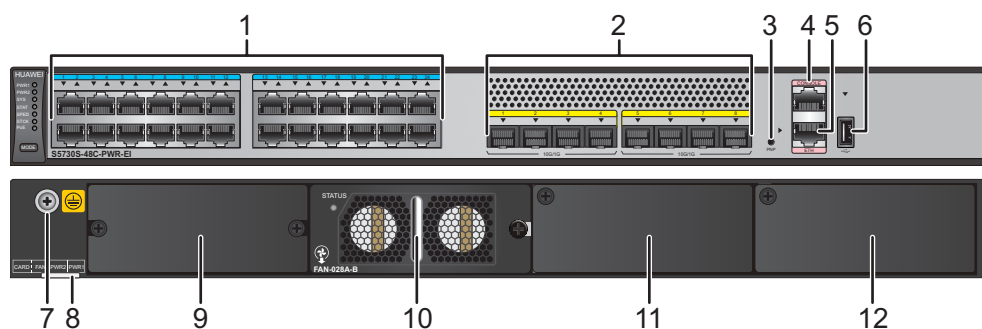
Table 5-962 lists the mapping between the S5730S-48C-PWR-EI chassis and software versions.

Table 5-962 Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-48C-PWR-EI	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-381 S5730S-48C-PWR-EI appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One PNP button NOTICE Applicable in V200R012C00 and later versions: To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	4	One console port NOTE It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.
5	One ETH management port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	10	Fan slot NOTE Applicable fan module: FAN-028A-B

1 1	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module 	1 2	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module
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Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-963](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-963 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-964](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-964 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-965](#).

Table 5-965 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-966](#) describes the attributes of an ETH management port.

Table 5-966 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730S-48C-PWR-EI has the same types of indicators as the S5730S-68C-PWR-EI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730S-48C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W or 650 W power module installed. A power module can provide 369.6 W of PoE power for powered devices (PDs). A 500 W AC power module and a 650 W DC power module can be used together in the switch. [Table 5-967](#) lists its power supply configurations.

Table 5-967 Power supply configurations

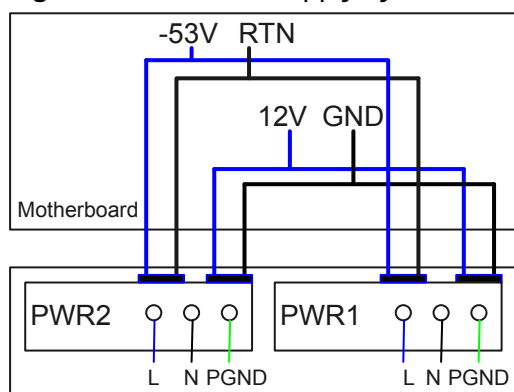
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	–	369.6 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-382](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-382 Power supply by dual AC PoE power modules



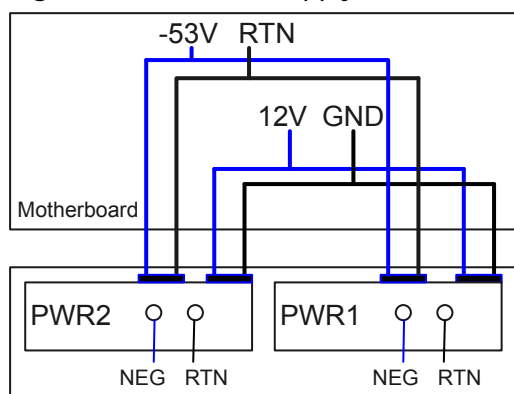
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Figure 5-383 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

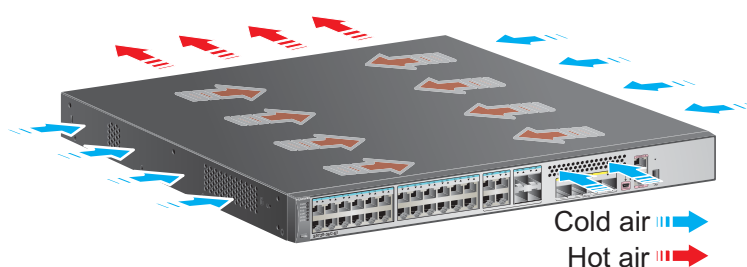
Figure 5-383 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730S-48C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-968 lists technical specifications of the S5730S-48C-PWR-EI.

Table 5-968 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.8 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	7.5 kg (16.53 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> • Not providing the PoE function: 83.2 W (without card) • 100% PoE loads: 967 W (system power consumption: 227.8 W, PoE: 739.2 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	44.2 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 57.4 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010791

5.18.3 S5730S-68C-EI-AC

Version Mapping

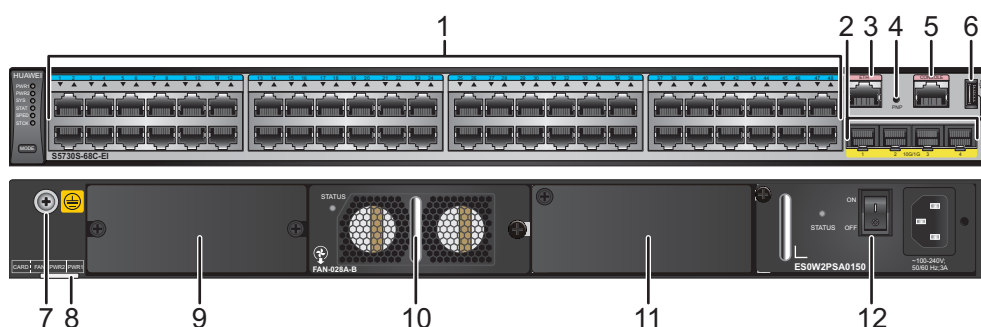
[Table 5-969](#) lists the mapping between the S5730S-68C-EI-AC chassis and software versions.

Table 5-969 Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-68C-EI-AC	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-384 S5730S-68C-EI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot</p> <p>NOTE</p> <p>Card supported:</p> <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	10	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: FAN-028A-B</p>

1	Power module slot 2	1	Power module slot 1
1	NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	2	NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-970](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-970 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-971](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-971 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-972](#).

Table 5-972 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-973](#) describes the attributes of an ETH management port.

Table 5-973 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730S-68C-EI-AC has similar indicators to those of the S5730S-68C-PWR-EI except that the S5730S-68C-EI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730S-68C-EI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-385 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-385 Power supply connections of dual DC power modules

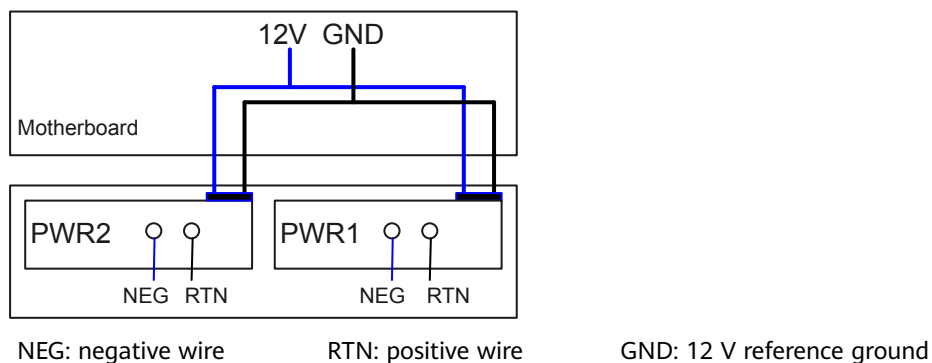
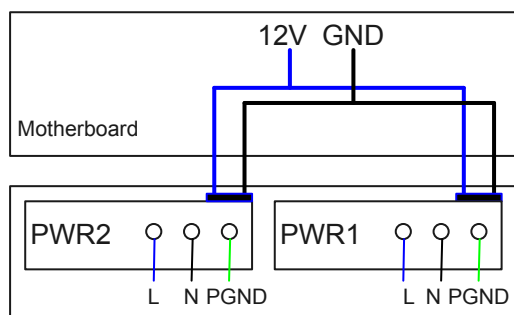


Figure 5-386 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

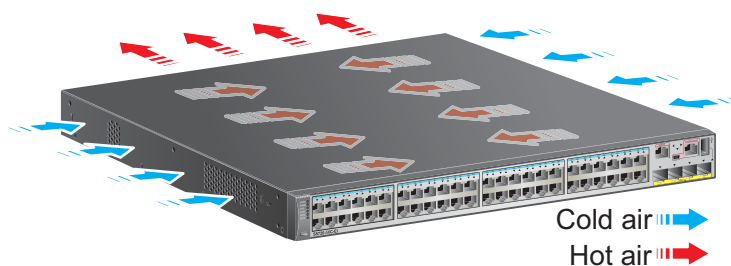
Figure 5-386 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730S-68C-EI-AC uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-974 lists technical specifications of the S5730S-68C-EI-AC.

Table 5-974 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	65.4 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	42.3 W (without card)

Item	Description
Operating temperature	<p>0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.</p>
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010792

5.18.4 S5730S-68C-PWR-EI

Version Mapping

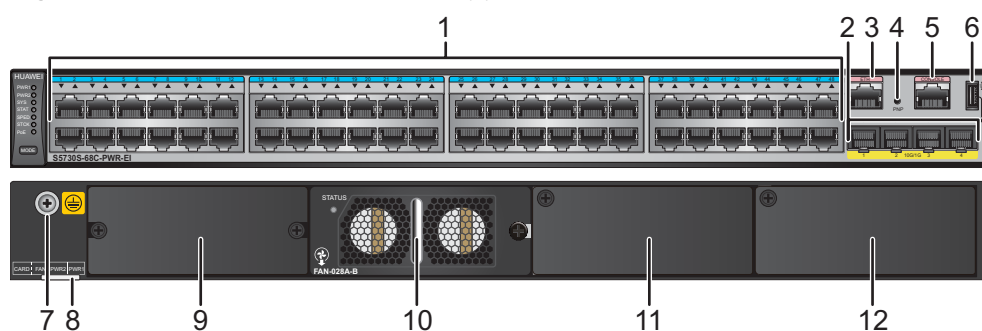
Table 5-975 lists the mapping between the S5730S-68C-PWR-EI chassis and software versions.

Table 5-975 Version mapping

Series	Model	Software Version
S5730S-EI	S5730S-68C-PWR-EI	V200R011C10 to V200R019C10 versions

Appearance and Structure

Figure 5-387 S5730S-68C-PWR-EI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>Applicable in V200R012C00 and later versions:</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p> <p>NOTE</p> <p>It is used with a console cable. The console cable is not delivered with the switch and needs to be separately purchased if needed.</p>	6	One USB port
7	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>

9	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • ES5D21Q04Q01 • ES5D21VST000 (applicable in V200R012C00 and later versions) 	1 0	Fan slot NOTE Applicable fan module: FAN-028A-B
1 1	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module • 1150 W AC PoE power module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions) 	1 2	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE power module • 650 W DC PoE power module • 1150 W AC PoE power module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions)

Interface Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-976](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-976 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-977](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-977 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-978](#).

Table 5-978 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-979](#) describes the attributes of an ETH management port.

Table 5-979 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

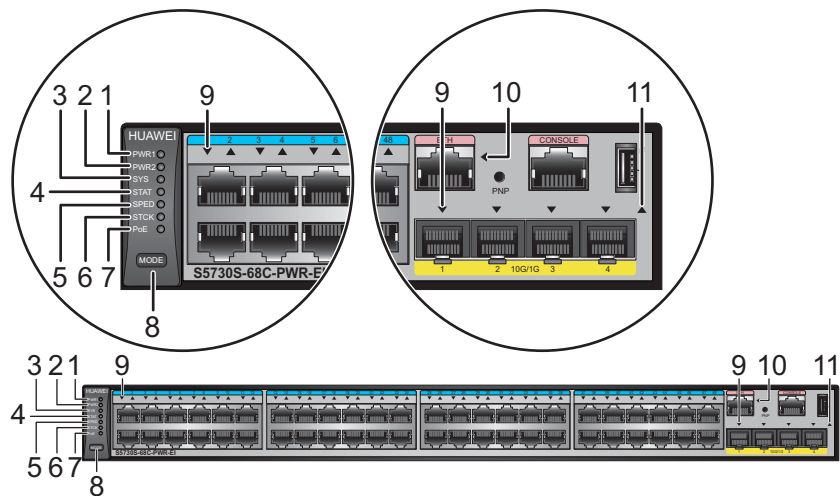
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-388 Indicators on the S5730S-68C-PWR-EI



NOTE

The S5730S-EI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators of a switch. If the switch fails, its SYS indicator and mode indicators can be configured to blink red fast so that field maintenance personnel can find this faulty switch.

Table 5-980 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.

No.	Indicator	Name	Color	Status	Description
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-981 .		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-981 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.

Display Mode	Color	Status	Description
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none"> The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. The total power consumption of PDs has reached the maximum power of the switch. The manual power management mode is used and the port is not enabled to provide power to the PD.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730S-68C-PWR-EI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch.

[Table 5-982](#) lists its power supply configurations.

Table 5-982 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 29 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25

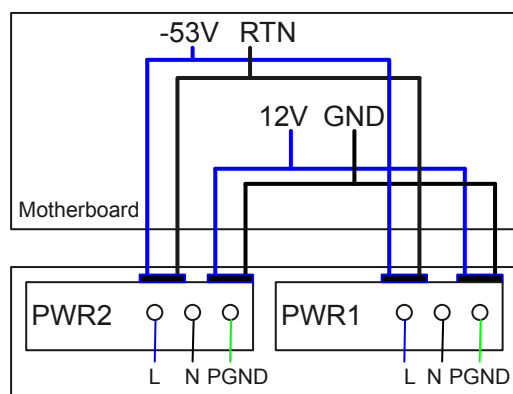
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 29
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-389 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-389 Power supply by dual AC PoE power modules



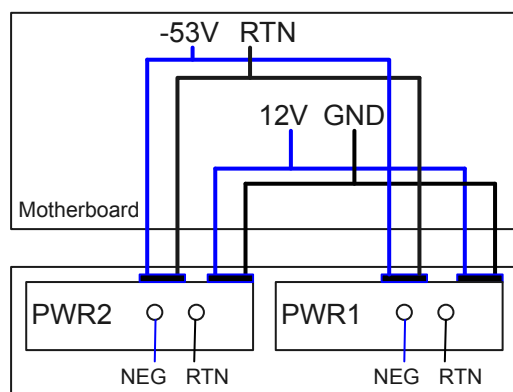
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Figure 5-390 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

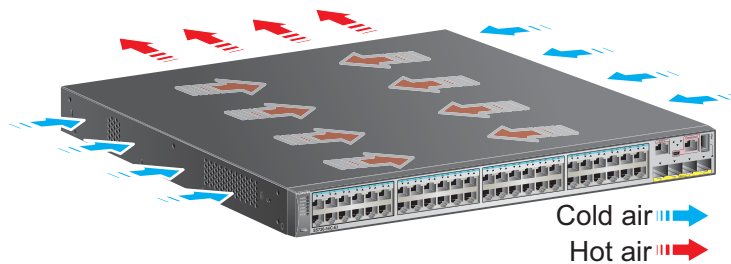
Figure 5-390 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730S-68C-PWR-EI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-983 lists technical specifications of the S5730S-68C-PWR-EI.

Table 5-983 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	43.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight (with packaging)	8 kg (17.64 lb)
Stack ports	Any 10GE SFP+ or 40GE QSFP+ ports Ports on the 2-port QSFP+ rear stack card
RTC	Supported

Item	Description
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Using 650 W DC or 500 W AC power modules <ul style="list-style-type: none"> - Not providing the PoE function: 68.3 W (without card) - 100% PoE loads: 925 W (system power consumption: 185.8 W, PoE: 739.2 W, without card) ● Using 1150 W AC or 1000 W AC power modules <ul style="list-style-type: none"> - Not providing the PoE function: 68.3 W (without card) - 100% PoE loads: 1733 W (system power consumption: 293 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption	50.1 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The operating temperature of the switch is 0°C to 40°C (32°F to 104°F) when it uses QSFP+ optical modules with 10 km or longer transmission distances.

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 64.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010793

5.19 S5700-HI

5.19.1 S5700-28C-HI

Version Mapping

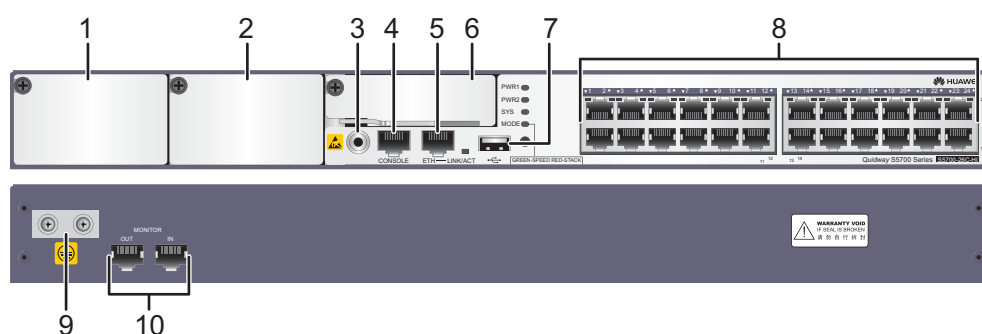
[Table 5-984](#) lists the mapping between the S5700-28C-HI and software versions.

Table 5-984 Version mapping

Series	Model	Software Version
S5700-HI	S5700-28C-HI	V100R006C01 to V200R005C02 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 5-391 S5700-28C-HI appearance



1	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> 170 W AC power module 170 W DC power module 	2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> 170 W AC power module 170 W DC power module
3	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	4	One console port
5	One ETH management port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card) 9.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card) 9.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)
7	One USB port	8	Twenty-four 10/100/1000BASE-T ports

9	Ground screw NOTE It is used with a ground cable . The switch has two ground screws, any of which can be used to install a ground cable.	1 0	Monitoring port NOTE The monitoring port monitors the cabinet door, power module, battery power, and power supply of the air conditioner.
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Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-985](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-985 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-986](#).

Table 5-986 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. **Table 5-987** describes the attributes of an ETH management port.

Table 5-987 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-392 Indicators on the S5700-28C-HI

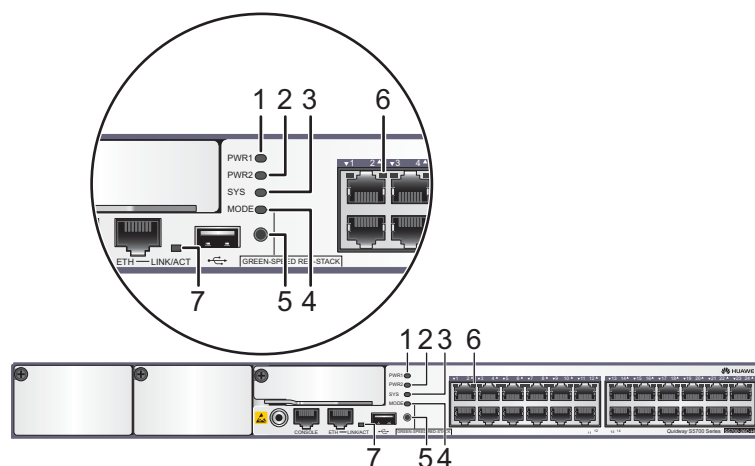


Table 5-988 Description of indicators on the switch

Number	Indicator/ Button	Color	Description
1	PWR1: power supply indicator	-	Off: No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 1 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in power module slot 1 fails.
2	PWR2: power supply indicator	-	Off: No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
		Green	Steady on: A power module is installed in power module slot 2 and is working normally.
		Red	Steady on: The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> • A power module is available in this slot but its power switch is in the OFF position. • A power module is available in this slot but it is not connected to a power source. • The power module in power module slot 2 fails.

Number	Indicator/ Button	Color	Description
3	SYS: system status indicator	-	Off: The system is not running.
		Green	<p>Indicator states and meaning in V100R006 version:</p> <ul style="list-style-type: none"> Steady on: The system is not operating properly or is starting. Slow blinking: The system is running normally. Fast blinking: The system is copying the system software and configuration file from a USB flash drive during a USB-based upgrade. <p>Indicator states and meaning in V200R001 and later versions:</p> <ul style="list-style-type: none"> Fast blinking: The system is starting or is copying the system software and configuration file from a USB flash drive during a USB-based upgrade. Slow blinking: The system is running normally.
		Yellow	<ul style="list-style-type: none"> Steady on: The system is performing self-check during startup (only applicable to V100R006). Blinking: The system has been successfully upgraded using a USB flash drive and the switch has restarted. You can remove the USB flash drive from the switch.
		Red	<ul style="list-style-type: none"> Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated. Blinking: An error occurred during USB-based upgrade and the system failed to be upgraded after a USB flash drive is inserted.
4	MODE: mode indicator	-	Off: The service port indicators are in the status mode (default). In the status mode, the service port indicator shows the port link or activity state.

Number	Indicator/ Button	Color	Description
		Green	Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
		Red	Steady on: The service port indicators show the stack ID of the switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	Mode switch button	-	<p>In versions earlier than V200R003C00:</p> <ul style="list-style-type: none"> • When you press this button once, the mode indicator turns green and the service port indicators show the speed of each service port. • When you press this button a second time, the mode indicator turns off. <p>In V200R003C00 and later versions:</p> <ul style="list-style-type: none"> • When you press this button once, the mode indicator turns green and the service port indicators show the speed of ports. • When you press this button a second time, the mode indicator turns red and the service port indicators show stack information. • When you press this button a third time, the mode indicator turns off and the service port indicators restore to the status mode. <p>If you do not press the button within 45 seconds, the mode indicator restores to the default mode.</p>
6	Service port indicator		Meanings of service port indicators vary in different modes. For details, see Table 5-989 and Table 5-990 .

Number	Indicator/Button	Color	Description
7	ETH indicator	Green	<ul style="list-style-type: none"> Off: No link is established on the port. Steady on: The port is connected. Blinking: The port is sending or receiving data.

Table 5-989 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-990 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	<p>10M/100M/1000M port: The port is operating at 10/100 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 1000 Mbit/s.</p>
	Green and yellow	Blinking	<p>10M/100M/1000M port: The port is operating at 1000 Mbit/s.</p> <p>1000M/10GE port: The port is operating at 10 Gbit/s.</p>
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	<p>The switch is not the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green and yellow	Blinking	<p>The switch is the master switch in a stack.</p> <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5700-28C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-393 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-393 Power supply connections of dual DC power modules

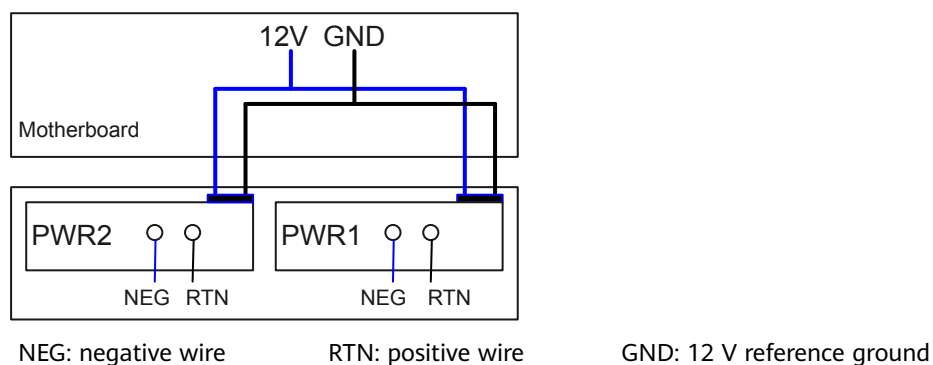
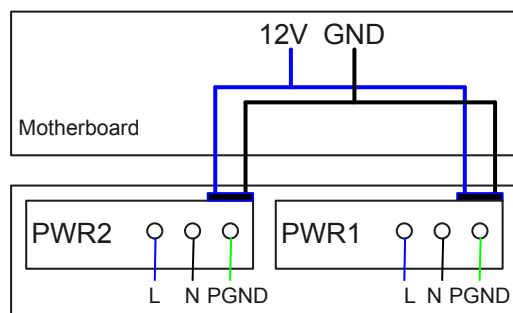


Figure 5-394 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

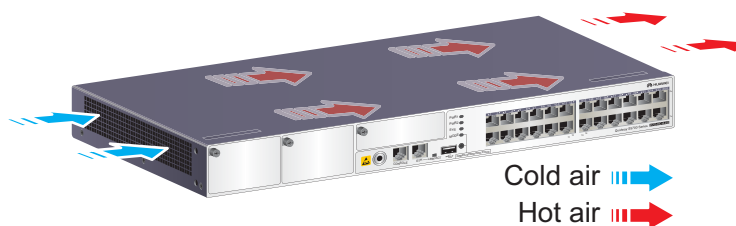
Figure 5-394 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-991 lists technical specifications of the S5700-28C-HI.

Table 5-991 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	64 MB
Mean time between failures (MTBF)	28.7 years when a 4-port 10GE interface card is configured, 41.1 years when a 2-port 10GE interface card is configured, 42.9 years when a 4-port GE interface card is configured
Mean time to repair (MTTR)	2 years
Availability	> 0.99999
Service port surge protection	±2 kV in common mode

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 220.0 mm (1.75 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 6.5 kg (14.33 lb)
Stack ports	<ul style="list-style-type: none"> Versions earlier than V200R003C00 do not support stack ports. Since V200R003C00, 10GE ports on the front card can be used as stack ports.
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	76.6 W
Operating temperature	-5°C to +55°C (23°F to 131°F) NOTE The operating temperature of the switch is -5°C to +50°C (23°F to 122°F) when it uses SFP+ optical modules with 40 km or longer transmission distances.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353630

5.19.2 S5700-28C-HI-24S

Version Mapping

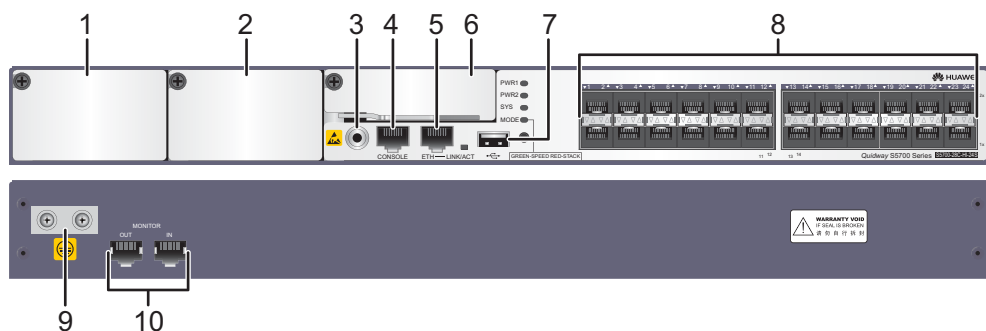
Table 5-992 lists the mapping between the S5700-28C-HI-24S and software versions.

Table 5-992 Version mapping

Series	Model	Software Version
S5700-HI	S5700-28C-HI-24S	V100R006C01 to V200R005C02 NOTE This model does not match V200R003C02 or V200R003C10.

Appearance and Structure

Figure 5-395 S5700-28C-HI-24S appearance



1	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 170 W AC power module • 170 W DC power module 	2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 170 W AC power module • 170 W DC power module
---	--	---	--

3	ESD jack NOTE Before installing or maintaining a switch, wear an ESD wrist strap and insert the other end of the ESD wrist strap into this ESD jack.	4	One console port
5	One ETH management port	6	Front card slot NOTE Card supported: <ul style="list-style-type: none"> 9.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card) 9.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card) 9.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)
7	One USB port	8	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> FE optical module GE optical module GE-CWDM optical module GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s)
9	Ground screw NOTE It is used with a ground cable . The switch has two ground screws, any of which can be used to install a ground cable.	10	Monitoring port NOTE The monitoring port monitors the cabinet door, power module, battery power, and power supply of the air conditioner.

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-993](#) describes the attributes of a 100/1000BASE-X port.

Table 5-993 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-994](#).

Table 5-994 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-995](#) describes the attributes of an ETH management port.

Table 5-995 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

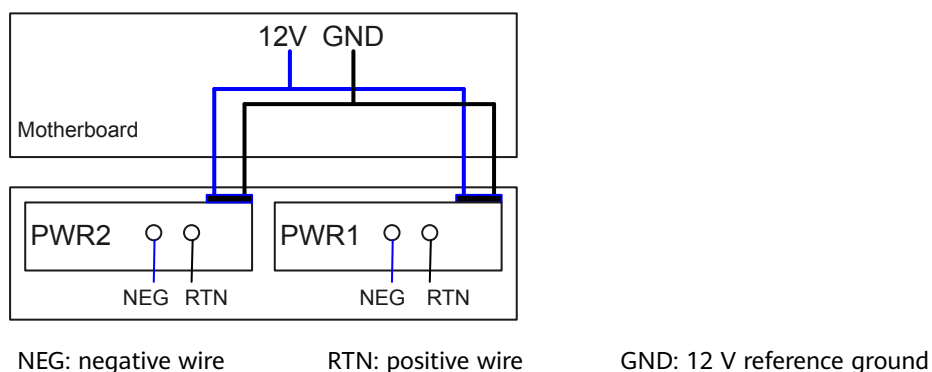
The S5700-28C-HI-24S has similar indicators (except service port indicators) to those on the S5700-28C-HI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5700-28C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

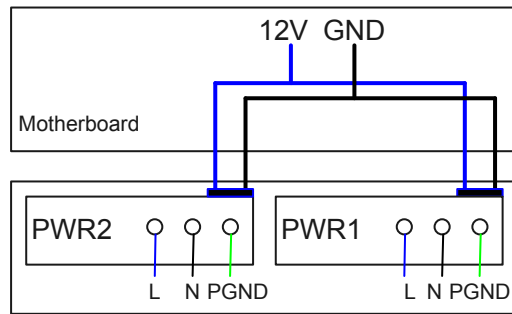
[Figure 5-396](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-396 Power supply connections of dual DC power modules



[Figure 5-397](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

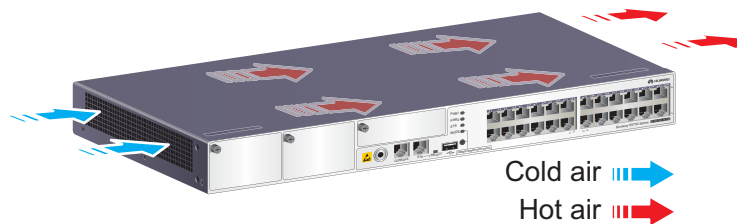
Figure 5-397 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5700-28C-HI-24S has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-996](#) lists technical specifications of the S5700-28C-HI-24S.

Table 5-996 Technical specifications

Item	Description
Memory (RAM)	512 MB
Flash	64 MB
Mean time between failures (MTBF)	25.5 years when a 4-port 10GE interface card is configured, 34.8 years when a 2-port 10GE interface card is configured, 36.1 years when a 4-port GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 220.0 mm (1.75 in. x 17.4 in. x 8.7 in.)
Weight	<ul style="list-style-type: none"> Empty: ≤ 5 kg (11.02 lb) Fully configured: ≤ 6.5 kg (14.33 lb)
Stack ports	<ul style="list-style-type: none"> Versions earlier than V200R003C00 do not support stack ports. Since V200R003C00, 10GE ports on the front card can be used as stack ports.
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	80.7 W
Operating temperature	-5°C to +55°C (23°F to 131°F) NOTE The operating temperature of the switch is -5°C to +50°C (23°F to 122°F) when it uses SFP+ optical modules with 40 km or longer transmission distances.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353631

5.20 S5710-HI

5.20.1 S5710-108C-PWR-HI

Version Mapping

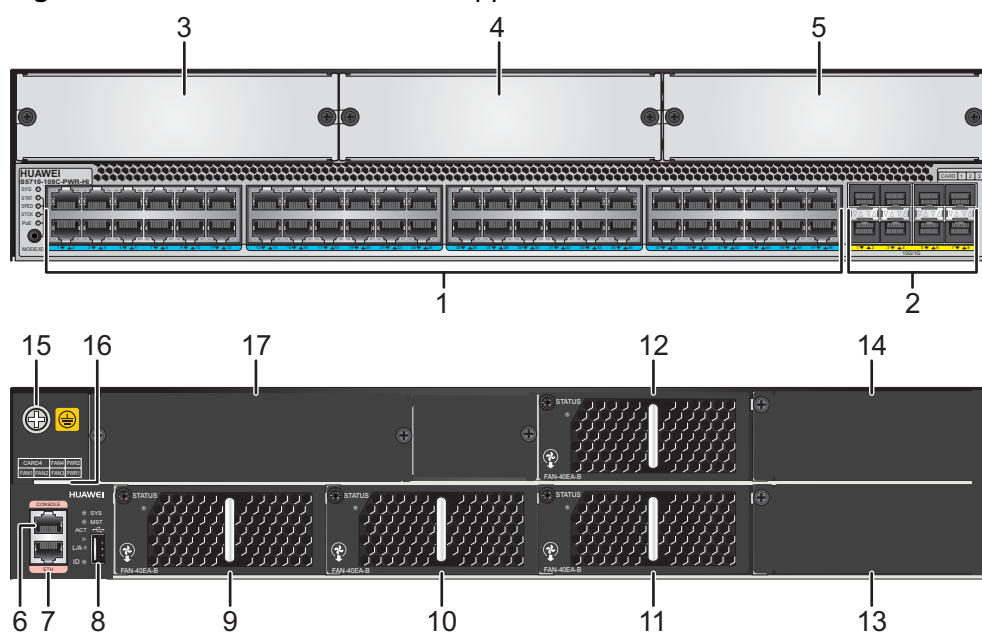
[Table 5-997](#) lists the mapping between the S5710-108C-PWR-HI chassis and software versions.

Table 5-997 Version mapping

Series	Model	Software Version
S5710-HI	S5710-108C-PWR-HI	V200R003C00 to V200R005C03 NOTE This model does not match V200R003C02, V200R003C10, or V200R005C01.

Appearance and Structure

Figure 5-398 S5710-108C-PWR-HI appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Eight 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module (applicable in V200R005C00) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables (applicable in V200R003C00 and later versions)
3	Front card slot 1 NOTE Card supported: <ul style="list-style-type: none"> • 9.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card) • 9.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card) 	4	Front card slot 2 NOTE Card supported: <ul style="list-style-type: none"> • 9.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card) • 9.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)
5	Front card slot 3 NOTE Card supported: <ul style="list-style-type: none"> • 9.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card) • 9.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card) 	6	One console port
7	One ETH management port	8	One USB port
9	Fan slot 1 NOTE Applicable fan module: 8.2 FAN-40EA-B Fan Module	10	Fan slot 2 NOTE Applicable fan module: 8.2 FAN-40EA-B Fan Module
11	Fan slot 3 NOTE Applicable fan module: 8.2 FAN-40EA-B Fan Module	12	Fan slot 4 NOTE Applicable fan module: 8.2 FAN-40EA-B Fan Module
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 350 W AC power module • 1150 W AC PoE power module 	14	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 350 W AC power module • 1150 W AC PoE power module

1 5	Ground screw NOTE It is used with a ground cable .	1 6	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
1 7	Rear card slot NOTE Card supported: <ul style="list-style-type: none"> • 9.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card) • 9.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-998](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-998 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-999](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-999 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1000](#).

Table 5-1000 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootROM menu. File transfer through the ETH management port is faster than transfer through the console port. For details on how to use the ETH management port, see the *Configuration Guide - Basic Configurations*. [Table 5-1001](#) describes the attributes of an ETH management port.

Table 5-1001 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-399 Indicators on the S5710-108C-PWR-HI front panel

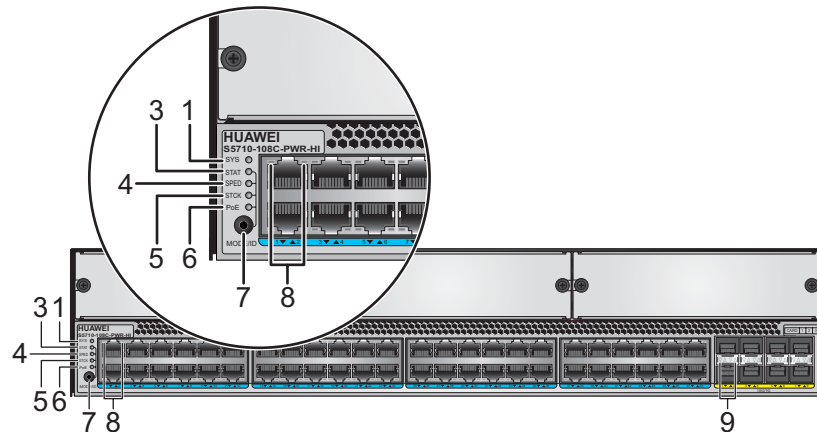


Figure 5-400 Indicators on the S5710-108C-PWR-HI rear panel

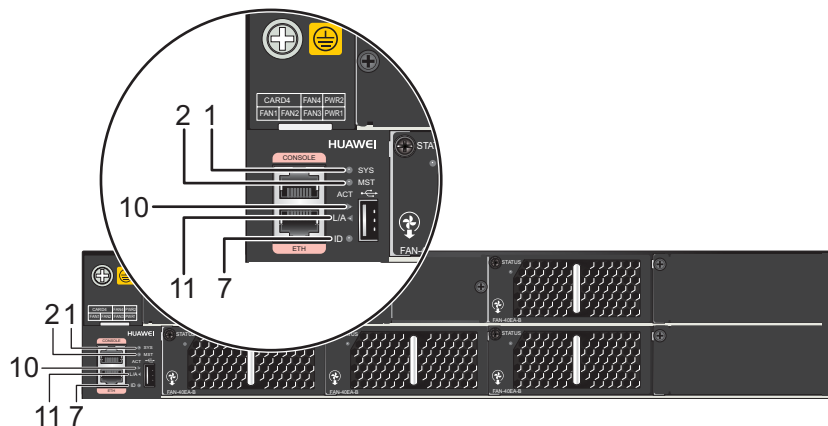


Table 5-1002 Description of indicators on the switch

Number	Indicator	Color	Description
1	SYS: system status indicator	-	Off: The system is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	Steady on: The system does not work normally after registration, or a fan or temperature alarm has been generated.
2	MST: stack master/slave indicator NOTE Versions prior to V200R005C03 do not support the stacking function.	-	Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled.
		Green	Steady on: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.
3	STAT: status indicator	Green	<ul style="list-style-type: none"> Off: The status mode is not selected. Steady on: The service port indicators are in the status mode (default).
4	SPED: speed indicator	Green	<ul style="list-style-type: none"> Off: The speed mode is not selected. Steady on: The service port indicators show the port speed. After 45 seconds, the service port indicators automatically restore to the status mode.
5	STCK: stack indicator NOTE Versions prior to V200R005C03 do not support the stacking function.	Green	<p>If you are not changing the indicator mode (default state):</p> <ul style="list-style-type: none"> Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled. Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.

Number	Indicator	Color	Description
			<p>If you are changing the indicator mode:</p> <ul style="list-style-type: none">• Off: The stack mode is not selected.• Steady on: The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.• Blinking: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
6	PoE: PoE indicator	Green	<ul style="list-style-type: none">• Off: The PoE mode is not selected.• Steady on: The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

Number	Indicator	Color	Description
7	MODE: mode switch button	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to PoE mode and show the PoE status of ports. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
	ID: ID indicator NOTE The S5710-108C-PWR-HI of V200R003 does not support the ID indicator.	Blue	<ul style="list-style-type: none"> Off: The ID indicator is not used (default state). Steady on: The indicator identifies the device for maintenance. The ID indicator can be turned on or off remotely to help onsite engineers find the device to maintain.
8	Service port indicator (GE electrical port)	Meanings of service port indicators vary in different modes. For details, see Table 5-1003 .	
9	Service port indicator (10GE optical port)		

Number	Indicator	Color	Description
10	USB-based deployment indicator: ACT	-	Off: <ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The ACT indicator is damaged. The USB flash drive connected to the switch does not contain any configuration file. The switch is restarting after a USB-based upgrade.
		Green	<ul style="list-style-type: none"> Steady on: A USB-based deployment has been completed. Blinking: The system is reading data from the USB flash drive.
		Yellow NOTE This indicator state is available in V200R005C00 and later versions.	Steady on: The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
		Red	Blinking: An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
11	Management port indicator: L/A	Green	<ul style="list-style-type: none"> Off: No link is established on the management port. Steady on: A link is established on the management port. Blinking: The management port is sending or receiving data.

Table 5-1003 Description of service port indicators in different modes

Display Mode	Color	Description
Status	-	Off: No link is established on the port or the port has been shut down.

Display Mode	Color	Description
	Green (electrical port)	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
	Green (optical port)	Steady on: A link is established on the port.
	Yellow (optical port)	Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: No link is established on the port or the port has been shut down. Steady on: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s. Blinking: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	Green	<ul style="list-style-type: none"> Off: The port is not providing power to a powered device (PD). Steady on: The port is providing PoE power. Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.

Display Mode	Color	Description
Stack	Green	<ul style="list-style-type: none"> • Off: Port indicators do not show the stack ID of the switch. • If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> - If the indicator of a port is steady on, the number of this port is the stack ID of the switch. - If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. • If the indicator is blinking, the switch is a master switch: <ul style="list-style-type: none"> - If the indicator of a port is blinking, the number of this port is the stack ID of the switch. - If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5710-108C-PWR-HI is a PoE switch and uses 1150 W AC PoE power modules. It has two power module slots. [Table 5-1004](#) lists its power supply configurations.

Table 5-1004 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 29 • 802.3at (30 W per port): 14

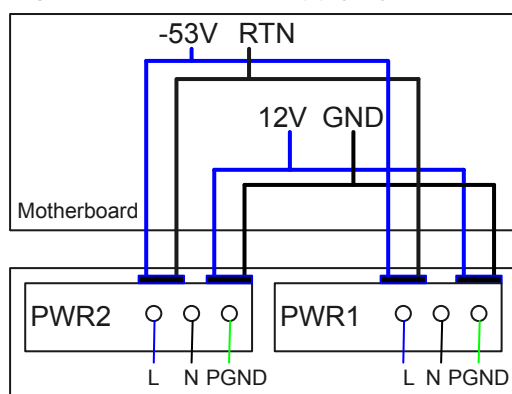
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-401 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-401 Power supply by dual AC PoE power modules

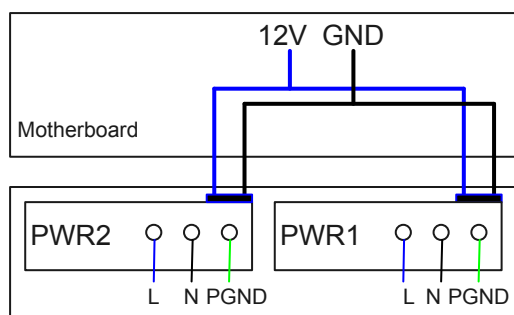


L: live wire N: neutral wire PGND: protection ground wire
 GND: 12 V reference ground RTN: -53 V reference ground

When using non-PoE power modules, the S5710-108C-PWR-HI can be configured with a single power module or double power modules for 1+1 power redundancy. Currently, only one non-PoE power module model, a 350 W AC power module, is supported.

Figure 5-402 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-402 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5710-108C-PWR-HI uses pluggable fan modules for forced air cooling. The airflow direction is front-to-rear.



NOTE

A little air also enters the chassis from both sides of the chassis.

Technical Specifications

Table 5-1005 lists technical specifications of the S5710-108C-PWR-HI.

Table 5-1005 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	200 MB
Mean time between failures (MTBF)	28.16 years when no interface card is configured, 27 years when a 16-port GE optical card is configured, 25.98 years when a 16-port GE electrical card is configured, 26.95 years when a 4-port 10GE card is configured, 26.69 years when a 4-port 40GE card is configured.
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	86.1 mm x 442.0 mm x 470.0 mm (3.4 in. x 17.4 in. x 18.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 557.3 mm (21.94 in.).
Weight	<ul style="list-style-type: none"> Empty: ≤ 12 kg (26.46 lb) Fully configured: ≤ 18 kg (39.68 lb)
Stack ports	<ul style="list-style-type: none"> V200R005C03 and earlier version: not supported V200R005C03: 8-port 10GE SFP+ ports on the front panel
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	<ul style="list-style-type: none"> Using 350 W power modules: 240 W Using two 1150 W power modules: 1680 W (system power consumption: 240 W, PoE: 1440 W)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 67.3 dB(A)

Item	Description
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02354043

5.21 S5720-HI

NOTE

The S5720-HI switches manufactured after August 31, 2016 cannot be downgraded to V200R007. Use either of the following methods to check the manufacturing date of a switch:

- Run the **display elabel** command in the system view and check the **Manufactured** field.
- Check the manufacturing date on the certificate label attached at the bottom of the switch.

5.21.1 S5720-32C-HI-24S-AC

Version Mapping

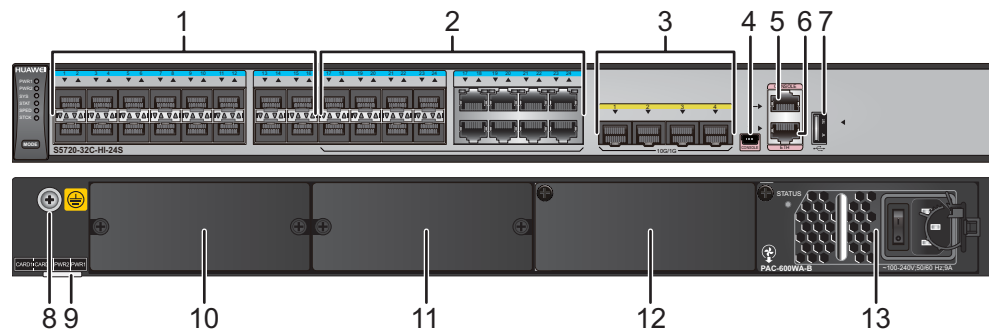
[Table 5-1006](#) lists the mapping between the S5720-32C-HI-24S-AC chassis and software versions.

Table 5-1006 Version mapping

Series	Model	Software Version
S5720-HI	S5720-32C-HI-24S-AC	V200R006C00 to V200R019C10 versions

Appearance and Structure

Figure 5-403 S5720-32C-HI-24S-AC appearance



<p>1 Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	<p>2 Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario and supported in V200R012C00 and later versions)
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions) 	4	One mini USB port
5	One console port	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
9	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>	1 0	<p>Rear card slot 1</p> <p>NOTE This slot is reserved for future use.</p>
1 1	<p>Rear card slot 2</p> <p>NOTE Card supported: 9.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)</p>	1 2	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 350 W DC power module • 600 W AC power module

1	Power module slot 1	-	-
3	NOTE Applicable power modules: <ul style="list-style-type: none">• 350 W DC power module• 600 W AC power module		

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1007](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1007 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1008](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1008 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1009](#).

Table 5-1009 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1010](#) describes the attributes of an ETH management port.

Table 5-1010 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description**NOTE**

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-404 Indicators on the S5720-32C-HI-24S-AC

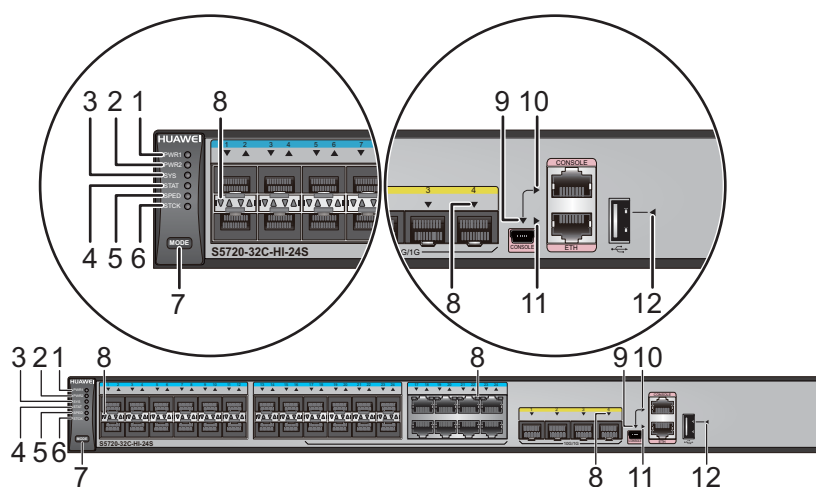


Table 5-1011 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1012 and Table 5-1013 .		
9	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
10	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.
11	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
12	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1012 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

Display Mode	Color	Status	Description
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-1013 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.

Display Mode	Color	Status	Description
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is steady on, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> • If the indicator of a port is blinking, the number of this port is the stack ID of the switch. • If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-32C-HI-24S-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-405 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-405 Power supply connections of dual DC power modules

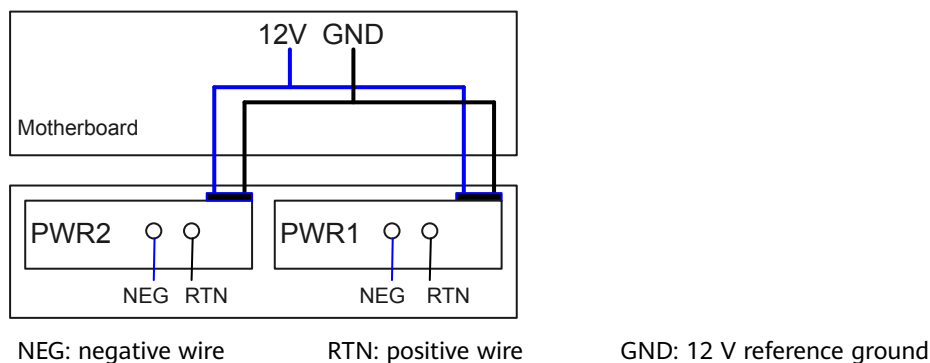
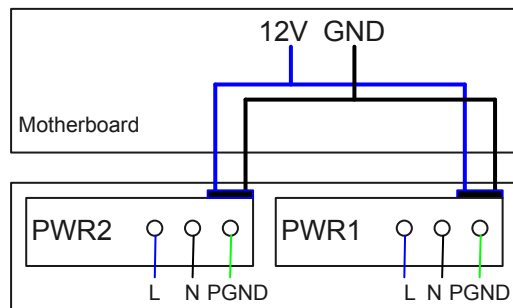


Figure 5-406 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-406 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-32C-HI-24S-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1014 lists technical specifications of the S5720-32C-HI-24S-AC.

Table 5-1014 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	56.21 years when no interface card is configured, 52.63 years when a 4-port 10GE interface card is configured

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	10.4 kg (22.93 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card NOTE The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	172.7 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	122.12 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02358600

5.21.2 S5720-56C-HI-AC

Version Mapping

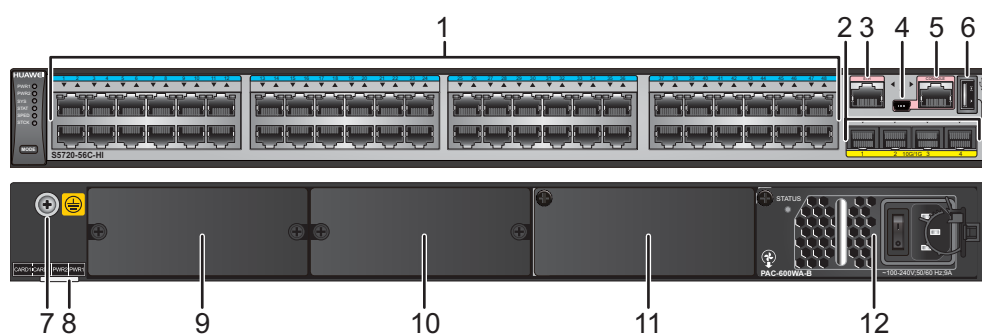
Table 5-1015 lists the mapping between the S5720-56C-HI-AC chassis and software versions.

Table 5-1015 Version mapping

Series	Model	Software Version
S5720-HI	S5720-56C-HI-AC	V200R006C00 to V200R019C10 versions

Appearance and Structure

Figure 5-407 S5720-56C-HI-AC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE This slot is reserved for future use.	10	Rear card slot 2 NOTE Card supported: 9.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)

1	Power module slot 2	1	Power module slot 1
1	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 350 W DC power module • 600 W AC power module 	2	<p>NOTE</p> <p>Applicable power modules:</p> <ul style="list-style-type: none"> • 350 W DC power module • 600 W AC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1016](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1016 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1017](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1017 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1018](#).

Table 5-1018 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1019](#) describes the attributes of an ETH management port.

Table 5-1019 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see

"First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

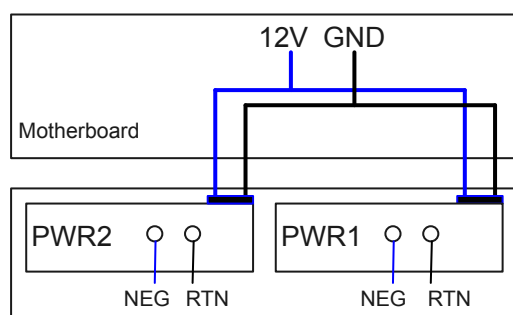
The S5720-56C-HI-AC has similar indicators to S5720-56C-PWR-HI-AC except that the S5720-56C-HI-AC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-HI-AC uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-408](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-408 Power supply connections of dual DC power modules



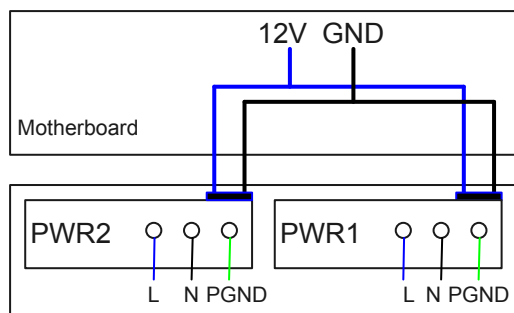
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

[Figure 5-409](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-409 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5720-56C-HI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-1020 lists technical specifications of the S5720-56C-HI-AC.

Table 5-1020 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	53.05 years when no interface card is configured, 49.85 years when a 4-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 2 kV

Item	Description
Power supply surge protection	<ul style="list-style-type: none"> • Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode • Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	10 kg (22.05 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card NOTE The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	183.3 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	128.93 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 60.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02358598

5.21.3 S5720-56C-PWR-HI-AC

Version Mapping

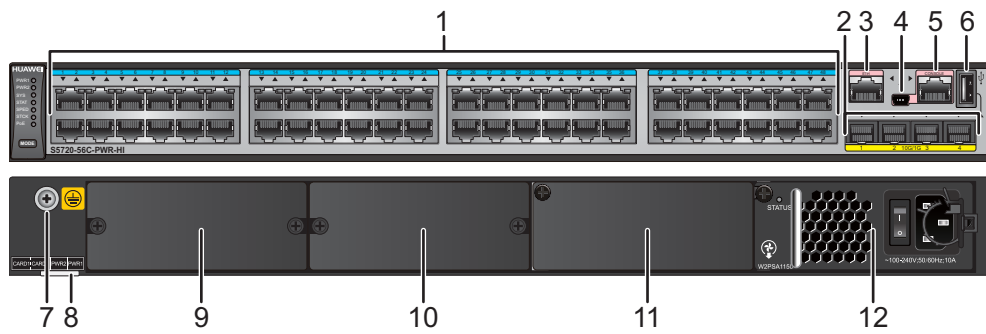
Table 5-1021 lists the mapping between the S5720-56C-PWR-HI-AC chassis and software versions.

Table 5-1021 Version mapping

Series	Model	Software Version
S5720-HI	S5720-56C-PWR-HI-AC	V200R006C00 to V200R019C10 versions

Appearance and Structure

Figure 5-410 S5720-56C-PWR-HI-AC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE This slot is reserved for future use.	10	Rear card slot 2 NOTE Card supported: 9.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)
11	Power module slot 2 NOTE Applicable power module: 1150 W AC PoE power module	12	Power module slot 1 NOTE Applicable power module: 1150 W AC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1022](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1022 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1023](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1023 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1024](#).

Table 5-1024 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1025](#) describes the attributes of an ETH management port.

Table 5-1025 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

In V200R007 and later versions, you can hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore to the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-411 Indicators on the S5720-56C-PWR-HI-AC

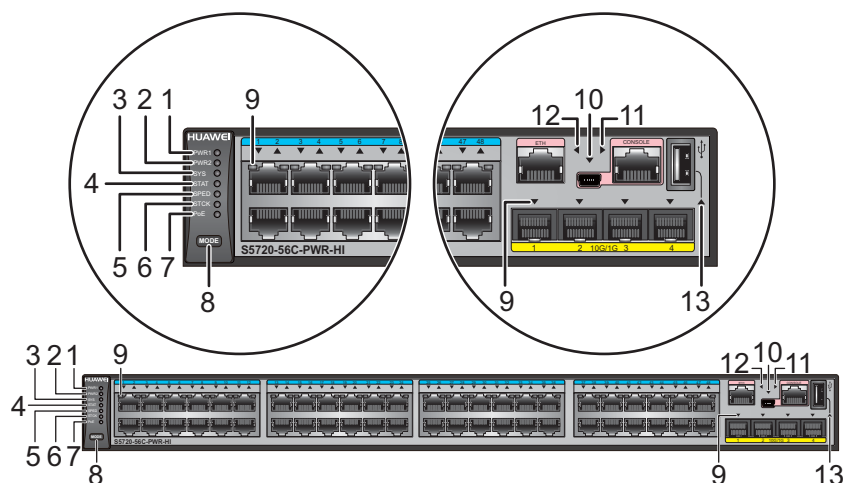


Table 5-1026 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1027 .		
10	-	Mini USB indicator	-	Off	The Mini USB port is disabled, and the console port is enabled.
			Green	Steady on	The Mini USB port is enabled. When the Mini USB indicator is steady green, the console indicator is off.
11	-	Console indicator	-	Off	The console port is disabled, and the Mini USB port is enabled.
			Green	Steady on	The console port is enabled (default state). When the console indicator is steady green, the Mini USB indicator is off.

No.	Indicator	Name	Color	Status	Description
12	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
13	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1027 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.

Display Mode	Color	Description
Speed	Green	<ul style="list-style-type: none"> • Off: The port is not connected or has been shut down. • Steady on: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s. • Blinking: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE	Green	<ul style="list-style-type: none"> • Off: The port does not provide PoE power. • Steady on: The port is providing PoE power. • Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
Stack	Green	<ul style="list-style-type: none"> • Off: The STCK mode is not selected. • If the indicator is steady on, the switch is not a master switch: <ul style="list-style-type: none"> - If the indicator of a port is steady on, the number of this port is the stack ID of the switch. - If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0. • If the indicator is blinking, the switch is a master switch: <ul style="list-style-type: none"> - If the indicator of a port is blinking, the number of this port is the stack ID of the switch. - If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5720-56C-PWR-HI-AC is a PoE switch and uses 1150 W AC PoE power modules. It has two power module slots. [Table 5-1028](#) lists its power supply configurations.

Table 5-1028 Power supply configurations

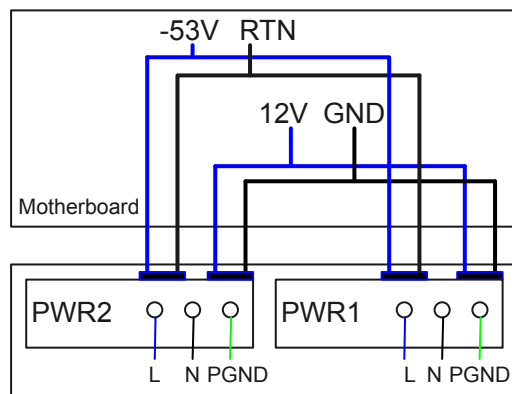
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 26
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 29• 802.3at (30 W per port): 14
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 29

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-412](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-412 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-HI-AC has five built-in fans for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-1029 lists technical specifications of the S5720-56C-PWR-HI-AC.

Table 5-1029 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	39.31 years when no interface card is configured; 37.53 years when a 4-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight (with packaging)	10.9 kg (24.03 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card NOTE The switch supports service port stacking since V200R009C00.
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	1739 W (system power consumption: 299 W, PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	132.35 W

Item	Description
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Short-term operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02358599

5.21.4 S5720-56C-PWR-HI-AC1

Version Mapping

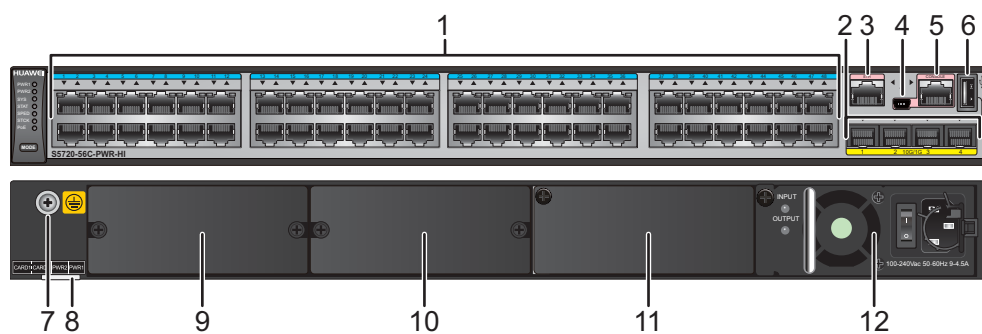
Table 5-1030 lists the mapping between the S5720-56C-PWR-HI-AC1 chassis and software versions.

Table 5-1030 Version mapping

Series	Model	Software Version
S5720-HI	S5720-56C-PWR-HI-AC1	V200R009C00 to V200R019C10 versions

Appearance and Structure

Figure 5-413 S5720-56C-PWR-HI-AC1 appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module (applicable in V200R009C00 and later versions) • 1 m, 3 m, and 10 m SFP+ high-speed copper cables • 5 m SFP+ high-speed copper cable (applicable in V200R009C00 and later versions) • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, supported in V200R011C10 and later versions)
3	One ETH management port	4	One mini USB port
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE This slot is reserved for future use.	10	Rear card slot 2 NOTE Card supported: 9.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)
11	Power module slot 2 NOTE Applicable power module: 580 W AC PoE power module	12	Power module slot 1 NOTE Applicable power module: 580 W AC PoE power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1031](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1031 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1032](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1032 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1033](#).

Table 5-1033 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

Mini USB port

The mini USB port is connected to a console for on-site configuration. When both the Mini USB and console port have a cable connected, only the Mini USB port works.

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1034](#) describes the attributes of an ETH management port.

Table 5-1034 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5720-56C-PWR-HI-AC1 has the same types of indicators as the S5720-56C-PWR-HI-AC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5720-56C-PWR-HI-AC1 is a PoE switch and uses 580 W AC PoE power modules. It has two power module slots. [Table 5-1035](#) lists its power supply configurations.

Table 5-1035 Power supply configurations

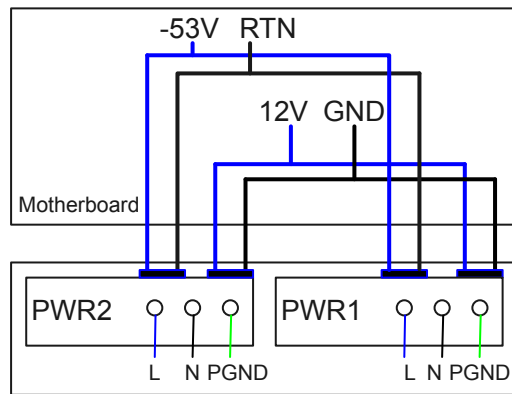
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
580 W	-	369.6 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 12
580 W	580 W	739.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

[Figure 5-414](#) shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-414 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: -53 V reference ground

Heat Dissipation

The S5720-56C-PWR-HI-AC1 has five built-in fans for forced air cooling. The airflow direction is left-to-right.



Technical Specifications

Table 5-1036 lists technical specifications of the S5720-56C-PWR-HI-AC1.

Table 5-1036 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	39.31 years when no interface card is configured; 37.53 years when a 4-port 10GE interface card is configured
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 1 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	10.6 kg (23.37 lb)
Stack ports	Four fixed 10GE SFP+ ports on the front panel or ports on the 4-port 10GE SFP+ rear interface card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum power consumption (100% throughput, 100% PoE loads, full speed of fans)	Not providing the PoE function: 188.74 W 100% PoE loads: 1036 W (system power consumption: 296 W, PoE: 740 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	137.8 W
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 64.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02350MTQ

5.22 S5730-HI

5.22.1 S5730-36C-HI

Version Mapping

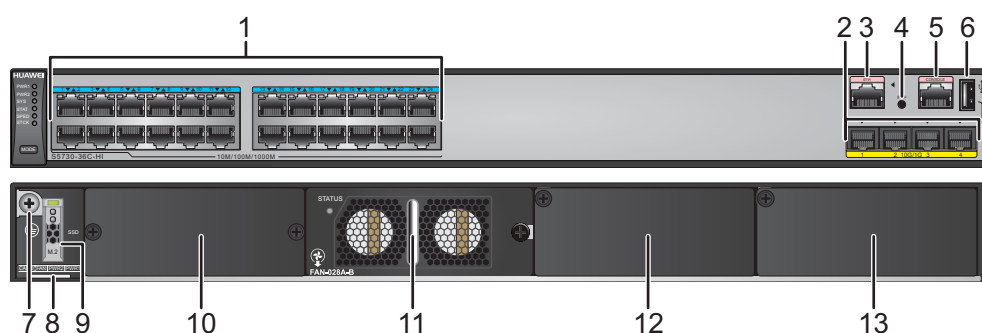
Table 5-1037 lists the mapping between the S5730-36C-HI chassis and software versions.

Table 5-1037 Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-415 S5730-36C-HI appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
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3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot NOTE Pluggable SSD card supported: SSD-240GB	10	Rear card slot NOTE Cards supported: <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00
11	Fan slot NOTE Applicable fan module: FAN-028A-B	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1038](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1038 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1039](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1039 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1040](#).

Table 5-1040 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1041](#) describes the attributes of an ETH management port.

Table 5-1041 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

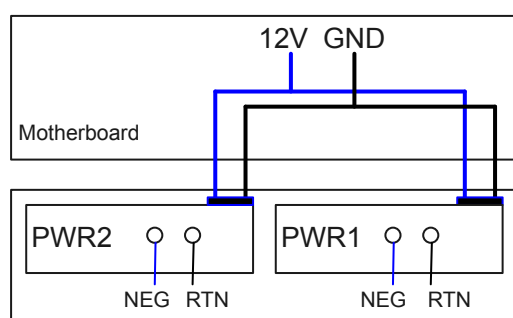
The S5730-36C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-36C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-36C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-416 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-416 Power supply connections of dual DC power modules



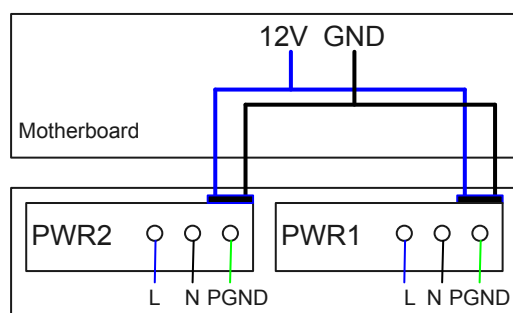
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-417 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-417 Power supply connections of dual AC power modules



L: Live wire

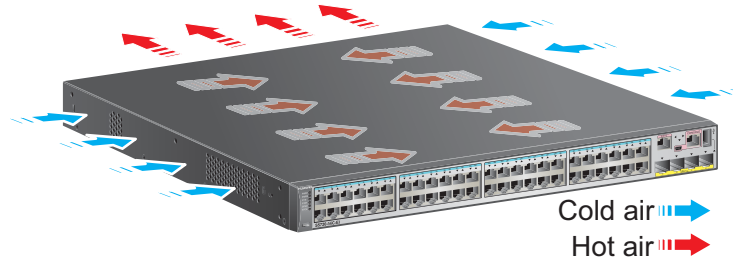
N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5730-36C-HI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1042](#) lists technical specifications of the S5730-36C-HI.

Table 5-1042 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	47.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.6 kg (18.96 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card

Item	Description
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	74 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	58 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351MQJ

5.22.2 S5730-36C-PWH-HI

Version Mapping

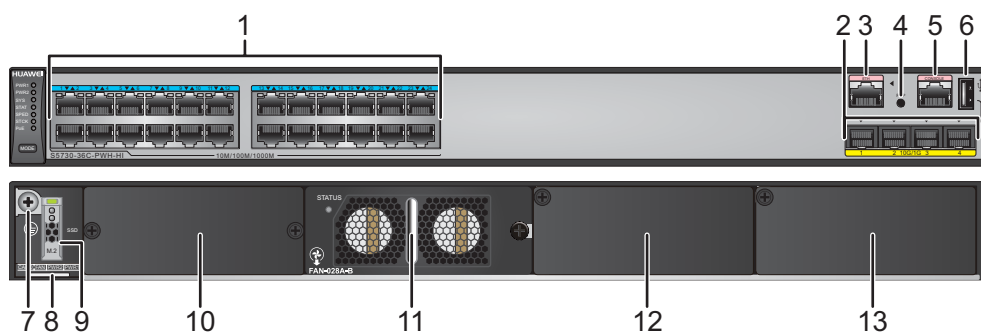
[Table 5-1043](#) lists the mapping between the S5730-36C-PWH-HI chassis and software versions.

Table 5-1043 Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-PWH-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-418 S5730-36C-PWH-HI appearance



1	Twenty-four PoE+ + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module• 10GE-CWDM optical module• 10GE-DWDM optical module• 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables• 3 m and 10 m AOC cables• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot NOTE Pluggable SSD card supported: SSD-240GB	10	Rear card slot NOTE Cards supported: <ul style="list-style-type: none">• ES5D21Q02Q00• ES5D21X08T00• ES5D21X08S00

1 1	Fan slot NOTE Applicable fan module: FAN-028A-B	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE Power Module • 650 W DC PoE Power Module • 1150 W AC PoE Power Module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions)
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE Power Module • 650 W DC PoE Power Module • 1150 W AC PoE Power Module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1044](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1044 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1045](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1045 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1046](#).

Table 5-1046 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1047](#) describes the attributes of an ETH management port.

Table 5-1047 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-36C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-36C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. [Table 5-1048](#) lists its power supply configurations.

Table 5-1048 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 12• 802.3bt (60 W per port): 6
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 13
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 14• 802.3bt (60 W per port): 7
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 14

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24

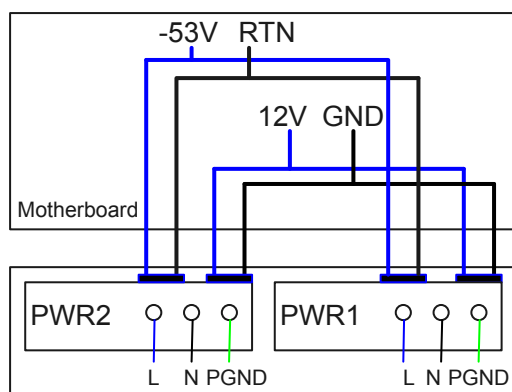
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24 802.3bt (60 W per port): 14
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24 802.3bt (60 W per port): 14

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-419 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-419 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

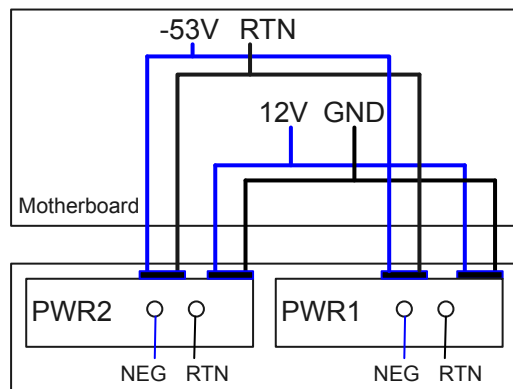
GND: 12 V reference ground

RTN: -53 V reference ground

Figure 5-420 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V

and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

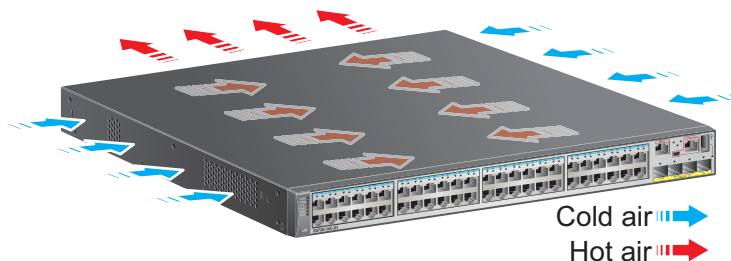
Figure 5-420 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-36C-PWH-HI uses pluggable fan modules for forced air cooling. Air flows in from the left and right sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1049 lists technical specifications of the S5730-36C-PWH-HI.

Table 5-1049 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	53.93 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<p>44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)</p> <p>When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).</p>
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Using 650 W DC or 500 W AC power modules: <ul style="list-style-type: none"> Not providing the PoE function: 90 W (without card) 100% PoE loads: 815 W (system power consumption: 75.8 W, PoE: 739.2 W, without card) Using 1150 W AC or 1000 W AC power modules: <ul style="list-style-type: none"> Not providing the PoE function: 105.9 W (without card) 100% PoE loads: 1595 W (system power consumption: 155 W, PoE: 1440 W, without card)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	Using 650 W DC or 500 W AC power modules: 66 W (without card) Using 1150 W AC or 1000 W AC power modules: 73 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351MQN

5.22.3 S5730-36C-HI-24S

Version Mapping

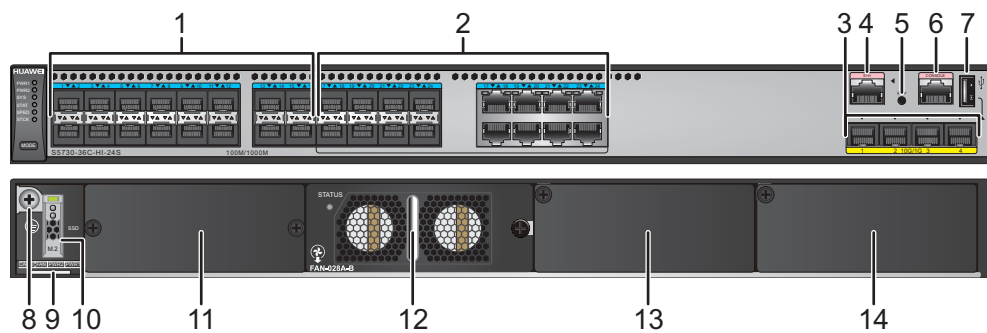
Table 5-1050 lists the mapping between the S5730-36C-HI-24S chassis and software versions.

Table 5-1050 Version mapping

Series	Model	Software Version
S5730-HI	S5730-36C-HI-24S	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-421 S5730-36C-HI-24S appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> ● FE optical module ● GE optical module ● GE-CWDM optical module ● GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) ● GE-CWDM optical module (used only in the OADM scenario) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> ● FE optical module ● GE optical module ● GE-CWDM optical module ● GE-CWDM optical module (used only in the OADM scenario)
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking) 	4	One ETH management port
5	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	6	One console port
7	One USB port	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>SSD card slot</p> <p>NOTE</p> <p>Pluggable SSD card supported: SSD-240GB</p>
11	<p>Rear card slot</p> <p>NOTE</p> <p>Cards supported:</p> <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00 	12	<p>Fan slot</p> <p>NOTE</p> <p>Applicable fan module: FAN-028A-B</p>

1 3	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none">• 150 W AC power module• 150 W DC power module	1 4	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none">• 150 W AC power module• 150 W DC power module
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Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1051](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1051 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1052](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1052 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1053](#).

Table 5-1053 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1054](#) describes the attributes of an ETH management port.

Table 5-1054 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

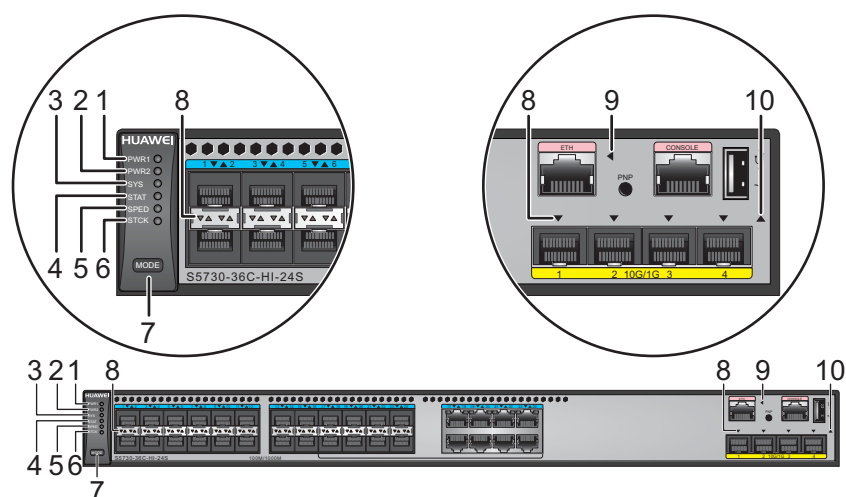
USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description**NOTE**

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-422 Indicators on the S5730-36C-HI-24S

**NOTE**

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-1055 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1056 and Table 5-1057 .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1056 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-1057 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730-36C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-423 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-423 Power supply connections of dual DC power modules

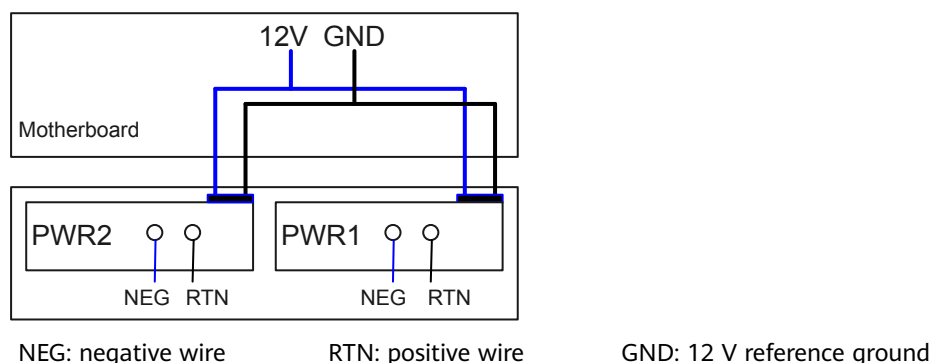
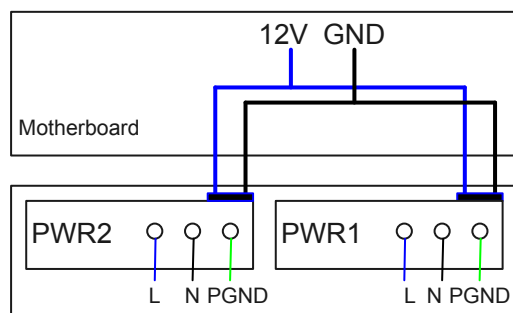


Figure 5-424 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

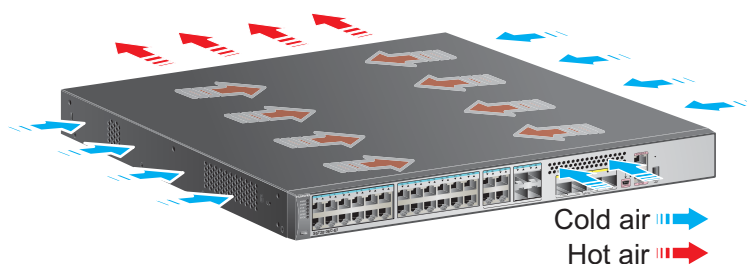
Figure 5-424 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-36C-HI-24S uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1058 lists specifications of the S5730-36C-HI-24S.

Table 5-1058 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	48.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.49 kg (20.92 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	79 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	66 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351XFQ

5.22.4 S5730-44C-HI

Version Mapping

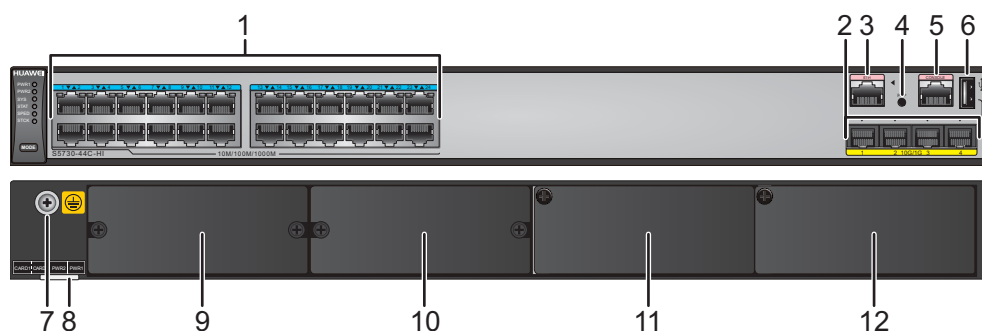
[Table 5-1059](#) lists the mapping between the S5730-44C-HI chassis and software versions.

Table 5-1059 Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-425 S5730-44C-HI appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
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3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE Cards supported: <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00 	10	Rear card slot 2 NOTE This slot is reserved for future use.
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1060](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1060 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1061](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1061 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1062](#).

Table 5-1062 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1063](#) describes the attributes of an ETH management port.

Table 5-1063 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

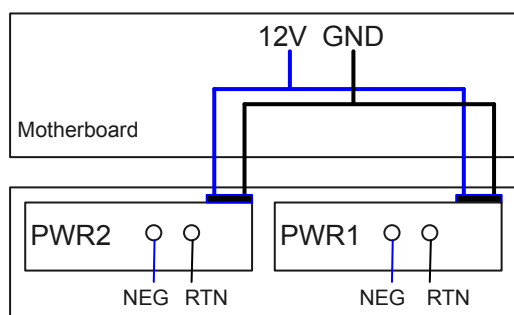
The S5730-44C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-44C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-44C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-426 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

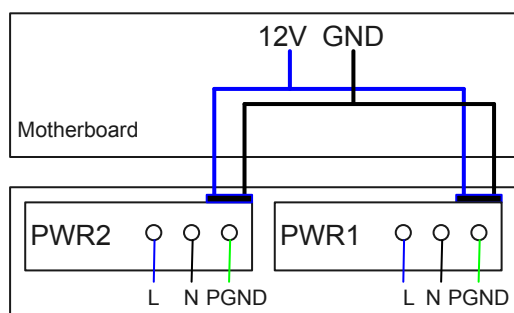
Figure 5-426 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Figure 5-427 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-427 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-44C-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1064 lists technical specifications of the S5730-44C-HI.

Table 5-1064 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.95 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	76.5 W (without card)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	54 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 55.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none">• AC power modules configured: 0-5000 m (0-16404 ft.)• DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02351MQG

5.22.5 S5730-44C-PWH-HI

Version Mapping

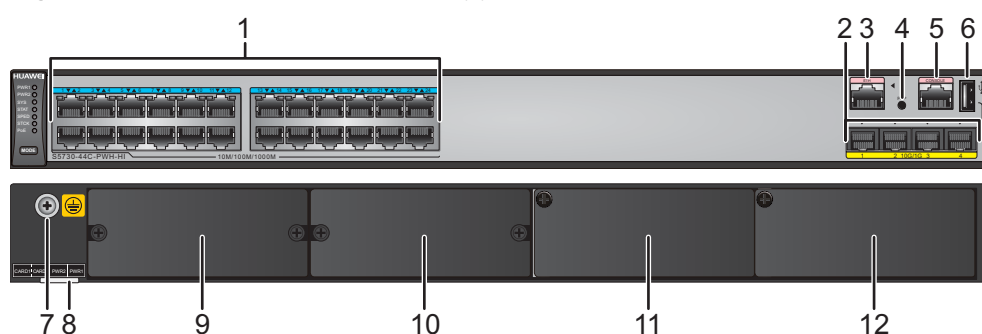
[Table 5-1065](#) lists the mapping between the S5730-44C-PWH-HI chassis and software versions.

Table 5-1065 Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-PWH-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-428 S5730-44C-PWH-HI appearance



1	Twenty-four PoE+ + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
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3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE Cards supported: <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00 	10	Rear card slot 2 NOTE This slot is reserved for future use.
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE Power Module • 650 W DC PoE Power Module • 1150 W AC PoE Power Module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE Power Module • 650 W DC PoE Power Module • 1150 W AC PoE Power Module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1066](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1066 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1067](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1067 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1068](#).

Table 5-1068 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-1069** describes the attributes of an ETH management port.

Table 5-1069 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

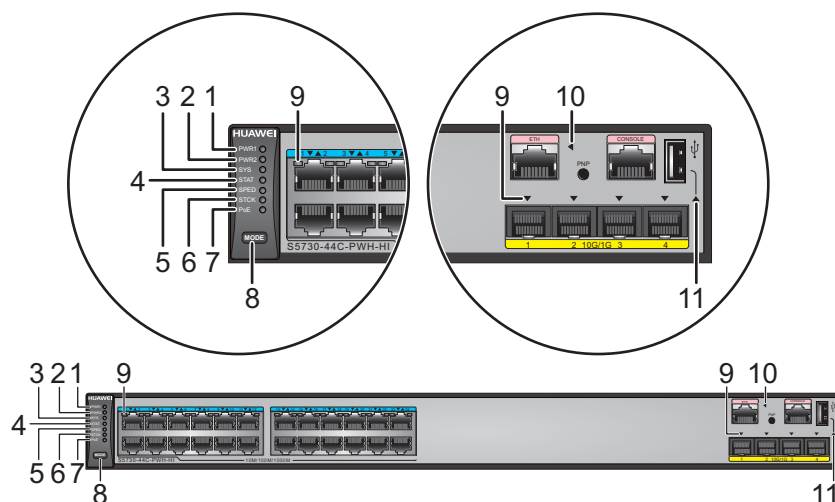
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-429 Indicators on the S5730-44C-PWH-HI



NOTE

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, STCK, and PoE) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-1070 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.

No.	Indicator	Name	Color	Status	Description
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>
7	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The service port indicators show the PoE status. After 45 seconds, the service port indicators automatically restore to the status mode.

No.	Indicator	Name	Color	Status	Description
8	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED and PoE indicators are off, and the STCK indicator is off or blinking green.</p>
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1071 .		
10	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
11	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1071 Description of service port indicators in different modes

Display Mode	Color	Description
Status	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: The port is connected. Blinking: The port is sending or receiving data.
Speed	Green	<ul style="list-style-type: none"> Off: The port is not connected or has been shut down. Steady on: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s. Blinking: <ul style="list-style-type: none"> 10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

Display Mode	Color	Description
PoE	Green	<ul style="list-style-type: none">• Off: The port does not provide PoE power.• Steady on: The port is providing PoE power.• Blinking: The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
Stack	Green	<ul style="list-style-type: none">• Off: The STCK mode is not selected.• If the indicator is steady on, the switch is not a master switch:<ul style="list-style-type: none">- If the indicator of a port is steady on, the number of this port is the stack ID of the switch.- If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.• If the indicator is blinking, the switch is a master switch:<ul style="list-style-type: none">- If the indicator of a port is blinking, the number of this port is the stack ID of the switch.- If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730-44C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch.

[Table 5-1072](#) lists its power supply configurations.

Table 5-1072 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	-	369.6 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 12 ● 802.3bt (60 W per port): 6
500 W	500 W	739.2 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 24 ● 802.3bt (60 W per port): 12
650 W	-	350 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 22 ● 802.3at (30 W per port): 11 ● 802.3bt (60 W per port): 5
650 W	500 W or 650 W	700 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 23 ● 802.3bt (60 W per port): 11
500 W or 650 W	650 W		
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 24 ● 802.3bt (60 W per port): 13
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 24 ● 802.3at (30 W per port): 24 ● 802.3bt (60 W per port): 24

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 14• 802.3bt (60 W per port): 7
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 14
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 24

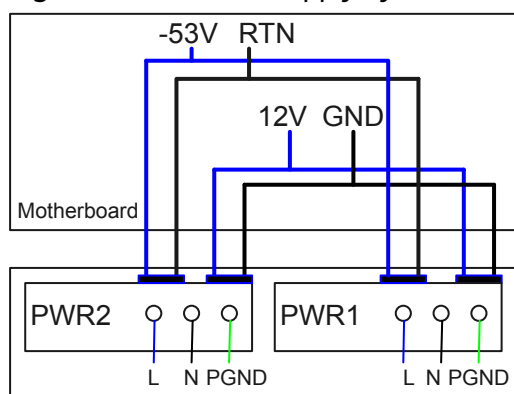
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 24
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 24
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 14
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 14

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-430 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

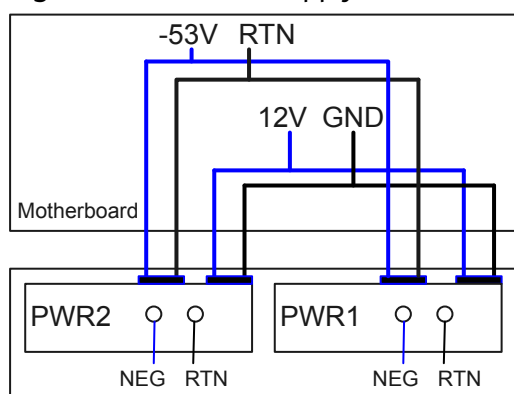
Figure 5-430 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-431 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 5-431 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-44C-PWH-HI has three built-in fans for forced air cooling. The airflow direction is left-to-right.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1073 lists technical specifications of the S5730-44C-PWH-HI.

Table 5-1073 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	49.48 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Using 650 W DC power modules: <ul style="list-style-type: none"> - Not providing the PoE function: 94 W (without card) - 100% PoE loads: 830 W (system power consumption: 130 W, PoE: 700 W, without card) ● Using 500 W AC power modules: <ul style="list-style-type: none"> - Not providing the PoE function: 94 W (without card) - 100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card) ● Using 1150 W AC power modules or 1000 W AC power modules: <ul style="list-style-type: none"> - Not providing the PoE function: 107.6 W (without card) - 100% PoE loads: 1596 W (system power consumption: 156 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	Using 650 W DC or 500 W AC power modules: 65 W (without card) Using 1150 W AC or 1000 W AC power modules: 71 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351LKB

5.22.6 S5730-44C-HI-24S

Version Mapping

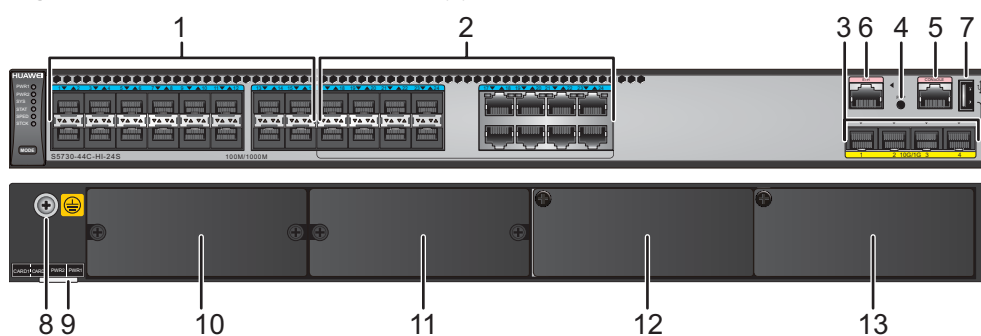
[Table 5-1074](#) lists the mapping between the S5730-44C-HI-24S chassis and software versions.

Table 5-1074 Version mapping

Series	Model	Software Version
S5730-HI	S5730-44C-HI-24S	V200R012C00SPC110, V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-432 S5730-44C-HI-24S appearance



1	<p>Sixteen 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • GE-CWDM optical module (used only in the OADM scenario) 	2	<p>Eight combo ports (10/100/1000BASE-T + 100/1000BASE-X)</p> <p>Modules applicable to combo optical ports:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-CWDM optical module (used only in the OADM scenario)
3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking) 	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One ETH management port
7	One USB port	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>ESN label</p> <p>NOTE</p> <p>You can draw it out to view the ESN and MAC address of the switch.</p>	10	<p>Rear card slot 1</p> <p>NOTE</p> <p>Cards supported:</p> <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00

1 1	Rear card slot 2 NOTE This slot is reserved for future use.	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1075](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1075 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

Combo port

A combo port consists of an optical Ethernet port and an electrical Ethernet port on the panel. Each combo port matches only one internal forwarding port. The electrical and optical ports of a combo port are multiplexed, and only one of them can work at a time. When one of the Ethernet ports is working, the other port is shut down.

NOTE

By default, a combo port works in auto mode, in which the port type is determined as follows:

- If the optical port has no optical module installed and the electrical port has no Ethernet cable connected, the port type depends on which port is connected first. If the electrical port is connected by an Ethernet cable first, the electrical port is used for data switching. If the optical port has an optical module installed first, the optical port is used for data switching.
- If the electrical port has an Ethernet cable connected and is in Up state, the electrical port is still used for data switching when the optical port has an optical module installed.
- If the optical port, no matter in Up or Down state, has an optical module installed, the optical port is still used for data switching when the electrical port has an Ethernet cable connected.
- If the optical port has an optical module installed and the electrical port has an Ethernet cable connected, the optical port is used for data switching after the switch restarts.

You can configure a combo port as an electrical or optical port using the **combo-port** command.

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1076](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1076 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1077](#).

Table 5-1077 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-1078** describes the attributes of an ETH management port.

Table 5-1078 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

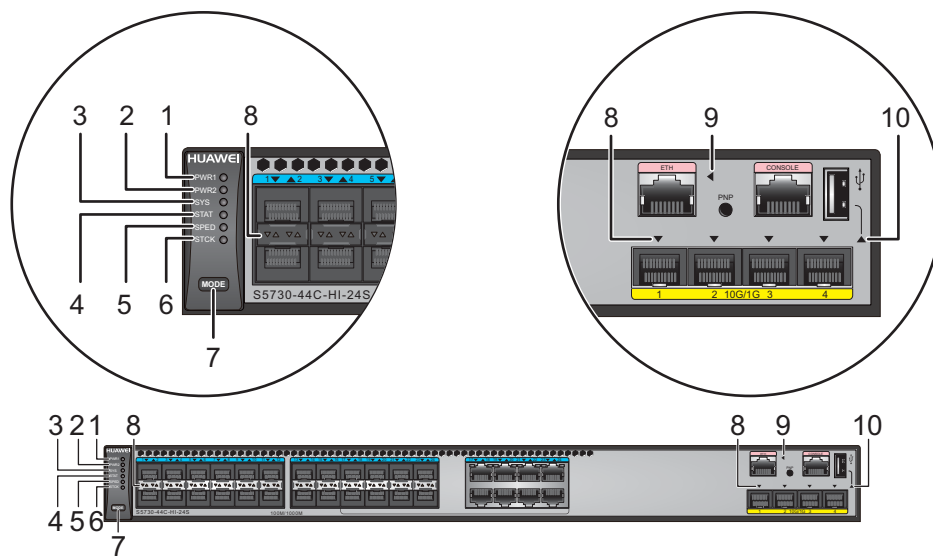
Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-433 Indicators on the S5730-44C-HI-24S



NOTE

The S5730-HI series switches provide a command for setting fault indicators, which help field maintenance personnel find a faulty switch quickly.

The SYS indicator and mode indicators (STAT, SPED, and STCK) are used as fault indicators. When an S5730-HI switch is faulty, you can run the command to turn on the fault indicators. Then the SYS indicator and mode indicators fast blink red to help field maintenance personnel quickly find the faulty switch.

Table 5-1079 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but its power switch is in the OFF position. A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 15 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or temperature alarm has been generated.
4	STAT	Status indicator	-	Off	The status mode is not selected.
			Green	Steady on	The status mode (default mode) is selected. If the status mode is selected, the service port indicator shows the port link or activity state.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The service port indicators show the port speeds. After 45 seconds, the service port indicators automatically restore to the status mode.
6	STCK	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is in stack standby or slave state or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a stack master switch or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. <p>After 45 seconds, the service port indicators automatically restore to the status mode.</p>

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the speed mode and show the speed of each service port When you press this button a second time, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a third time, the service port indicators restore to the default mode, and the STAT indicator turns green. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the STAT indicator is steady green, the SPED indicator is off, and the STCK indicator is off or blinking green.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1080 and Table 5-1081 .		
9	-	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from the USB flash drive.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1080 Description of service port indicators in different modes (two indicators for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Yellow	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Table 5-1081 Description of service port indicators in different modes (one indicator for each port)

Display Mode	Color	Status	Description
Status	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
Speed	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10/100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
Stack	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.

Display Mode	Color	Status	Description
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.

Power Supply Configuration

The S5730-44C-HI-24S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-434 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-434 Power supply connections of dual DC power modules

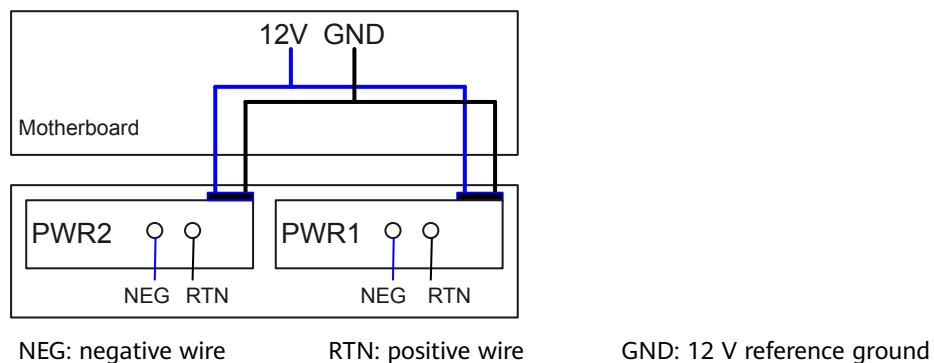
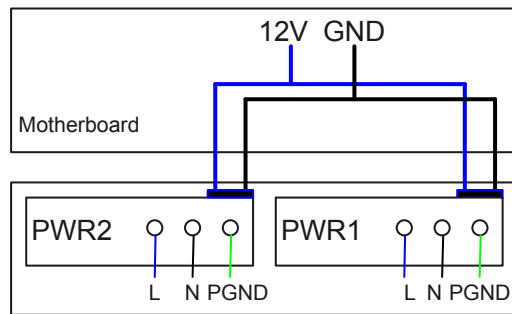


Figure 5-435 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-435 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-44C-HI-24S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1082 lists technical specifications of the S5730-44C-HI-24S.

Table 5-1082 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	51.12 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.72 kg (21.43 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	78 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	64 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 56.1 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02351XFR

5.22.7 S5730-60C-HI

Version Mapping

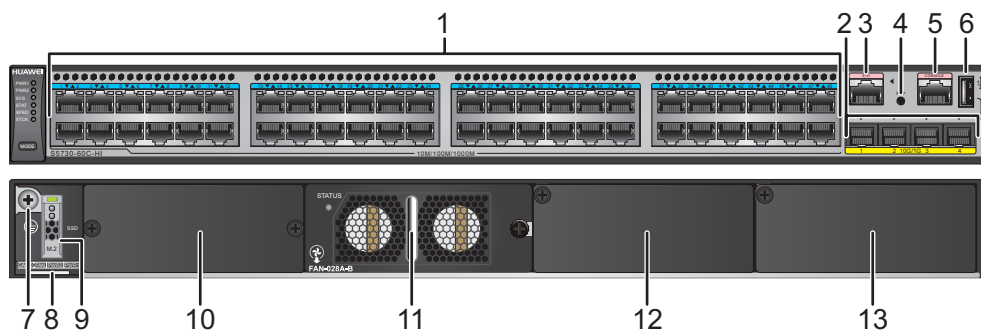
Table 5-1083 lists the mapping between the S5730-60C-HI chassis and software versions.

Table 5-1083 Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-436 S5730-60C-HI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One ETH management port	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	One console port	6	One USB port
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>SSD card slot</p> <p>NOTE Pluggable SSD card supported: SSD-240GB</p>	10	<p>Rear card slot</p> <p>NOTE Cards supported:</p> <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00
11	<p>Fan slot</p> <p>NOTE Applicable fan module: FAN-028A-B</p>	12	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

1	Power module slot 1	-	-
3	NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1084](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1084 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1085](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1085 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1086](#).

Table 5-1086 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1087](#) describes the attributes of an ETH management port.

Table 5-1087 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

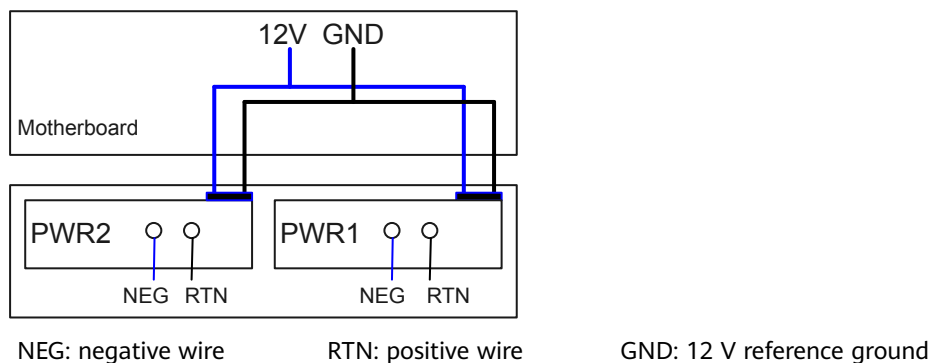
The S5730-60C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-60C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-60C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

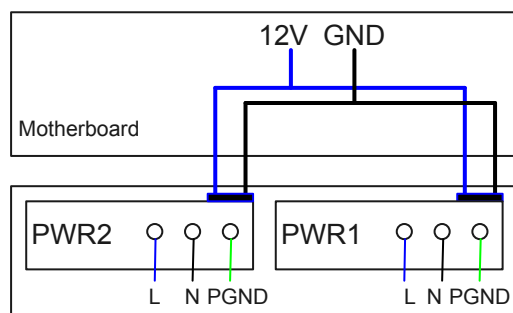
[Figure 5-437](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-437 Power supply connections of dual DC power modules



[Figure 5-438](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-438 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Heat Dissipation

The S5730-60C-HI uses a pluggable fan module for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1088 lists technical specifications of the S5730-60C-HI.

Table 5-1088 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	47.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999

Item	Description
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	87.7 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	70 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 52.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> AC power modules configured: 0-5000 m (0-16404 ft.) DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02351MQR

5.22.8 S5730-60C-PWH-HI

Version Mapping

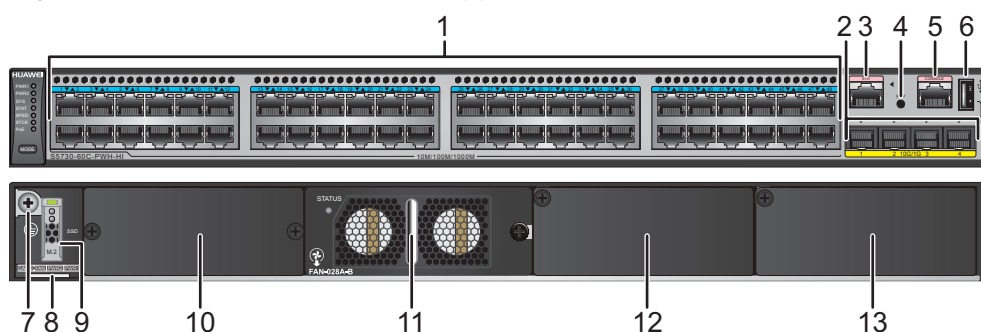
[Table 5-1089](#) lists the mapping between the S5730-60C-PWH-HI chassis and software versions.

Table 5-1089 Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-PWH-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-439 S5730-60C-PWH-HI appearance



1	Forty-eight PoE+ + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot NOTE Pluggable SSD card supported: SSD-240GB	10	Rear card slot NOTE Cards supported: <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00

1 1	Fan slot NOTE Applicable fan module: FAN-028A-B	1 2	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE Power Module • 650 W DC PoE Power Module • 1150 W AC PoE Power Module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions)
1 3	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE Power Module • 650 W DC PoE Power Module • 1150 W AC PoE Power Module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1090](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1090 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1091](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1091 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1092](#).

Table 5-1092 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1093](#) describes the attributes of an ETH management port.

Table 5-1093 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-60C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-60C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power module and a 1000 W AC power module can be used together in the switch. [Table 5-1094](#) lists its power supply configurations.

Table 5-1094 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W or 650 W	-	369.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 12• 802.3bt (60 W per port): 6
500 W or 650 W	500 W or 650 W	739.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 24• 802.3bt (60 W per port): 12
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 26• 802.3bt (60 W per port): 13
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48• 802.3bt (60 W per port): 24
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 29• 802.3at (30 W per port): 14• 802.3bt (60 W per port): 7
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 29• 802.3bt (60 W per port): 14

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 25• 802.3bt (60 W per port): 12
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48• 802.3bt (60 W per port): 24
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 25• 802.3bt (60 W per port): 12
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48• 802.3bt (60 W per port): 24
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48• 802.3bt (60 W per port): 24
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48• 802.3bt (60 W per port): 24

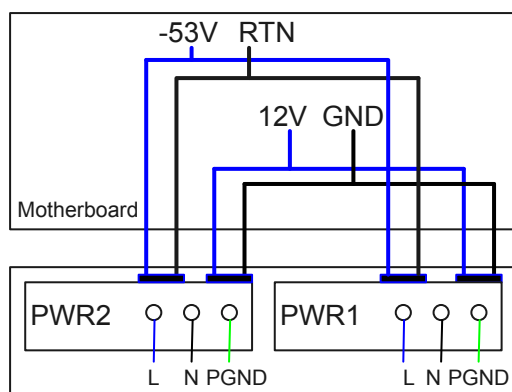
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29 802.3bt (60 W per port): 14
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29 802.3bt (60 W per port): 14

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-440 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

Figure 5-440 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire

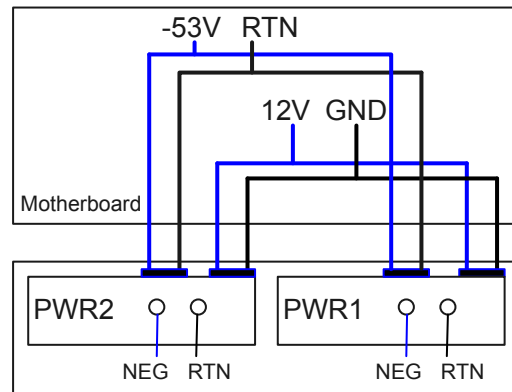
GND: 12 V reference ground

RTN: -53 V reference ground

Figure 5-441 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V

and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

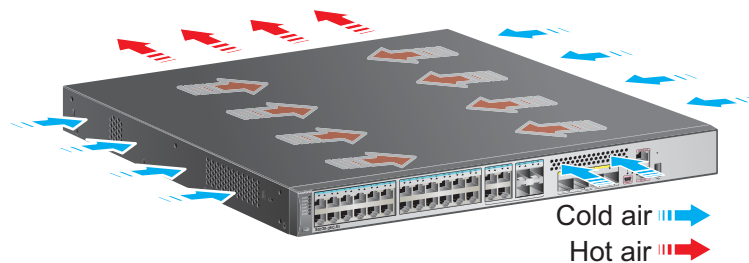
Figure 5-441 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-60C-PWH-HI uses a pluggable fan module for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1095 lists technical specifications of the S5730-60C-PWH-HI.

Table 5-1095 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	46.09 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight (with packaging)	9 kg (19.84 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Using 650 W DC or 500 W AC power modules:<ul style="list-style-type: none">Not providing the PoE function: 106 W (without card)100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card)Using 1150 W AC or 1000 W AC power modules:<ul style="list-style-type: none">Not providing the PoE function: 119.7 W (without card)100% PoE loads: 1610 W (system power consumption: 170 W, PoE: 1440 W, without card)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	Using 650 W DC or 500 W AC power modules: 80 W (without card) Using 1150 W AC or 1000 W AC power modules: 83 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351MQV

5.22.9 S5730-60C-HI-48S

Version Mapping

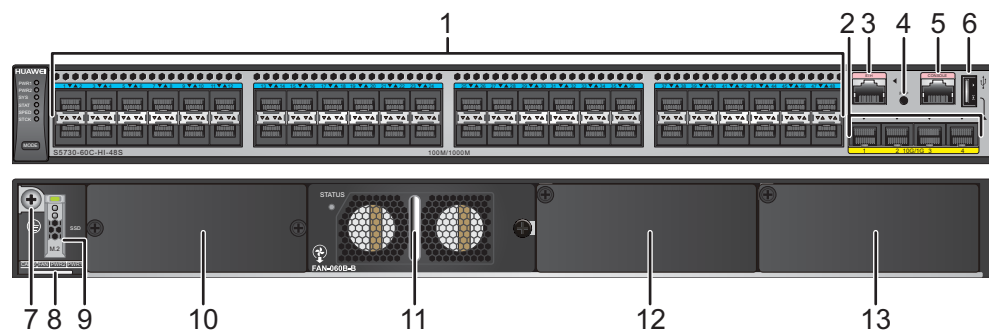
[Table 5-1096](#) lists the mapping between the S5730-60C-HI-48S chassis and software versions.

Table 5-1096 Version mapping

Series	Model	Software Version
S5730-HI	S5730-60C-HI-48S	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-442 S5730-60C-HI-48S appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • GE-CWDM optical module (used only in the OADM scenario) 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
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3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	SSD card slot NOTE Pluggable SSD card supported: SSD-240GB	10	Rear card slot NOTE Cards supported: <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00
11	Fan slot NOTE Applicable fan module: FAN-060B-B	12	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 350 W DC power module • 600 W AC power module
13	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 350 W DC power module • 600 W AC power module 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1097](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1097 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used

Attribute	Description
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1098](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1098 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1099](#).

Table 5-1099 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1100](#) describes the attributes of an ETH management port.

Table 5-1100 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-60C-HI-48S has the same types of indicators as the S5730-36C-HI-24S. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-60C-HI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-443 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-443 Power supply connections of dual DC power modules

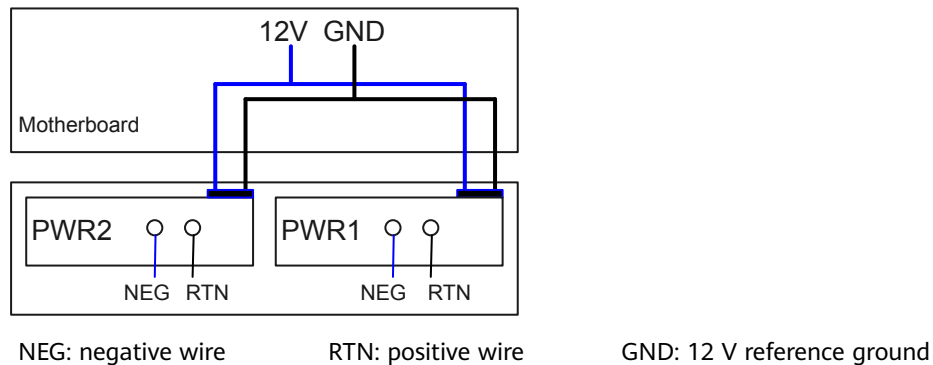
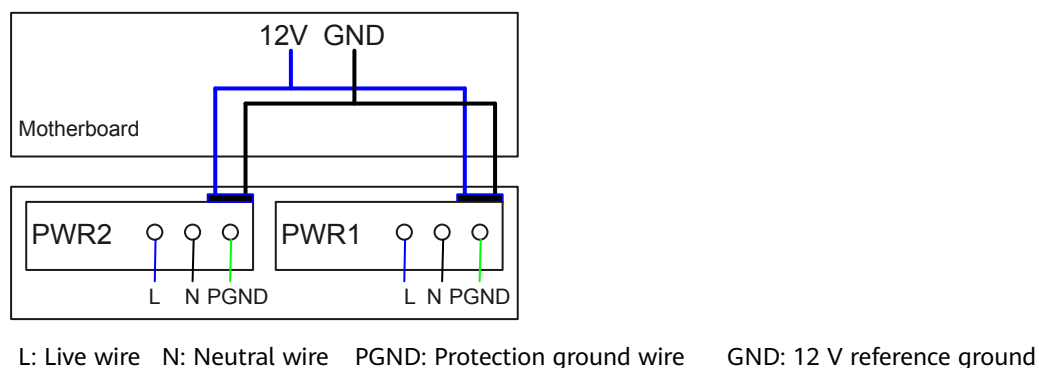


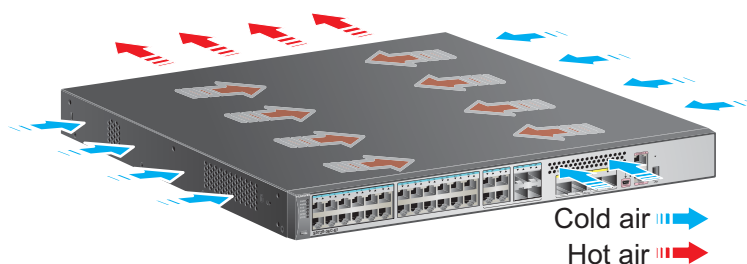
Figure 5-444 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-444 Power supply connections of dual AC power modules



Heat Dissipation

The S5730-60C-HI-48S uses pluggable fan modules for forced air cooling. Air flows in from the left side, right side, and front panel, and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1101 lists specifications of the S5730-60C-HI-48S.

Table 5-1101 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	45.53 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.71 kg (21.41 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	136 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	100 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 67.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02351XFS

5.22.10 S5730-68C-HI

Version Mapping

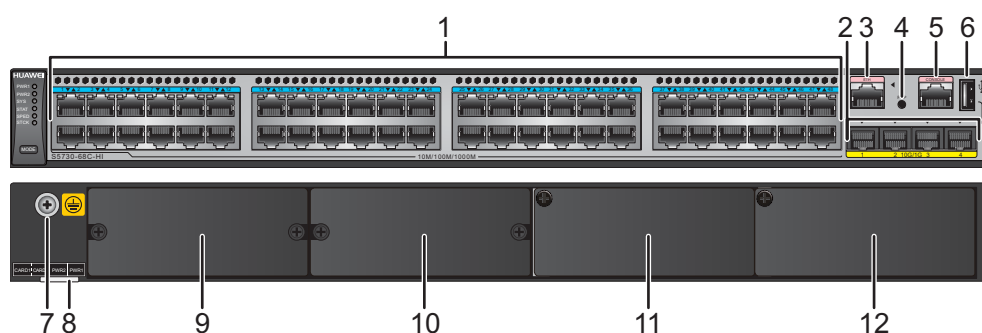
Table 5-1102 lists the mapping between the S5730-68C-HI chassis and software versions.

Table 5-1102 Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-445 S5730-68C-HI appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
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3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE Cards supported: <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00 	10	Rear card slot 2 NOTE This slot is reserved for future use.
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 150 W AC power module • 150 W DC power module

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1103](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1103 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1104](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1104 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1105](#).

Table 5-1105 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1106](#) describes the attributes of an ETH management port.

Table 5-1106 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

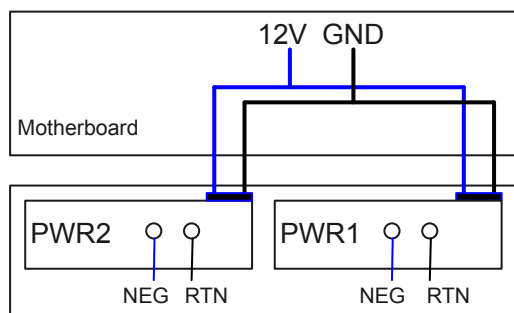
The S5730-68C-HI has similar indicators to those of the S5730-44C-PWH-HI except that the S5730-68C-HI does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-HI uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-446](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-446 Power supply connections of dual DC power modules



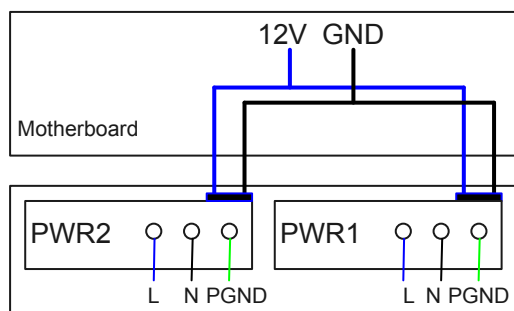
NEG: negative wire

RTN: positive wire

GND: 12 V reference ground

Figure 5-447 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-447 Power supply connections of dual AC power modules



L: Live wire

N: Neutral wire

PGND: Protection ground wire

GND: 12 V reference ground

Heat Dissipation

The S5730-68C-HI has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1107 lists technical specifications of the S5730-68C-HI.

Table 5-1107 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	49.29 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	8.5 kg (18.74 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -36 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	88.05 W (without card)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	62 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 55.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	<ul style="list-style-type: none"> • AC power modules configured: 0-5000 m (0-16404 ft.) • DC power modules configured: 0-2000 m (0-6562 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351MQT

5.22.11 S5730-68C-PWH-HI

Version Mapping

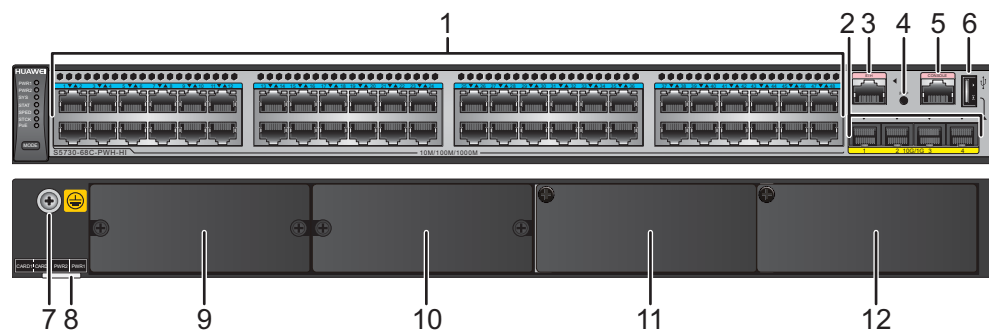
Table 5-1108 lists the mapping between the S5730-68C-PWH-HI chassis and software versions.

Table 5-1108 Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-PWH-HI	V200R012C00 to V200R019C10 versions

Appearance and Structure

Figure 5-448 S5730-68C-PWH-HI appearance



1	Forty-eight PoE+ + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
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3	One ETH management port	4	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
5	One console port	6	One USB port
7	Ground screw NOTE It is used with a ground cable .	8	ESN label NOTE You can draw it out to view the ESN and MAC address of the switch.
9	Rear card slot 1 NOTE Cards supported: <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00 	10	Rear card slot 2 NOTE This slot is reserved for future use.
11	Power module slot 2 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE Power Module • 650 W DC PoE Power Module • 1150 W AC PoE Power Module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions) 	12	Power module slot 1 NOTE Applicable power modules: <ul style="list-style-type: none"> • 500 W AC PoE Power Module • 650 W DC PoE Power Module • 1150 W AC PoE Power Module • 1000 W AC PoE power module (applicable in V200R013C00 and later versions)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1109](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1109 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1110](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1110 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1111](#).

Table 5-1111 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1112](#) describes the attributes of an ETH management port.

Table 5-1112 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5730-68C-PWH-HI has the same types of indicators as the S5730-44C-PWH-HI. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-PWH-HI is a PoE switch. It has two power module slots, each of which can have a 500 W, 650 W, 1150 W, or 1000 W (applicable in V200R013C00 and later versions) power module installed. A 500 W AC power module and a 650 W DC power module can be used together in the switch. A 1150 W AC power

module and a 1000 W AC power module can be used together in the switch. [Table 5-1113](#) lists its power supply configurations.

Table 5-1113 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
500 W	-	369.6 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 12 • 802.3bt (60 W per port): 6
500 W	500 W	739.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 12
650 W	-	350 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 22 • 802.3at (30 W per port): 11 • 802.3bt (60 W per port): 5
650 W	500 W or 650 W	700 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 45 • 802.3at (30 W per port): 23 • 802.3bt (60 W per port): 11
500 W or 650 W	650 W		
1150 W (220 V)	-	785.4 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 26 • 802.3bt (60 W per port): 13
1150 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1150 W (110 V)	-	446.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 29• 802.3at (30 W per port): 14• 802.3bt (60 W per port): 7
1150 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 29• 802.3bt (60 W per port): 14
1000 W (220 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 25• 802.3bt (60 W per port): 12
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48• 802.3bt (60 W per port): 24
1000 W (110 V)	-	754.6 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 25• 802.3bt (60 W per port): 12
1000 W (110 V)	1000 W (110 V)	1440 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48• 802.3bt (60 W per port): 24

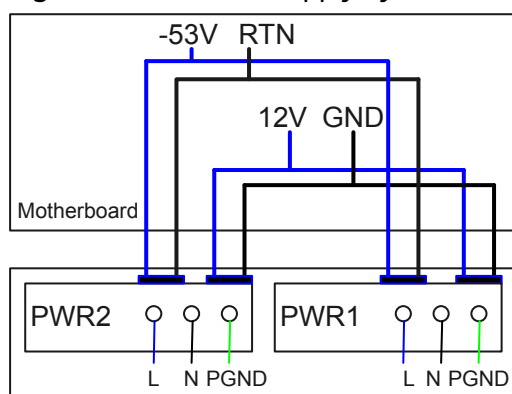
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	1150 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1150 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48 • 802.3bt (60 W per port): 24
1000 W (110 V)	1150 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29 • 802.3bt (60 W per port): 14
1150 W (110 V)	1000 W (110 V)	893.2 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 29 • 802.3bt (60 W per port): 14

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-449 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 12 V and -53 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and -53 V voltage for the PDs.

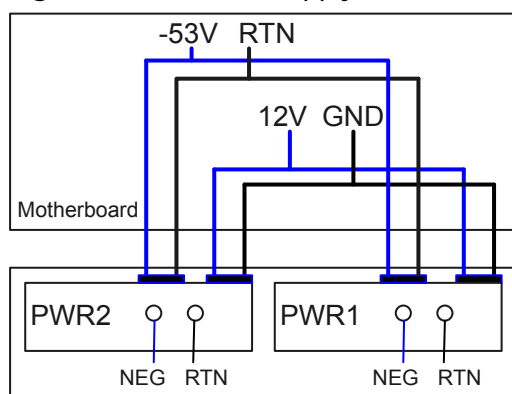
Figure 5-449 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: -53 V reference ground

Figure 5-450 shows the power supply connections of dual DC PoE power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V and -53 V output voltages, and the motherboard provides 12 V voltage for the entire device and -53 V voltage for the PDs.

Figure 5-450 Power supply connections of dual DC PoE power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground RTN: -53 V reference ground

Heat Dissipation

The S5730-68C-PWH-HI has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1114 lists technical specifications of the S5730-68C-PWH-HI.

Table 5-1114 Technical specifications

Item	Description
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	48.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using 500 W AC or 1000 W AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing 650 W DC or 1150 W AC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.) When 1150 W power modules are installed, they stretch out from the chassis. Therefore, the total depth of the switch changes to 507.3 mm (19.97 in.).
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC

Item	Description
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Using 650 W DC power modules: <ul style="list-style-type: none"> - Not providing the PoE function: 106 W (without card) - 100% PoE loads: 830 W (system power consumption: 130 W, PoE: 700 W, without card) ● Using 500 W AC power modules: <ul style="list-style-type: none"> - Not providing the PoE function: 106 W (without card) - 100% PoE loads: 830 W (system power consumption: 90.8 W, PoE: 739.2 W, without card) ● Using 1150 W AC or 1000 W AC power modules: <ul style="list-style-type: none"> - Not providing the PoE function: 116.3 W (without card) - 100% PoE loads: 1608 W (system power consumption: 168 W, PoE: 1440 W, without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	Using 650 W DC or 500 W AC power modules: 72 W (without card) Using 1150 W AC or 1000 W AC power modules: 76 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 69.6 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351LKE

5.22.12 S5730-68C-HI-48S

Version Mapping

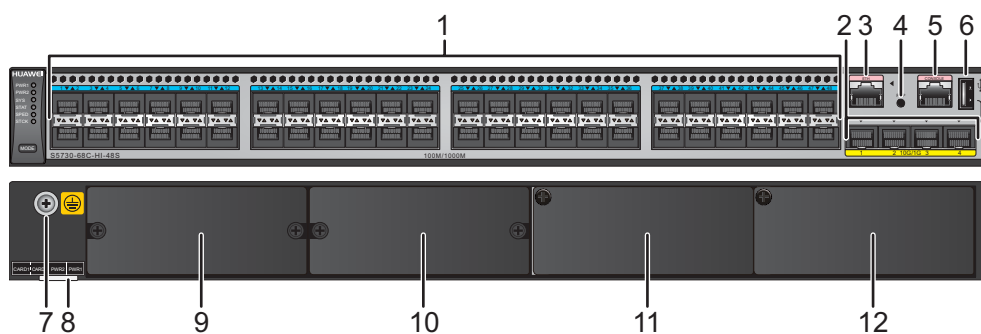
[Table 5-1115](#) lists the mapping between the S5730-68C-HI-48S chassis and software versions.

Table 5-1115 Version mapping

Series	Model	Software Version
S5730-HI	S5730-68C-HI-48S	V200R013C00 to V200R019C10 versions

Appearance and Structure

Figure 5-451 S5730-68C-HI-48S appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) • GE-CWDM optical module (used only in the OADM scenario) 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	<p>One ETH management port</p>	4	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
5	<p>One console port</p>	6	<p>One USB port</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>ESN label</p> <p>NOTE You can draw it out to view the ESN and MAC address of the switch.</p>
9	<p>Rear card slot 1</p> <p>NOTE Cards supported:</p> <ul style="list-style-type: none"> • ES5D21Q02Q00 • ES5D21X08T00 • ES5D21X08S00 	10	<p>Rear card slot 2</p> <p>NOTE This slot is reserved for future use.</p>
11	<p>Power module slot 2</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 350 W DC power module • 600 W AC power module 	12	<p>Power module slot 1</p> <p>NOTE Applicable power modules:</p> <ul style="list-style-type: none"> • 350 W DC power module • 600 W AC power module

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1116](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1116 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1117](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1117 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1118](#).

Table 5-1118 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1119](#) describes the attributes of an ETH management port.

Table 5-1119 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

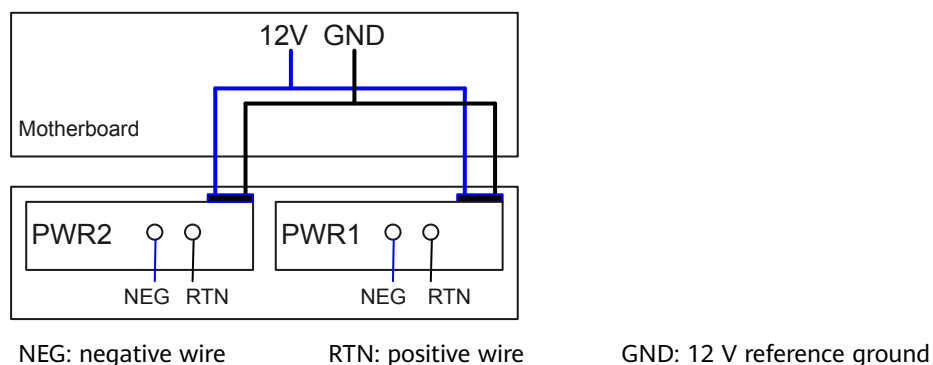
The S5730-68C-HI-48S has the same types of indicators as the S5730-36C-HI-24S. For details, see [Indicator Description](#).

Power Supply Configuration

The S5730-68C-HI-48S uses pluggable power modules. It can be configured with a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

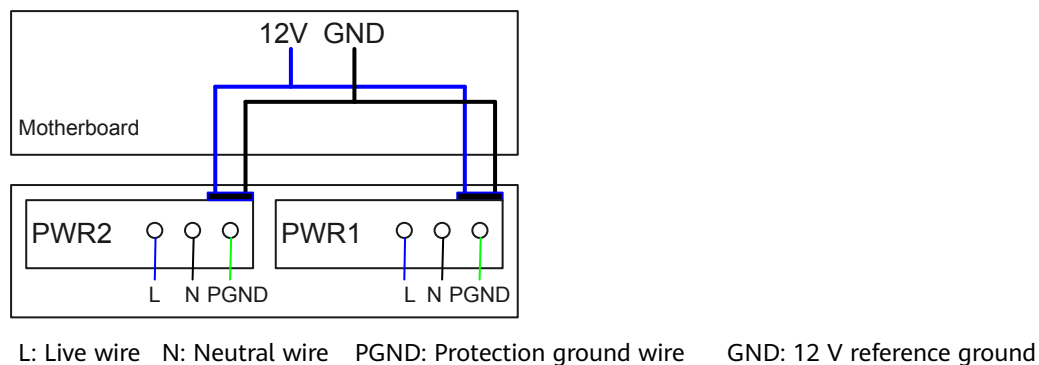
[Figure 5-452](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-452 Power supply connections of dual DC power modules



[Figure 5-453](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-453 Power supply connections of dual AC power modules



Heat Dissipation

The S5730-68C-HI-48S has three built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1120 lists specifications of the S5730-68C-HI-48S.

Table 5-1120 Technical specifications

Item	Parameter
Memory (RAM)	2 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	46.49 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 1 kV in differential mode, ± 2 kV in common mode
Dimensions (H x W x D)	44.4 mm x 442.0 mm x 420.0 mm (1.75 in. x 17.4 in. x 16.5 in.)
Weight (with packaging)	9.39 kg (20.7 lb)

Item	Parameter
Stack ports	10GE SFP+ ports on the front panel, or 10GE ports or 40GE QSFP+ ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	100 V AC to 240 V AC, 50/60 Hz -48 V DC to -60 V DC
Maximum voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	100 W (without card)
Operating temperature	0°C to 45°C (32°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 64.7 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Parameter
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02351XFT

5.23 S5731-S

5.23.1 S5731-S24T4X

Version Mapping

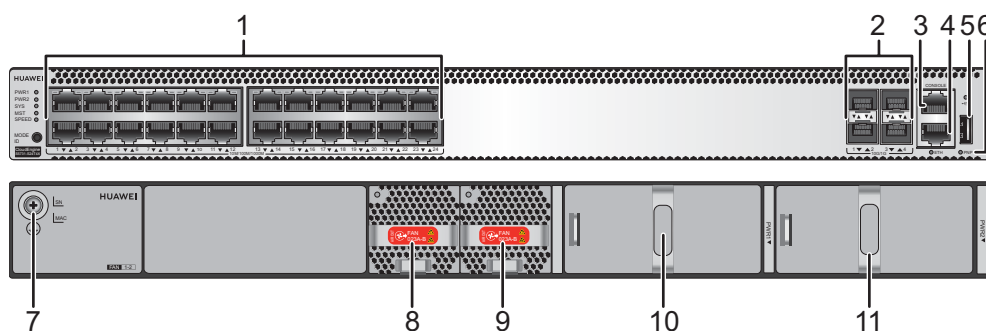
Table 5-1121 lists the mapping between the S5731-S24T4X chassis and software versions.

Table 5-1121 Version mapping

Series	Model	Software Version
S5731-S	S5731-S24T4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-454 S5731-S24T4X appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)

1	Power module slot 2	-	-
1	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1122](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1122 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1123](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1123 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1124](#).

Table 5-1124 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1125](#) describes the attributes of an ETH management port.

Table 5-1125 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

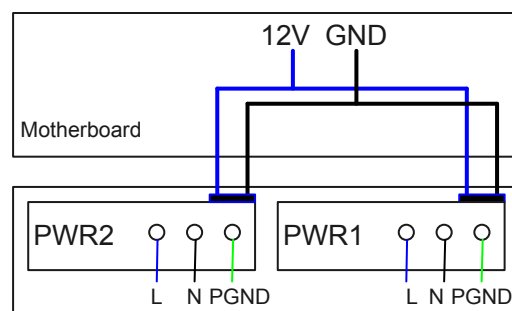
The S5731-S24T4X has similar indicators to those on the S5731-S48P4X except that the S5731-S24T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731-S24T4X can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-455](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

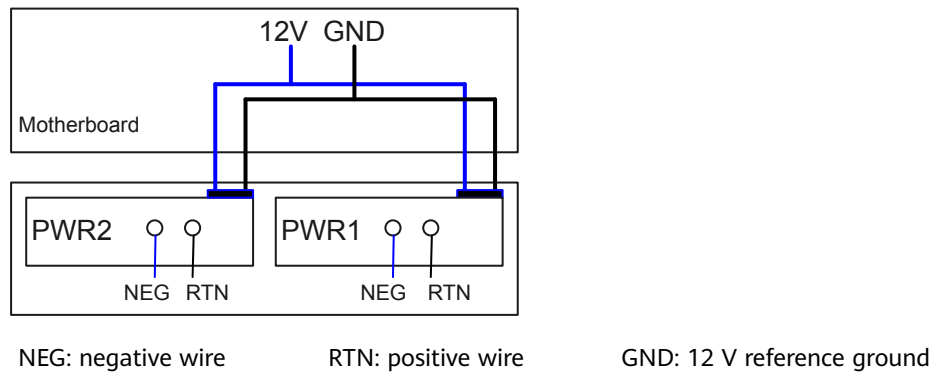
Figure 5-455 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

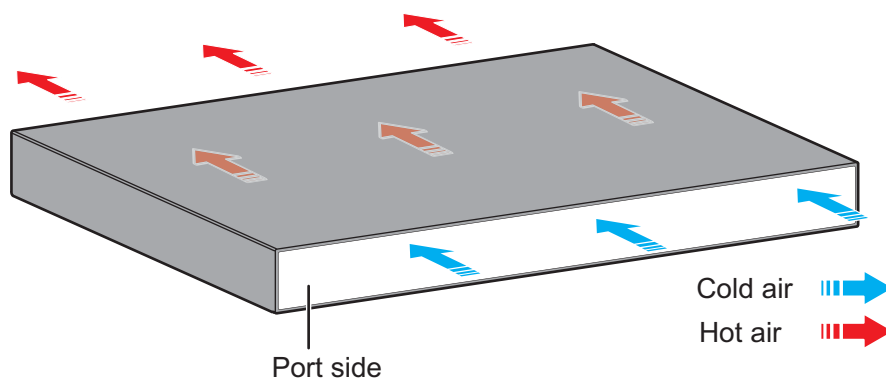
[Figure 5-456](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-456 Power supply connections of dual DC power modules



Heat Dissipation

The S5731-S24T4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1126 lists technical specifications of the S5731-S24T4X.

Table 5-1126 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.4 kg (18.52 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353AHU

5.23.2 S5731-S24P4X

Version Mapping

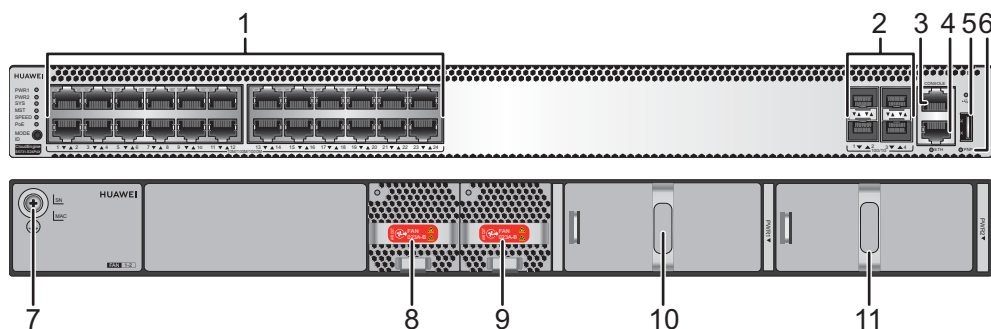
[Table 5-1127](#) lists the mapping between the S5731-S24P4X chassis and software versions.

Table 5-1127 Version mapping

Series	Model	Software Version
S5731-S	S5731-S24P4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-457 S5731-S24P4X appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)
11	Power module slot 2 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1128](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1128 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1129](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1129 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1130](#).

Table 5-1130 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1131](#) describes the attributes of an ETH management port.

Table 5-1131 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5731-S24P4X has the same types of indicators as the S5731-S48P4X. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731-S24P4X is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1132](#) lists its power supply configurations.

Table 5-1132 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	760 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 24802.3at (30 W per port): 24

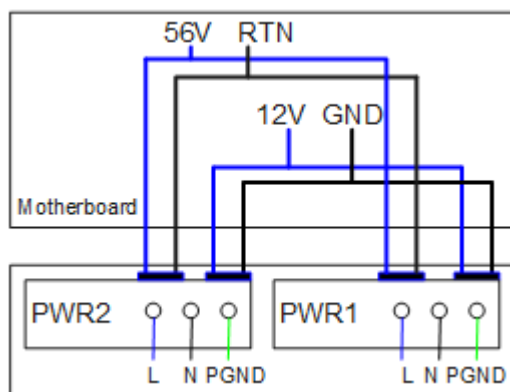
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	–	665 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 22
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W (110 V)	1000 W (110 V)	1330 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-458 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 56 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and 56 V voltage for the PDs.

Figure 5-458 Power supply by dual AC PoE power modules



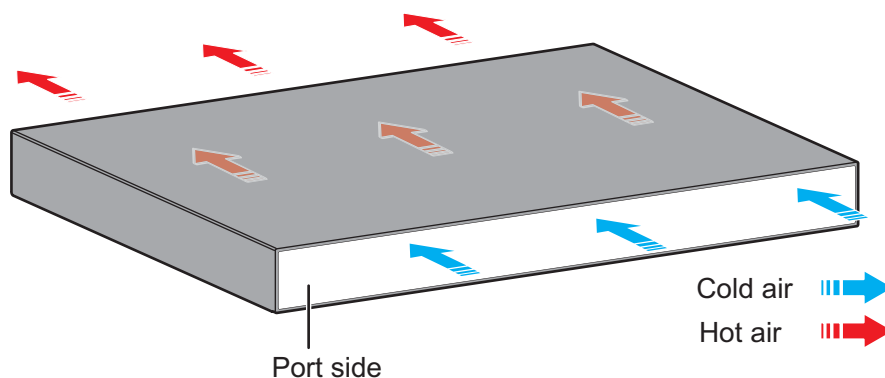
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: 56 V reference ground

Heat Dissipation

The S5731-S24P4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



Technical Specifications

[Table 5-1133](#) lists technical specifications of the S5731-S24P4X.

Table 5-1133 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.6 kg (18.96 lb)

Item	Description
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 121 W 100% PoE loads: 977 W (PoE: 720 W)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353AHX

5.23.3 S5731-S48T4X

Version Mapping

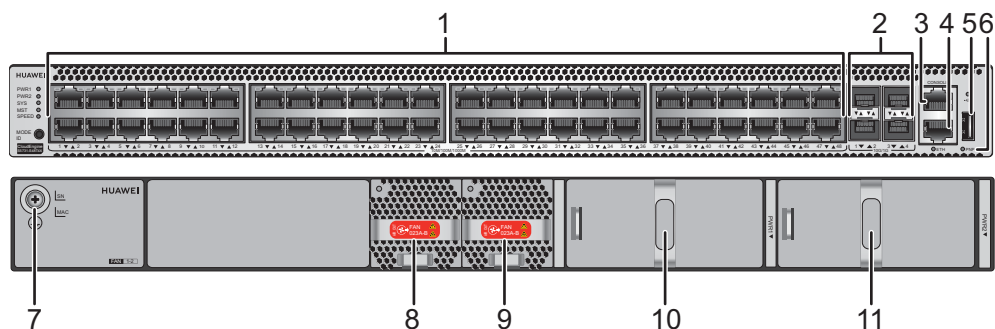
Table 5-1134 lists the mapping between the S5731-S48T4X chassis and software versions.

Table 5-1134 Version mapping

Series	Model	Software Version
S5731-S	S5731-S48T4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-459 S5731-S48T4X appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)

1	Power module slot 2	-	-
1	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1135](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1135 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1136](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1136 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1137](#).

Table 5-1137 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1138](#) describes the attributes of an ETH management port.

Table 5-1138 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

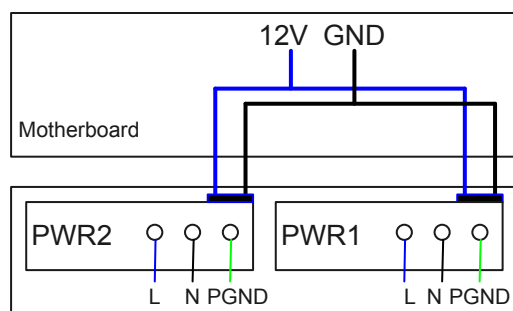
The S5731-S48T4X has similar indicators to those on the S5731-S48P4X except that the S5731-S48T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731-S48T4X can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-460](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

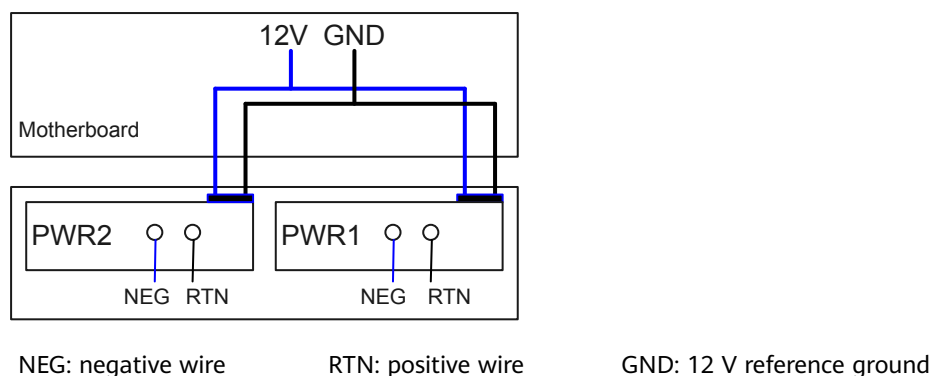
Figure 5-460 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

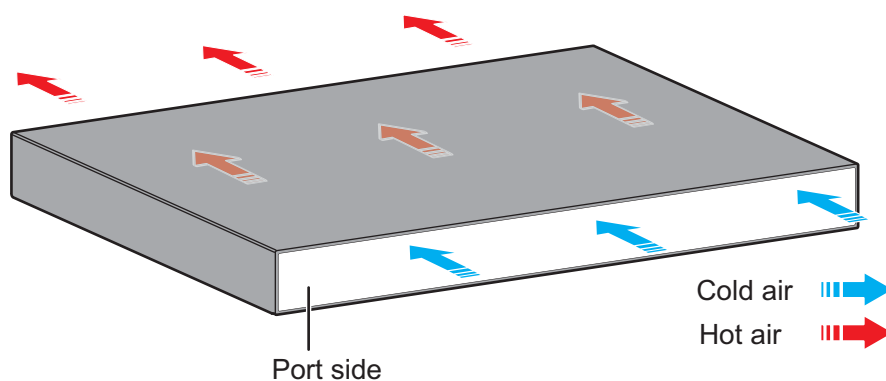
[Figure 5-461](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-461 Power supply connections of dual DC power modules



Heat Dissipation

The S5731-S48T4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1139 lists technical specifications of the S5731-S48T4X.

Table 5-1139 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.55 kg (18.85 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353AJB

5.23.4 S5731-S48P4X

Version Mapping

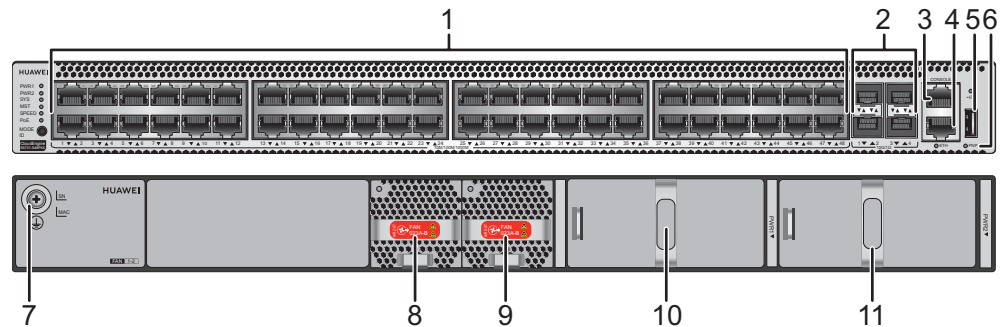
Table 5-1140 lists the mapping between the S5731-S48P4X chassis and software versions.

Table 5-1140 Version mapping

Series	Model	Software Version
S5731-S	S5731-S48P4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-462 S5731-S48P4X appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)
11	Power module slot 2 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1141](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1141 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1142](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1142 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1143](#).

Table 5-1143 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1144](#) describes the attributes of an ETH management port.

Table 5-1144 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-463 Indicators on the S5731-S48P4X

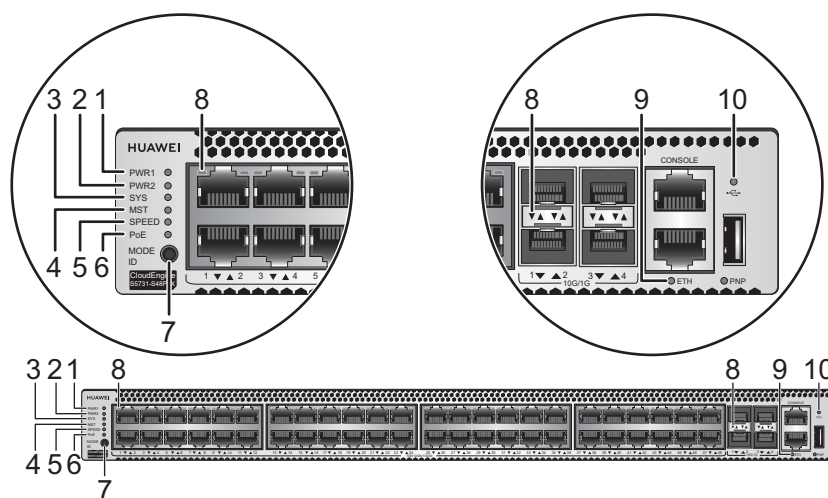


Table 5-1145 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<p>The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> • If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. • If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
	ID	ID indicator NOTE The mode switch button has an ID indicator.	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1146 .		
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1146 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Power Supply Configuration

The S5731-S48P4X is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1147](#) lists its power supply configurations.

Table 5-1147 Power supply configurations

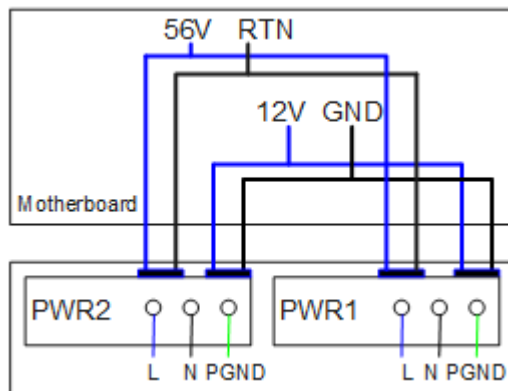
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	–	760 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 25
1000 W (110 V)	–	665 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 43• 802.3at (30 W per port): 22
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1000 W (110 V)	1000 W (110 V)	1330 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 44

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-464 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 56 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and 56 V voltage for the PDs.

Figure 5-464 Power supply by dual AC PoE power modules



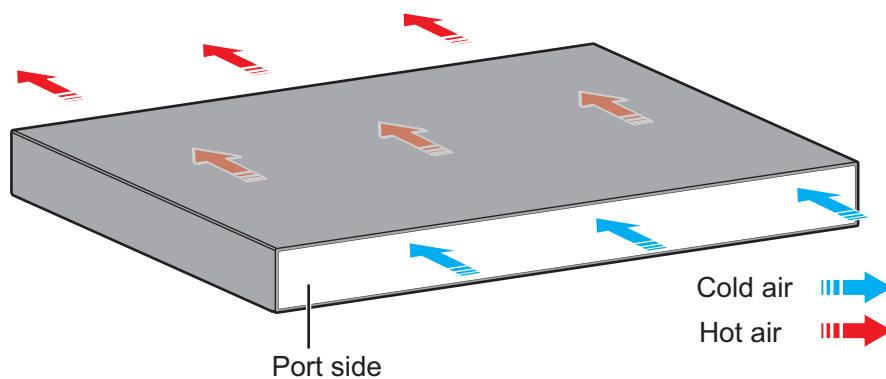
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: 56 V reference ground

Heat Dissipation

The S5731-S48P4X uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1148 lists technical specifications of the S5731-S48P4X.

Table 5-1148 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 132 W 100% PoE loads: 1750 W (PoE: 1440 W)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353AJH

5.24 S5731S-S

5.24.1 S5731S-S24T4X-A

Version Mapping

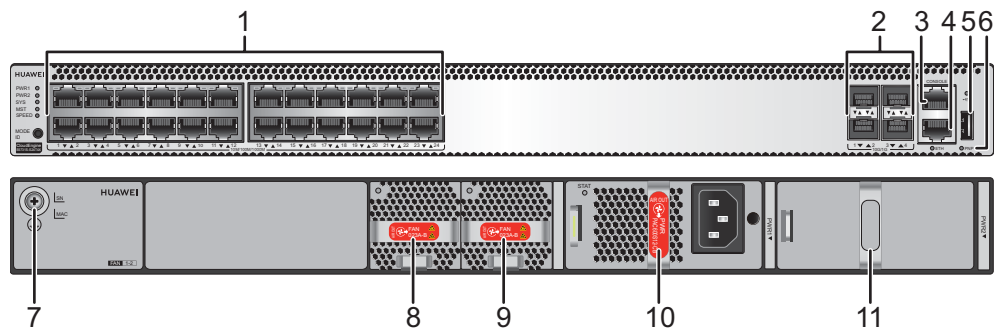
[Table 5-1149](#) lists the mapping between the S5731S-S24T4X-A chassis and software versions.

Table 5-1149 Version mapping

Series	Model	Software Version
S5731S-S	S5731S-S24T4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-465 S5731S-S24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-1150** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1150 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1151](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1151 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1152](#).

Table 5-1152 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1153](#) describes the attributes of an ETH management port.

Table 5-1153 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

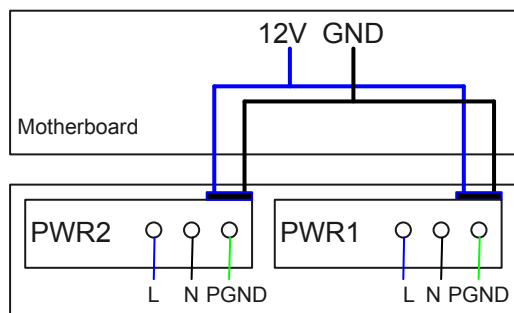
The S5731S-S24T4X-A has similar indicators to those on the S5731S-S48P4X-A except that the S5731S-S24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-S24T4X-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-466](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

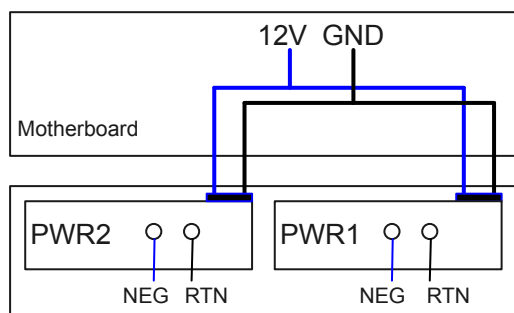
Figure 5-466 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-467 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

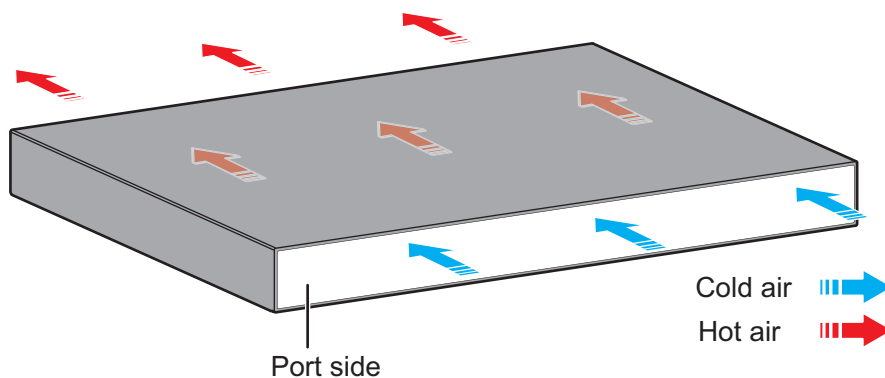
Figure 5-467 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5731S-S24T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1154 lists technical specifications of the S5731S-S24T4X-A.

Table 5-1154 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC

Item	Description
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC• DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353AHV

5.24.2 S5731S-S24P4X-A

Version Mapping

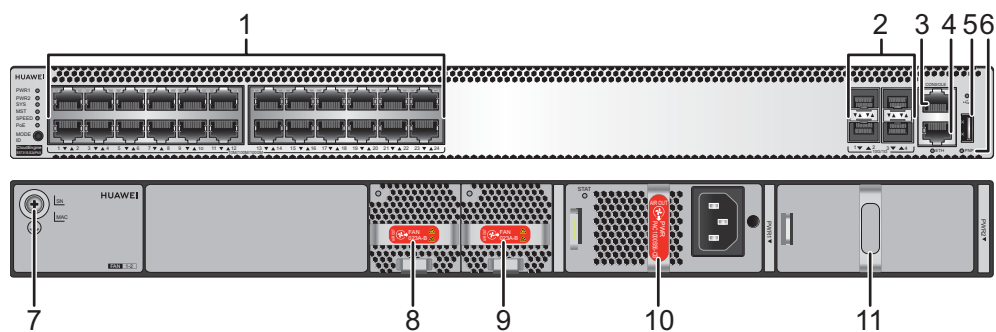
Table 5-1155 lists the mapping between the S5731S-S24P4X-A chassis and software versions.

Table 5-1155 Version mapping

Series	Model	Software Version
S5731S-S	S5731S-S24P4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-468 S5731S-S24P4X-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)

1	Power module slot 2	-	-
1	<p>NOTE</p> <p>Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)</p>		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1156](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1156 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1157](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1157 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1158](#).

Table 5-1158 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1159](#) describes the attributes of an ETH management port.

Table 5-1159 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5731S-S24P4X-A has the same types of indicators as the S5731S-S48P4X-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-S24P4X-A is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1160](#) lists its power supply configurations.

Table 5-1160 Power supply configurations

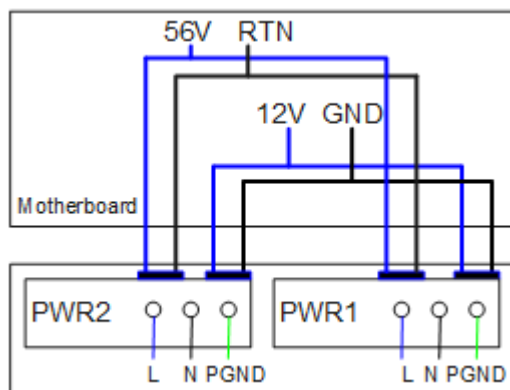
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	–	760 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24
1000 W (110 V)	–	665 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 22
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24
1000 W (110 V)	1000 W (110 V)	1330 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-469 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 56 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and 56 V voltage for the PDs.

Figure 5-469 Power supply by dual AC PoE power modules



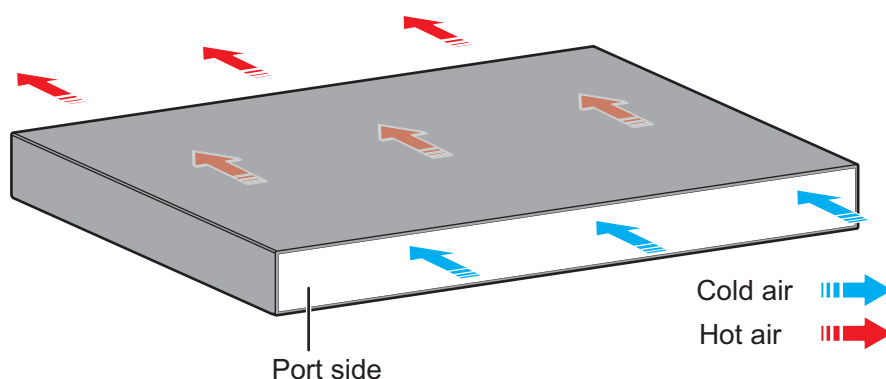
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: 56 V reference ground

Heat Dissipation

The S5731S-S24P4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



Technical Specifications

Table 5-1161 lists technical specifications of the S5731S-S24P4X-A.

Table 5-1161 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.7 kg (21.38 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 121 W 100% PoE loads: 977 W (PoE: 720 W)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353AHY

5.24.3 S5731S-S48T4X-A

Version Mapping

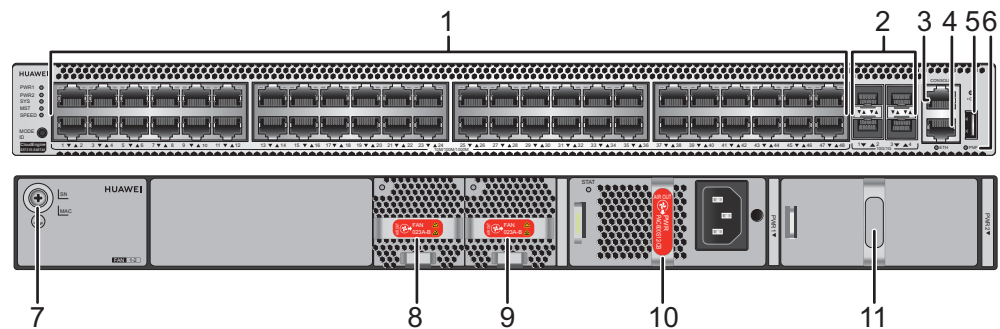
Table 5-1162 lists the mapping between the S5731S-S48T4X-A chassis and software versions.

Table 5-1162 Version mapping

Series	Model	Software Version
S5731S-S	S5731S-S48T4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-470 S5731S-S48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> ● GE optical module ● GE-CWDM optical module ● GE-DWDM optical module ● GE copper module (100M/1000M auto-sensing) ● 10GE SFP+ optical module (OSXD22N00 not supported) ● 10GE-CWDM optical module ● 10GE-DWDM optical module ● 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables ● 3 m and 10 m SFP+ AOC cables ● 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1163](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1163 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1164](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1164 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1165](#).

Table 5-1165 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1166](#) describes the attributes of an ETH management port.

Table 5-1166 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

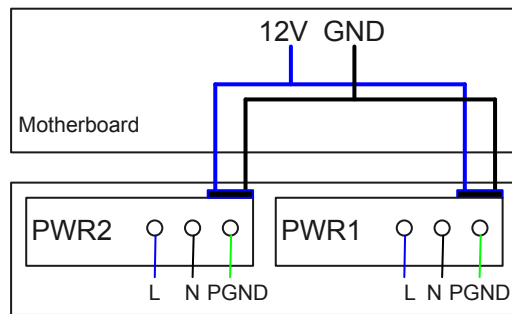
The S5731S-S48T4X-A has similar indicators to those on the S5731S-S48P4X-A except that the S5731S-S48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-S48T4X-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-471 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

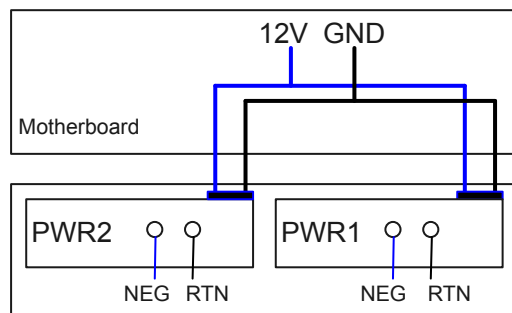
Figure 5-471 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-472 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

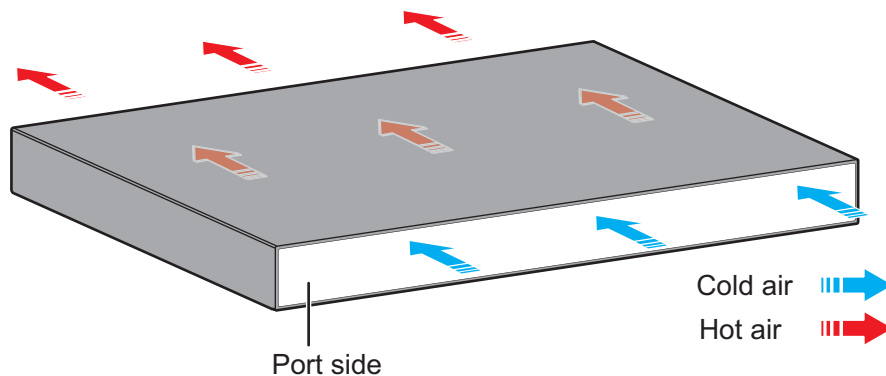
Figure 5-472 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5731S-S48T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1167 lists technical specifications of the S5731S-S48T4X-A.

Table 5-1167 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC

Item	Description
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353AJC

5.24.4 S5731S-S48P4X-A

Version Mapping

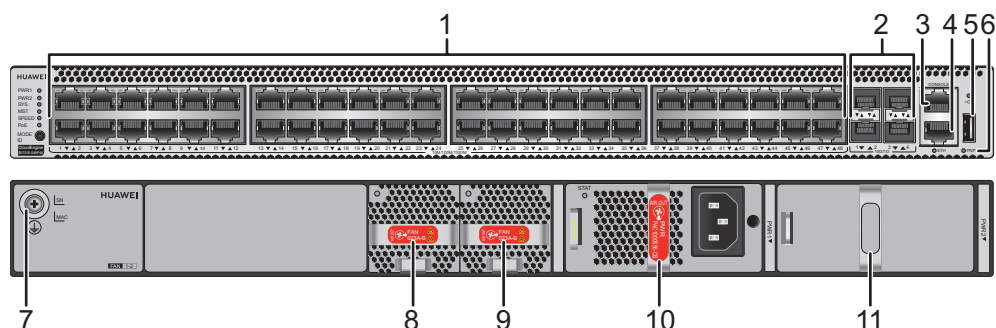
Table 5-1168 lists the mapping between the S5731S-S48P4X-A chassis and software versions.

Table 5-1168 Version mapping

Series	Model	Software Version
S5731S-S	S5731S-S48P4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-473 S5731S-S48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
---	--	---	--

3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)
11	Power module slot 2 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1169](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1169 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1170](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1170 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1171](#).

Table 5-1171 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1172](#) describes the attributes of an ETH management port.

Table 5-1172 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-474 Indicators on the S5731S-S48P4X-A

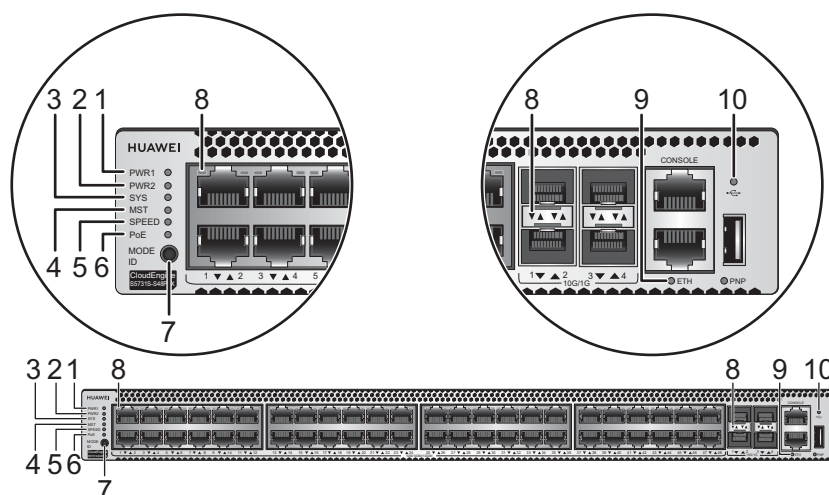


Table 5-1173 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	<p>The switch has two power modules installed. Any of the following situations occurs in power module slot 2:</p> <ul style="list-style-type: none"> • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> • If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. • If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
	ID	ID indicator NOTE The mode switch button has an ID indicator.	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1174 .		
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1174 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Power Supply Configuration

The S5731S-S48P4X-A is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1175](#) lists its power supply configurations.

Table 5-1175 Power supply configurations

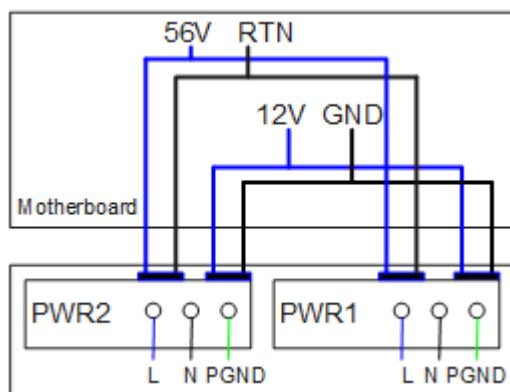
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	–	760 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 25
1000 W (110 V)	–	665 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 43• 802.3at (30 W per port): 22
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48
1000 W (110 V)	1000 W (110 V)	1330 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 44

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-475 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 56 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and 56 V voltage for the PDs.

Figure 5-475 Power supply by dual AC PoE power modules



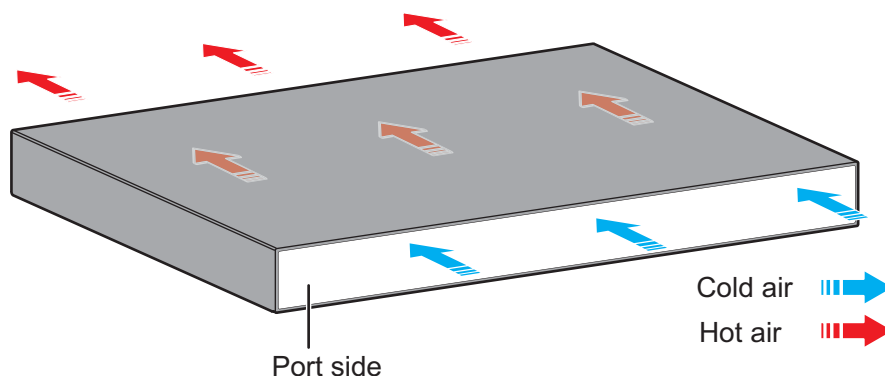
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: 56 V reference ground

Heat Dissipation

The S5731S-S48P4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1176 lists technical specifications of the S5731S-S48P4X-A.

Table 5-1176 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.9 kg (21.83 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">• AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 132 W• 100% PoE loads: 1750 W (PoE: 1440 W)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> ● EMC certification ● Safety certification ● Manufacturing certification
Part number	02353AJJ

5.25 S5731-H

5.25.1 S5731-H24T4XC

Version Mapping

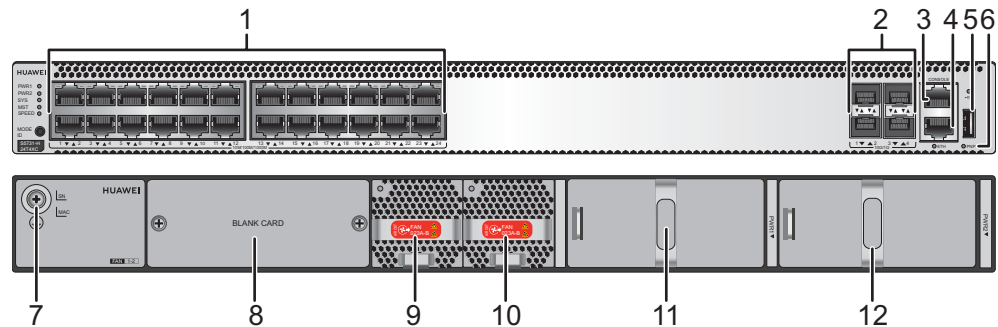
Table 5-1177 lists the mapping between the S5731-H24T4XC chassis and software versions.

Table 5-1177 Version mapping

Series	Model	Software Version
S5731-H	S5731-H24T4XC	V200R013C02 and later versions

Appearance and Structure

Figure 5-476 S5731-H24T4XC appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Rear card slot</p> <p>NOTE Applicable card:</p> <ul style="list-style-type: none"> • ES5D21X08T00 • ES5D21Q02Q00 • S7X08000 (applicable in V200R019C10 and later versions)
9	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module</p>	10	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module</p>
11	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	12	<p>Power module slot 2</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1178](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1178 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1179](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1179 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1180](#).

Table 5-1180 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1181](#) describes the attributes of an ETH management port.

Table 5-1181 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

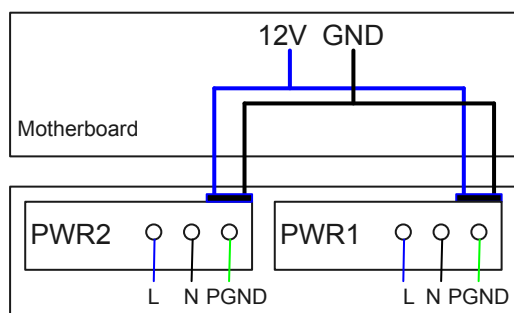
The S5731-H24T4XC has similar indicators to those on the S5731-H48P4XC except that the S5731-H24T4XC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731-H24T4XC can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-477](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

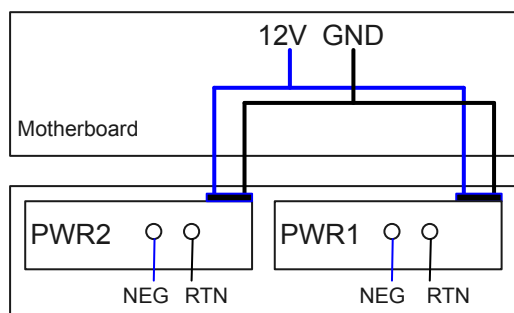
Figure 5-477 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-478 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

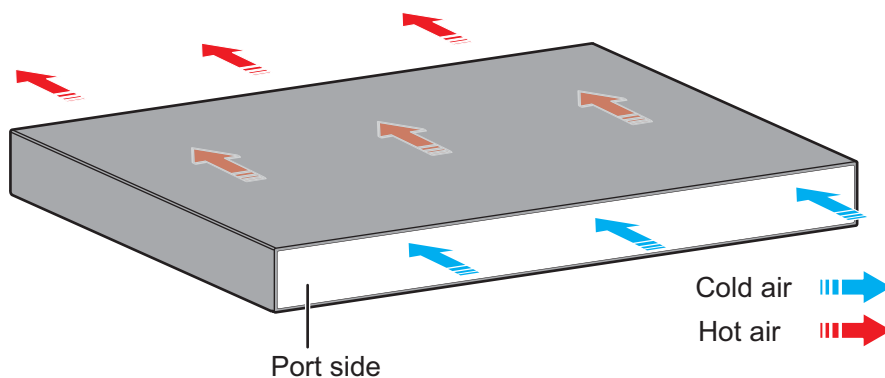
Figure 5-478 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5731-H24T4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1182 lists technical specifications of the S5731-H24T4XC.

Table 5-1182 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.4 kg (18.52 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported

Item	Description
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W (without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W (without card)
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02352QPP

5.25.2 S5731-H24P4XC

Version Mapping

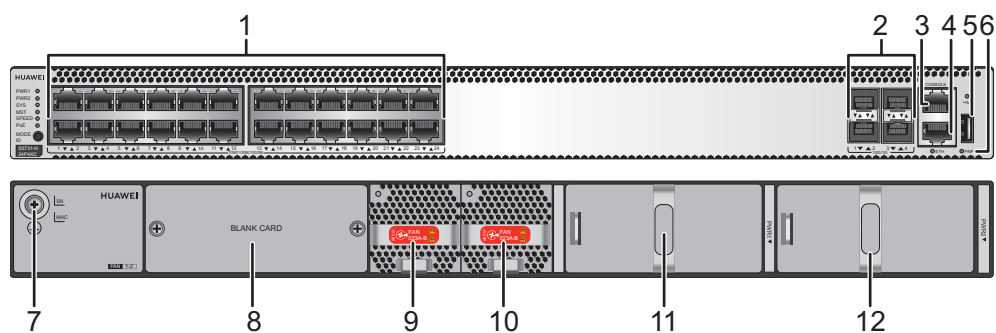
Table 5-1183 lists the mapping between the S5731-H24P4XC chassis and software versions.

Table 5-1183 Version mapping

Series	Model	Software Version
S5731-H	S5731-H24P4XC	V200R013C02 and later versions

Appearance and Structure

Figure 5-479 S5731-H24P4XC appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> • E55D21X08T00 • E55D21Q02Q00 • S7X08000 (applicable in V200R019C10 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module

1	Power module slot 1	1	Power module slot 2
1	NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)	2	NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1184](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1184 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1185](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1185 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1186](#).

Table 5-1186 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1187](#) describes the attributes of an ETH management port.

Table 5-1187 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5731-H24P4XC has the same types of indicators as the S5731-H48P4XC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731-H24P4XC is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1188](#) lists its power supply configurations.

Table 5-1188 Power supply configurations

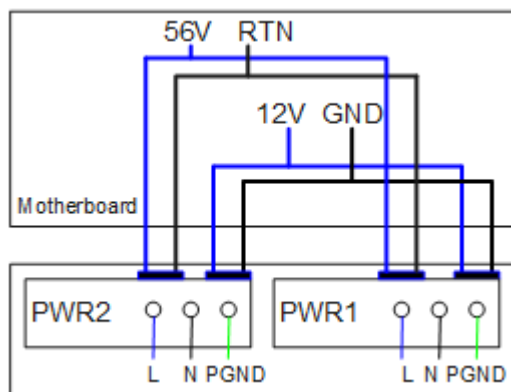
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	–	760 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24
1000 W (110 V)	–	665 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 22
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24
1000 W (110 V)	1000 W (110 V)	1330 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 24• 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-480 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 56 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and 56 V voltage for the PDs.

Figure 5-480 Power supply by dual AC PoE power modules



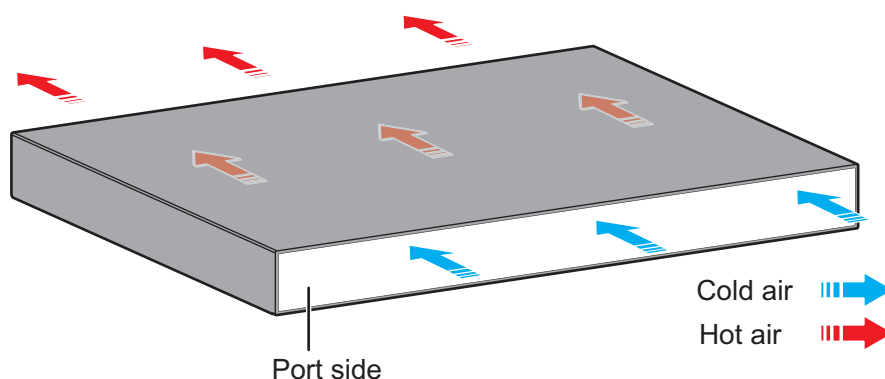
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: 56 V reference ground

Heat Dissipation

The S5731-H24P4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1189 lists technical specifications of the S5731-H24P4XC.

Table 5-1189 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.21 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.6 kg (18.96 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 121 W (without card) 100% PoE loads: 977 W (PoE: 720 W, without card)

Item	Description
Typical power consumption (30% of traffic load, tested according to ATIS standard)	95 W (without card)
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02352QPV

5.25.3 S5731-H48T4XC

Version Mapping

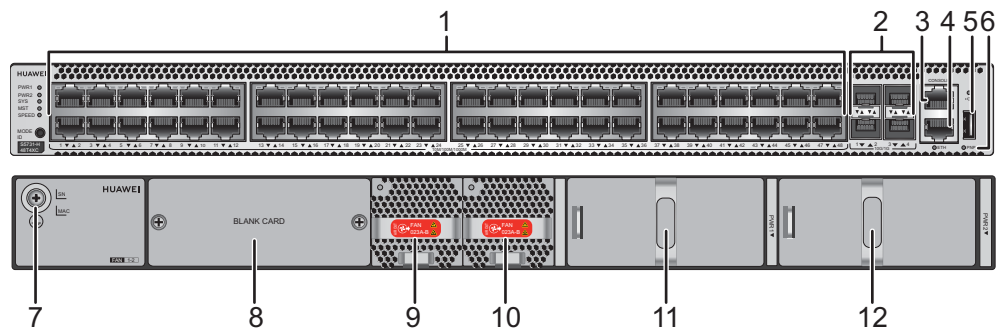
[Table 5-1190](#) lists the mapping between the S5731-H48T4XC chassis and software versions.

Table 5-1190 Version mapping

Series	Model	Software Version
S5731-H	S5731-H48T4XC	V200R013C02 and later versions

Appearance and Structure

Figure 5-481 S5731-H48T4XC appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> • ES5D21X08T00 • ES5D21Q02Q00 • S7X08000 (applicable in V200R019C10 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
11	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	12	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1191](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1191 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1192](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1192 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1193](#).

Table 5-1193 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1194](#) describes the attributes of an ETH management port.

Table 5-1194 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

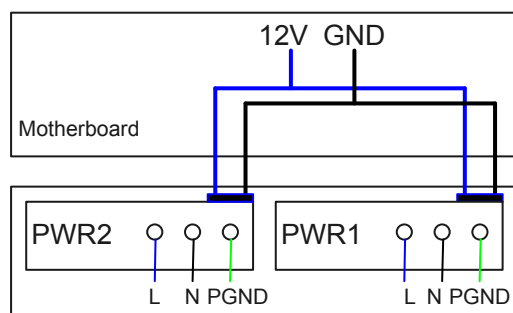
The S5731-H48T4XC has similar indicators to those on the S5731-H48P4XC except that the S5731-H48T4XC does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731-H48T4XC can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-482 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

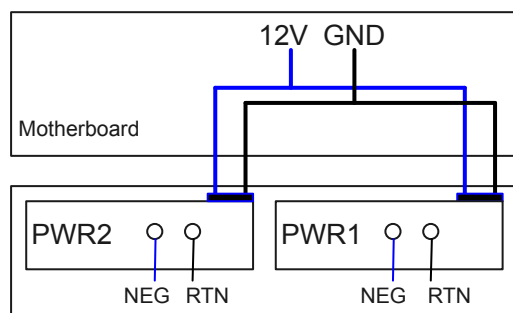
Figure 5-482 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-483 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

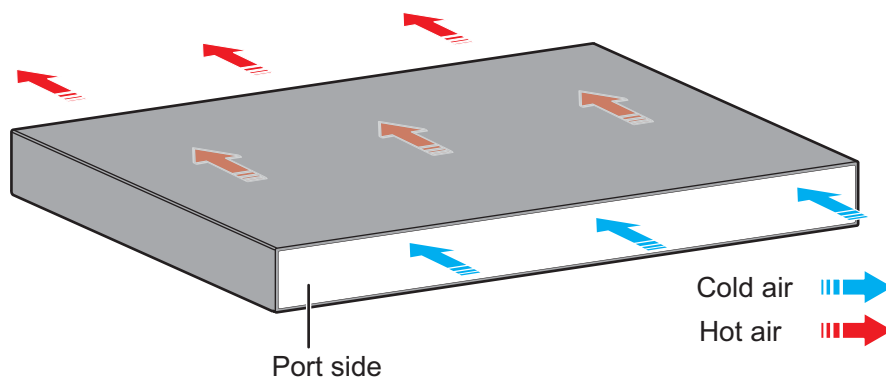
Figure 5-483 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5731-H48T4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1195 lists technical specifications of the S5731-H48T4XC.

Table 5-1195 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.55 kg (18.85 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported

Item	Description
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W (without card)
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02352QPT

5.25.4 S5731-H48P4XC

Version Mapping

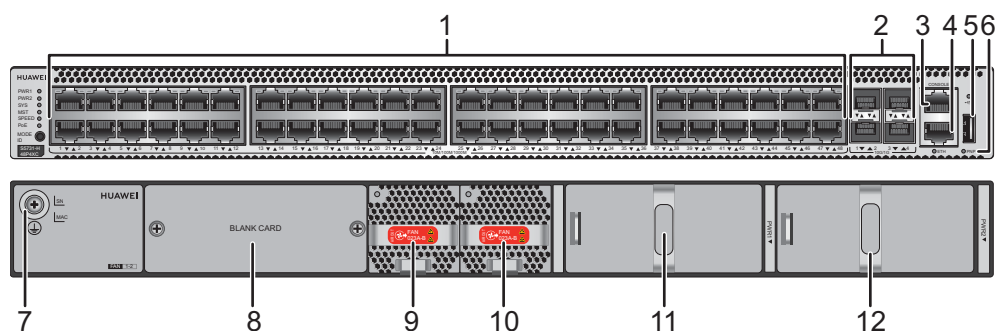
Table 5-1196 lists the mapping between the S5731-H48P4XC chassis and software versions.

Table 5-1196 Version mapping

Series	Model	Software Version
S5731-H	S5731-H48P4XC	V200R013C02 and later versions

Appearance and Structure

Figure 5-484 S5731-H48P4XC appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Rear card slot</p> <p>NOTE</p> <p>Applicable card:</p> <ul style="list-style-type: none"> • E55D21X08T00 • E55D21Q02Q00 • S7X08000 (applicable in V200R019C10 and later versions)
9	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module</p>	10	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module</p>

1	Power module slot 1	1	Power module slot 2
1	NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)	2	NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1197](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1197 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1198](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1198 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1199](#).

Table 5-1199 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1200](#) describes the attributes of an ETH management port.

Table 5-1200 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-485 Indicators on the S5731-H48P4XC

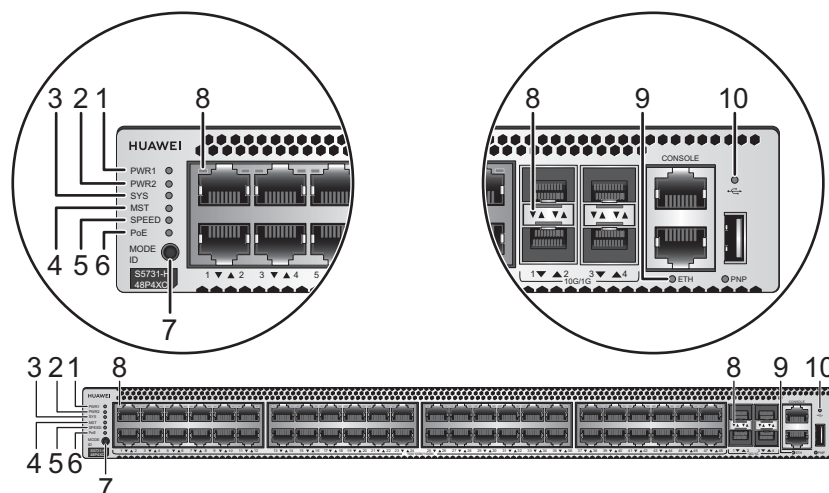


Table 5-1201 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description		
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.		
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.		
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>		
			ID	ID indicator	-	Off	The ID indicator is not used (default state).
					Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1202 .				
9	ETH	ETH port indicator	-	Off	The ETH port is not connected.		
			Green	Steady on	The ETH port is connected.		

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	The ETH port is sending or receiving data.
10	-	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1202 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	Green	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
		Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
		Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Green	Blinking	The power of the PD connected to the port exceeds the power capacity of the port or the power threshold configured on the port. Alternatively, the PD does not comply with IEEE standards.

Power Supply Configuration

The S5731-H48P4XC is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1203](#) lists its power supply configurations.

Table 5-1203 Power supply configurations

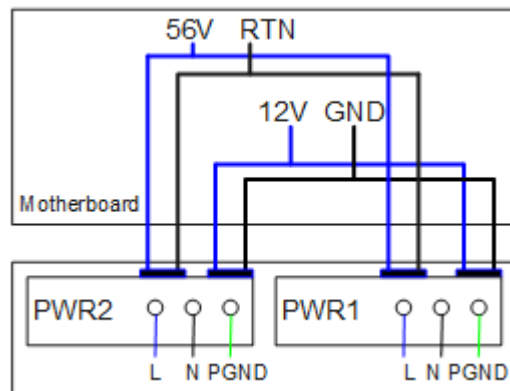
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	–	760 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 25
1000 W (110 V)	–	665 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 43 • 802.3at (30 W per port): 22
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 48
1000 W (110 V)	1000 W (110 V)	1330 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 48 • 802.3at (30 W per port): 44

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-486 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 56 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and 56 V voltage for the PDs.

Figure 5-486 Power supply by dual AC PoE power modules



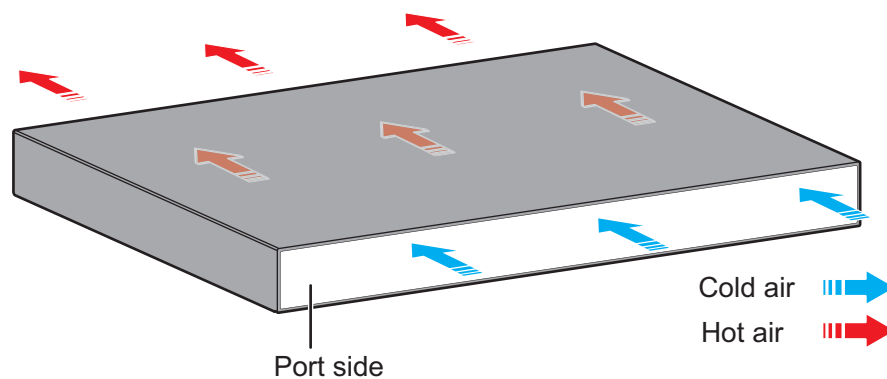
L: live wire N: neutral wire PGND: protection ground wire

GND: 12 V reference ground

RTN: 56 V reference ground

Heat Dissipation

The S5731-H48P4XC uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1204 lists technical specifications of the S5731-H48P4XC.

Table 5-1204 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	54.96 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	8.8 kg (19.40 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 132 W (without card)100% PoE loads: 1750 W (PoE: 1440 W, without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	108 W (without card)

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 62.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02352SVD

5.26 S5731S-H

5.26.1 S5731S-H24T4XC-A

Version Mapping

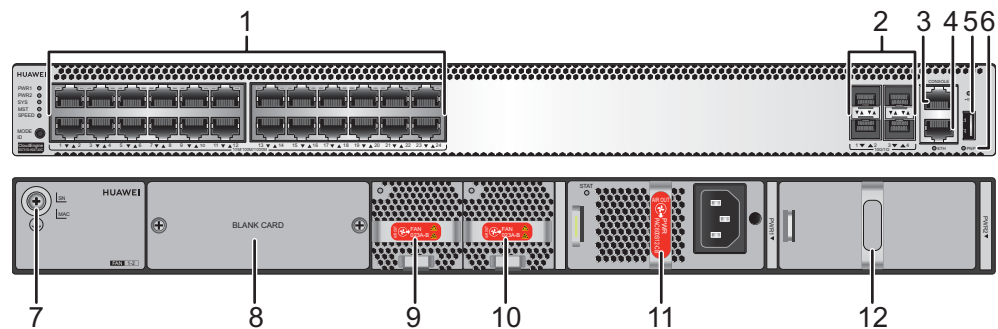
[Table 5-1205](#) lists the mapping between the S5731S-H24T4XC-A chassis and software versions.

Table 5-1205 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H24T4XC-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-487 S5731S-H24T4XC-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw NOTE It is used with a ground cable .	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> • ES5D21X08T00 • ES5D21Q02Q00 • S7X08000 (applicable in V200R019C10 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
11	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	12	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1206](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1206 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1207](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1207 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1208](#).

Table 5-1208 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1209](#) describes the attributes of an ETH management port.

Table 5-1209 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

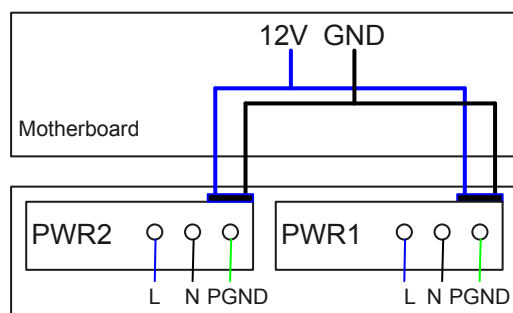
The S5731S-H24T4XC-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4XC-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-H24T4XC-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-488](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

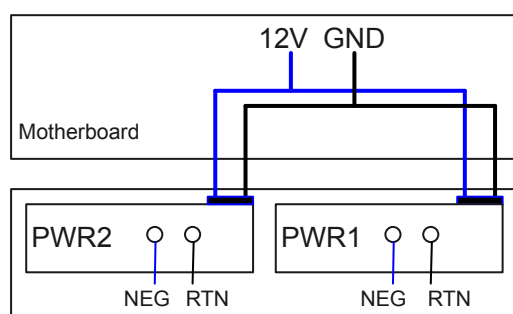
Figure 5-488 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-489 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

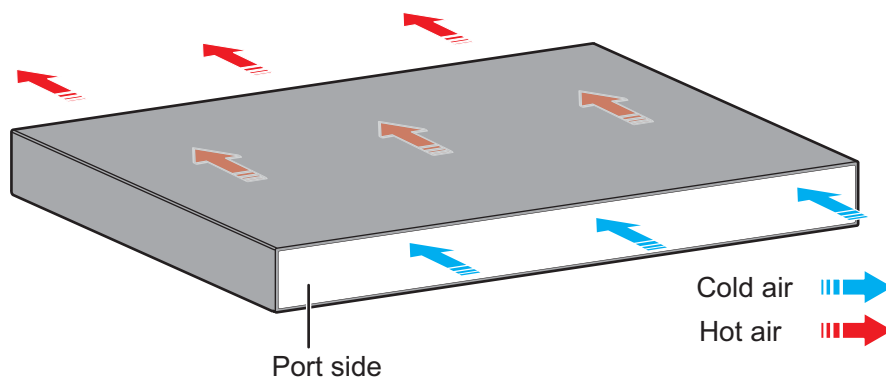
Figure 5-489 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5731S-H24T4XC-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1210 lists technical specifications of the S5731S-H24T4XC-A.

Table 5-1210 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported

Item	Description
Rated voltage range	<ul style="list-style-type: none"> ● AC input: 100 V AC to 240 V AC, 50/60 Hz ● High-Voltage DC input: 240 V DC ● DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> ● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz ● High-Voltage DC input: 190 V DC to 290 V DC ● DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W (without card)
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W (without card)
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> ● EMC certification ● Safety certification ● Manufacturing certification
Part number	02352YRG

5.26.2 S5731S-H48T4XC-A

Version Mapping

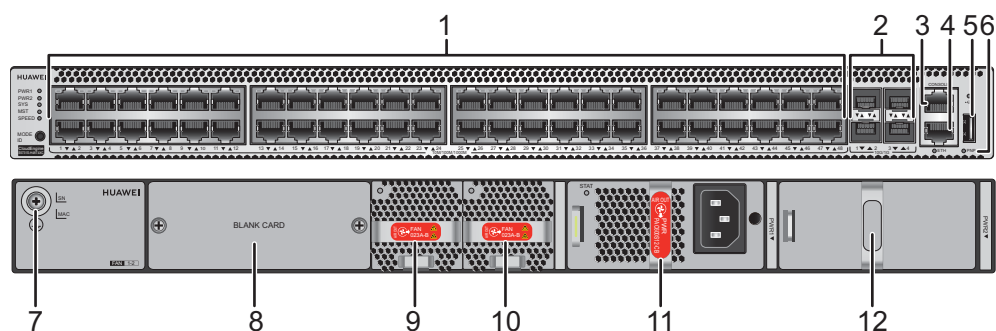
Table 5-1211 lists the mapping between the S5731S-H48T4XC-A chassis and software versions.

Table 5-1211 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H48T4XC-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-490 S5731S-H48T4XC-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Rear card slot NOTE Applicable card: <ul style="list-style-type: none"> • E55D21X08T00 • E55D21Q02Q00 • S7X08000 (applicable in V200R019C10 and later versions)
9	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module

1	Power module slot 1	1	Power module slot 2
1	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	2	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1212](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1212 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1213](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1213 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1214](#).

Table 5-1214 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1215](#) describes the attributes of an ETH management port.

Table 5-1215 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

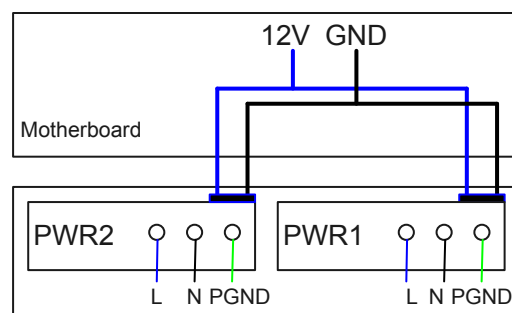
The S5731S-H48T4XC-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4XC-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-H48T4XC-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-491 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

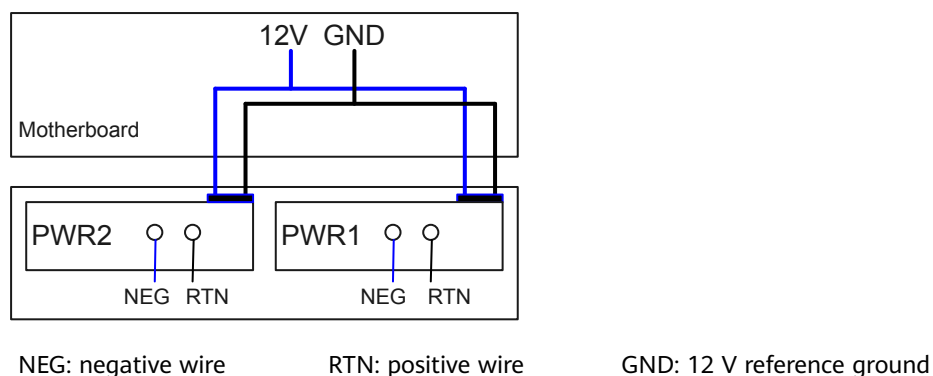
Figure 5-491 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

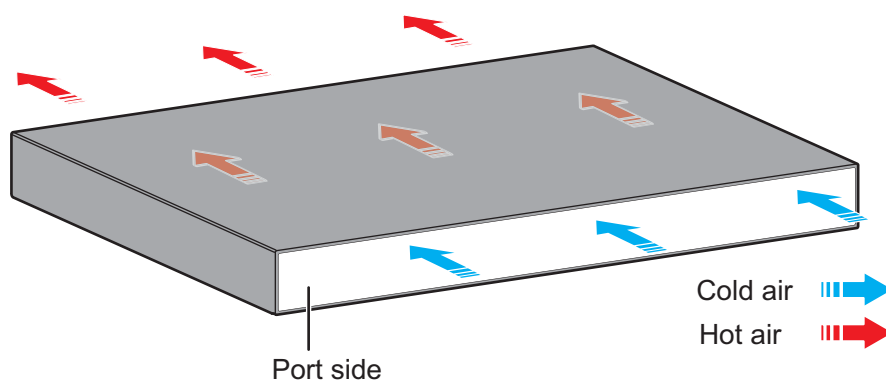
Figure 5-492 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-492 Power supply connections of dual DC power modules



Heat Dissipation

The S5731S-H48T4XC-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1216 lists technical specifications of the S5731S-H48T4XC-A.

Table 5-1216 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel, or ports on the rear card
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W (without card)

Item	Description
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W (without card)
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02352YRF

5.26.3 S5731S-H24T4S-A

Version Mapping

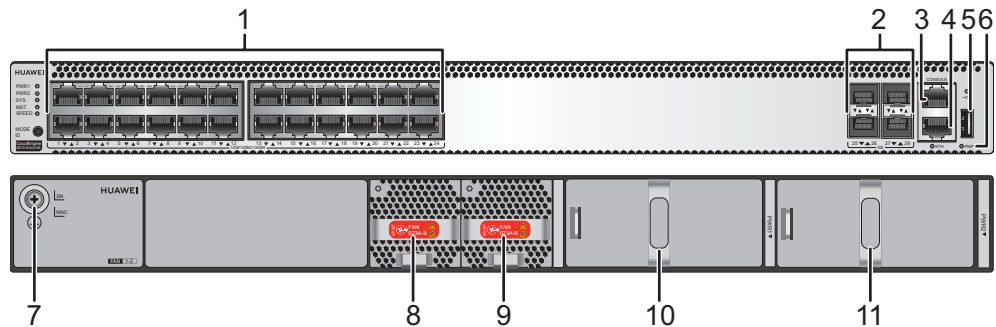
Table 5-1217 lists the mapping between the S5731S-H24T4S-A chassis and software versions.

Table 5-1217 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H24T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-493 S5731S-H24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only applicable to stack ports, OSXD22N00 not supported) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 3 m and 10 m SFP+ AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1218](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1218 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1219](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1219 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1220](#).

Table 5-1220 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1221](#) describes the attributes of an ETH management port.

Table 5-1221 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

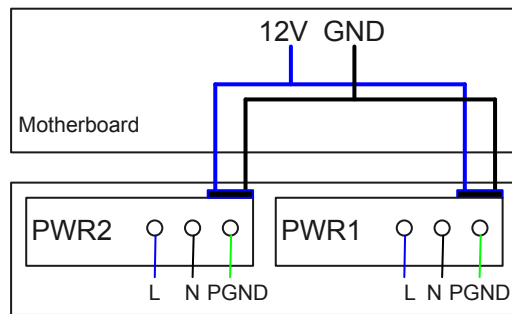
The S5731S-H24T4S-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-H24T4S-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-494 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

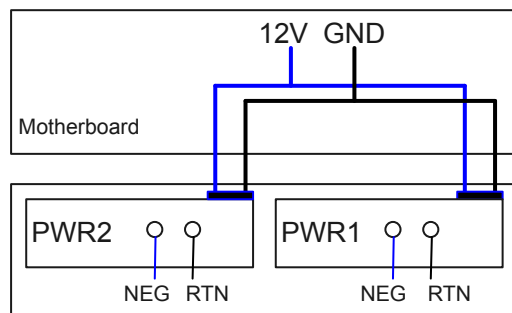
Figure 5-494 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-495 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

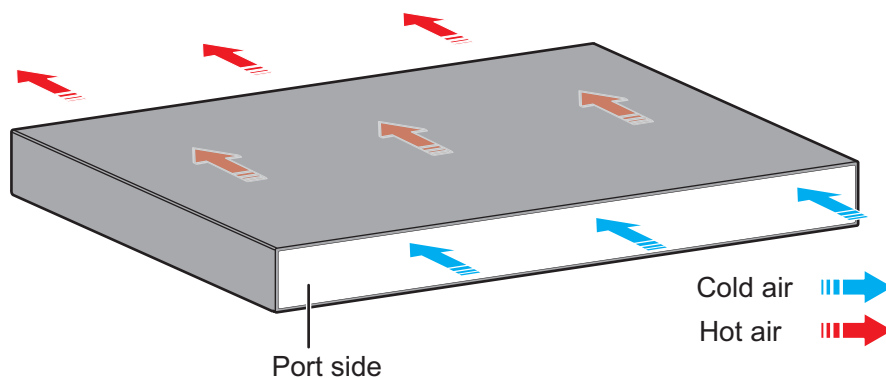
Figure 5-495 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5731S-H24T4S-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1222](#) lists technical specifications of the S5731S-H24T4S-A.

Table 5-1222 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	1000BASE-X ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC

Item	Description
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	91 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	70 W
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353DJE

5.26.4 S5731S-H48T4S-A

Version Mapping

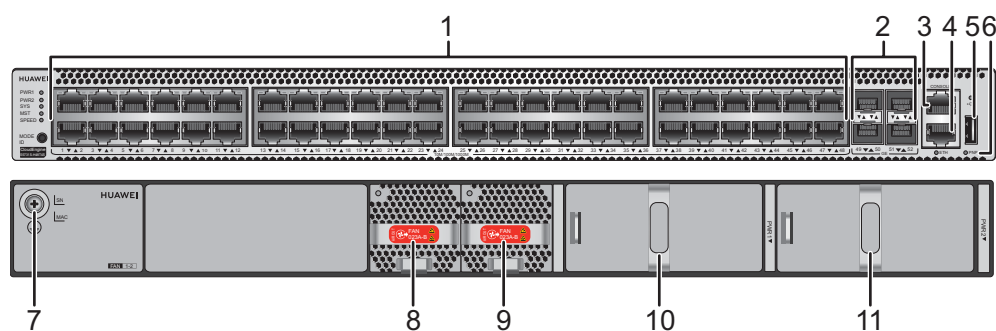
Table 5-1223 lists the mapping between the S5731S-H48T4S-A chassis and software versions.

Table 5-1223 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H48T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-496 S5731S-H48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only applicable to stack ports, OSXD22N00 not supported) • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables (only applicable to stack ports) • 3 m and 10 m SFP+ AOC cables (only applicable to stack ports) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1224](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1224 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1225](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1225 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1226](#).

Table 5-1226 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1227](#) describes the attributes of an ETH management port.

Table 5-1227 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

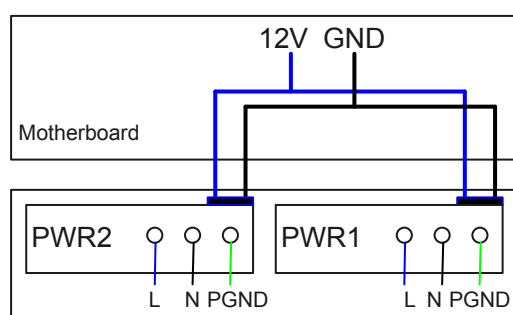
The S5731S-H48T4S-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-H48T4S-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-497 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

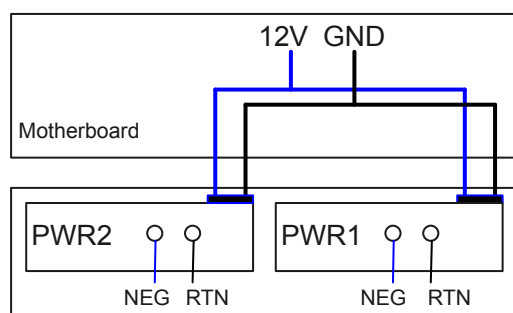
Figure 5-497 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-498 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

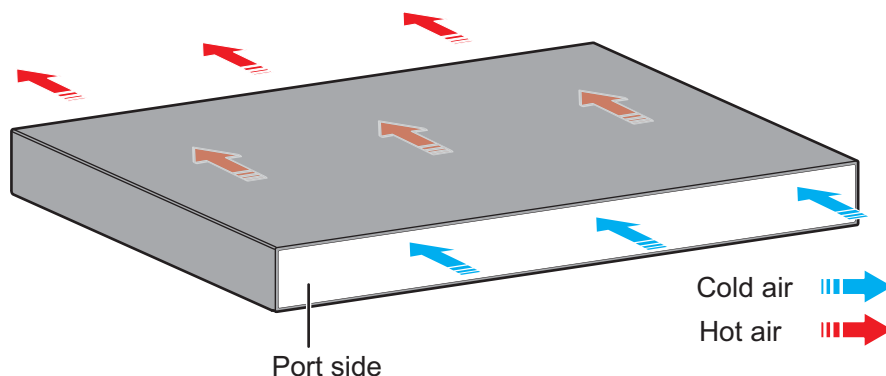
Figure 5-498 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5731S-H48T4S-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1228](#) lists technical specifications of the S5731S-H48T4S-A.

Table 5-1228 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	1000BASE-X ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	113 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	85 W
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02353DJG

5.26.5 S5731S-H24T4X-A

Version Mapping

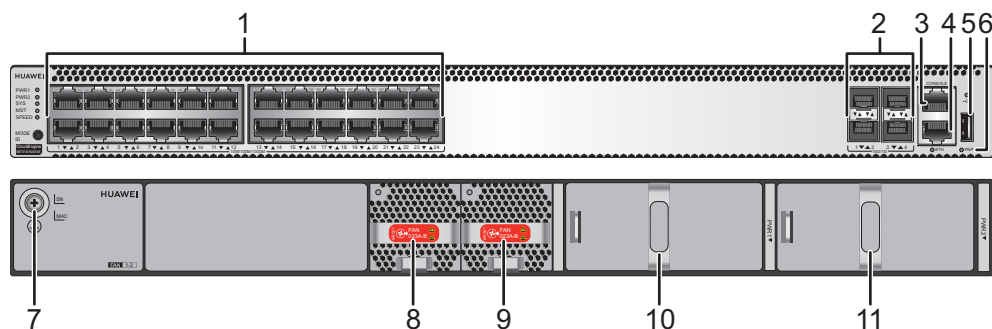
[Table 5-1229](#) lists the mapping between the S5731S-H24T4X-A chassis and software versions.

Table 5-1229 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H24T4X-A	V200R019C10 and later versions

Appearance and Structure

Figure 5-499 S5731S-H24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)

1	Power module slot 2	-	-
1	NOTE Applicable power module: <ul style="list-style-type: none">• 6.13 600 W AC Power Module (PAC600S12-CB)• 6.20 1000 W DC Power Module (PDC1000S12-DB)• 6.4 150 W AC Power Module (PAC150S12-R)		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1230](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1230 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1231](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1231 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1232](#).

Table 5-1232 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1233](#) describes the attributes of an ETH management port.

Table 5-1233 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

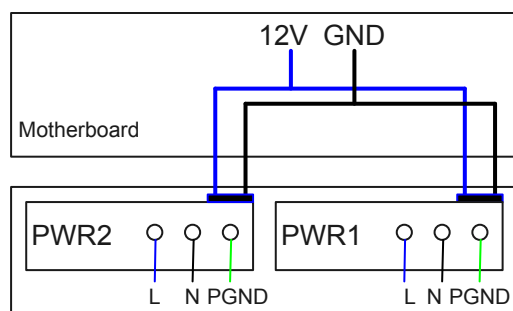
The S5731S-H24T4X-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-H24T4X-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

[Figure 5-500](#) shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

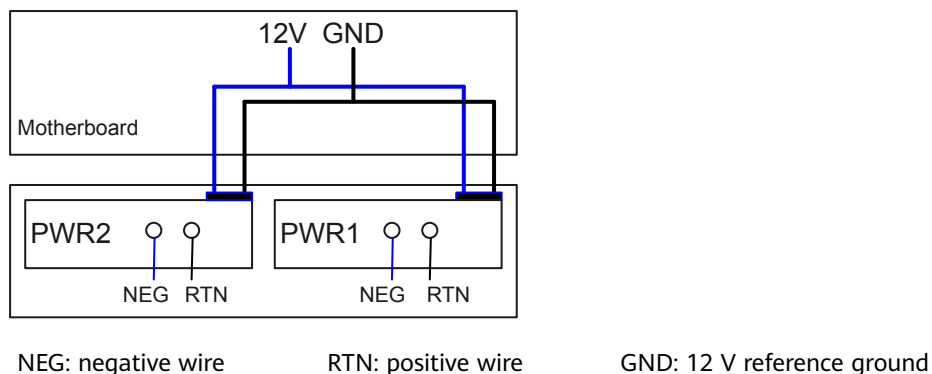
Figure 5-500 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

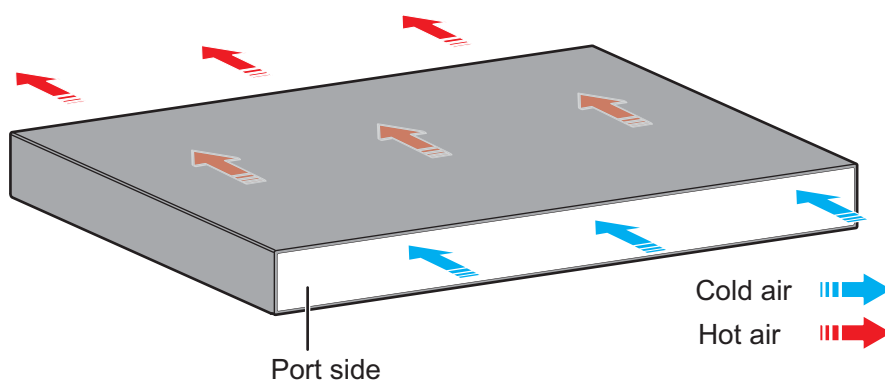
[Figure 5-501](#) shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

Figure 5-501 Power supply connections of dual DC power modules



Heat Dissipation

The S5731S-H24T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1234 lists technical specifications of the S5731S-H24T4X-A.

Table 5-1234 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.73 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.35 kg (20.61 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	114 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	88 W

Item	Description
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353HVV

5.26.6 S5731S-H48T4X-A

Version Mapping

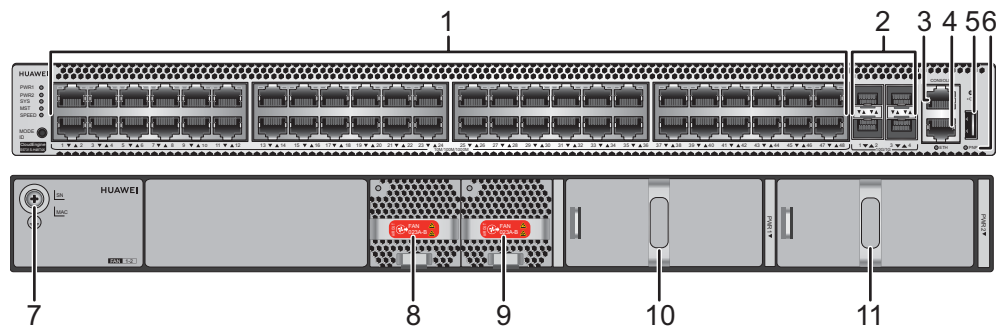
[Table 5-1235](#) lists the mapping between the S5731S-H48T4X-A chassis and software versions.

Table 5-1235 Version mapping

Series	Model	Software Version
S5731S-H	S5731S-H48T4X-A	V200R019C10 and later versions

Appearance and Structure

Figure 5-502 S5731S-H48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Fan module slot 1 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module
9	Fan module slot 2 NOTE Applicable fan module: 8.5 FAN-023A-B Fan Module	10	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R)
11	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) • 6.4 150 W AC Power Module (PAC150S12-R) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1236](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1236 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1237](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1237 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1238](#).

Table 5-1238 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1239](#) describes the attributes of an ETH management port.

Table 5-1239 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

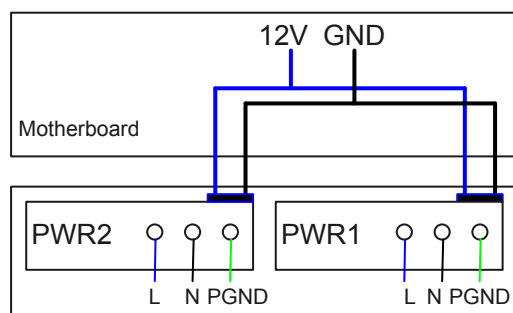
The S5731S-H48T4X-A has similar indicators to those on the S5731-H48P4XC except that the S5731S-H48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5731S-H48T4X-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-503 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

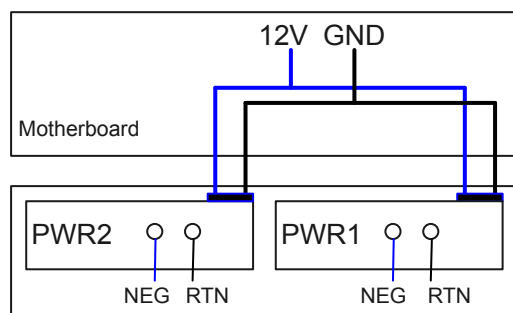
Figure 5-503 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-504 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

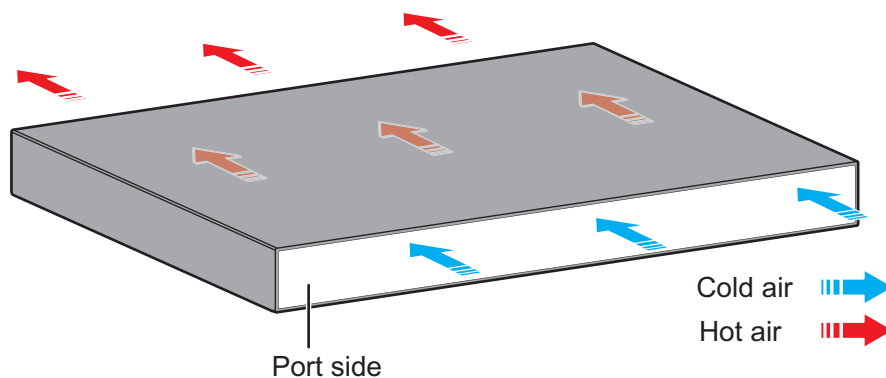
Figure 5-504 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5731S-H48T4X-A uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1240 lists technical specifications of the S5731S-H48T4X-A.

Table 5-1240 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	1 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.31 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 448.0 mm (1.72 in. x 17.4 in. x 17.7 in.)
Weight (with packaging)	9.5 kg (20.94 lb)
Stack ports	10GE SFP+ ports on the front panel
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC

Item	Description
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	124 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	101 W
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353HVJ

5.27 S5732-H

5.27.1 S5732-H24S6Q

Version Mapping

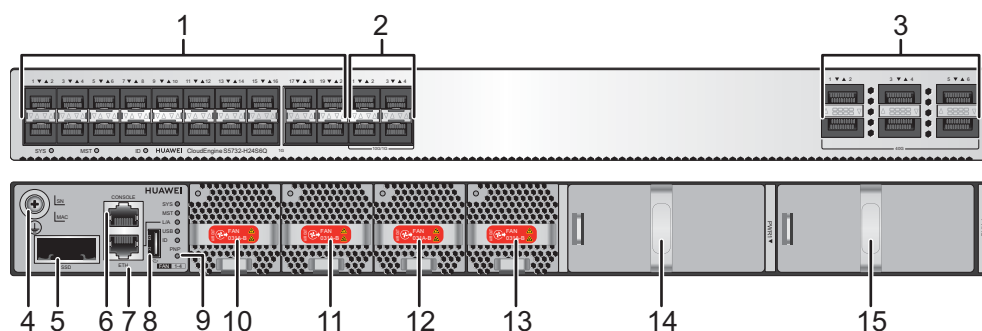
Table 5-1241 lists the mapping between the S5732-H24S6Q chassis and software versions.

Table 5-1241 Version mapping

Series	Model	Software Version
S5732-H	S5732-H24S6Q	V200R019C00 and later versions

Appearance and Structure

Figure 5-505 S5732-H24S6Q appearance



1	<p>Twenty 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables
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3	<p>Six 40GE QSFP+ optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module • 1 m, 3 m, and 5 m QSFP+ to QSFP+ high-speed copper cables • 10 m QSFP+ to QSFP+ AOC cable <p>NOTE A QSFP+ optical port cannot be split into four 10GE ports.</p>	4	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
5	<p>SSD card slot</p> <p>NOTE This slot is reserved for future use.</p>	6	<p>One console port</p>
7	<p>One ETH management port</p>	8	<p>One USB port</p>
9	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	10	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>
11	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>	12	<p>Fan module slot 3</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>
13	<p>Fan module slot 4</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>	14	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB)

1	Power module slot 2	-	-
5	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) 		

Port Description

1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1242](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1242 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1243](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1243 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s. [Table 5-1244](#) describes the attributes of a QSFP+ optical port.

Table 5-1244 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1245](#).

Table 5-1245 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1246](#) describes the attributes of an ETH management port.

Table 5-1246 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-506 Indicators on the S5732-H24S6Q

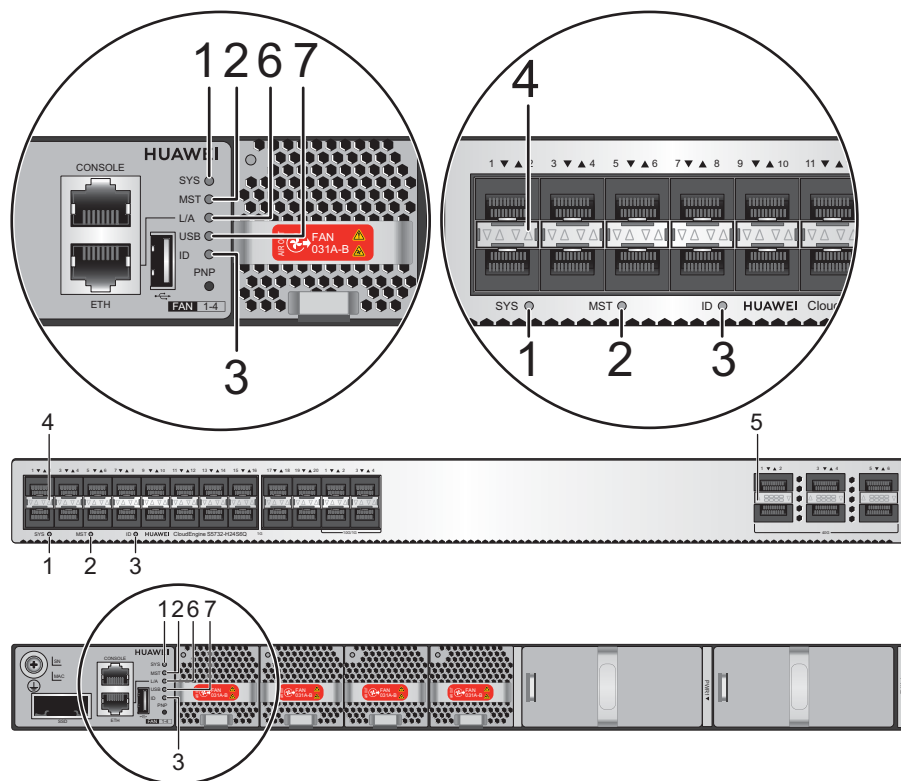


Table 5-1247 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
2	MST	Stack indicator	-	Off	The switch is not the master switch in a stack.
			Green	Steady on	The switch is the master switch in a stack or a standalone switch.
3	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
4	-	Service port indicator (GE/10GE optical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
			-	Off	The port is not sending or receiving data.
			Yellow	Blinking	The port is sending or receiving data.
5	-	Service port indicator (40GE optical port)	-	Off	The port is not connected or has been shut down.
			Green	Steady on	A link has been established on the port.
				Blinking	The port is sending or receiving data.
6	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The Eth port is sending or receiving data.

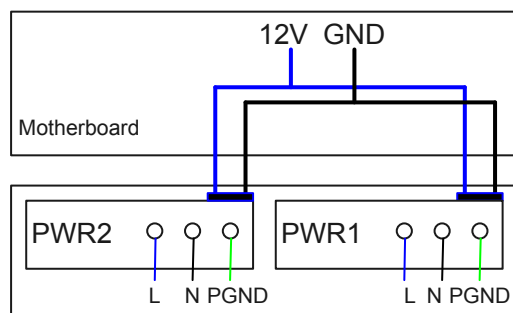
No.	Indicator	Name	Color	Status	Description
7	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none">No USB flash drive is connected to the switch.The USB port is damaged.The indicator is damaged.The USB flash drive does not have any configuration file and cannot be used for deployment.The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Power Supply Configuration

The S5732-H24S6Q can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-507 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

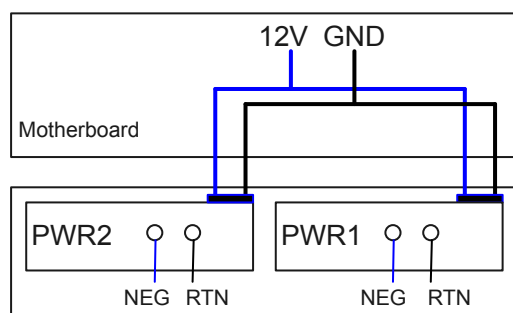
Figure 5-507 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-508 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

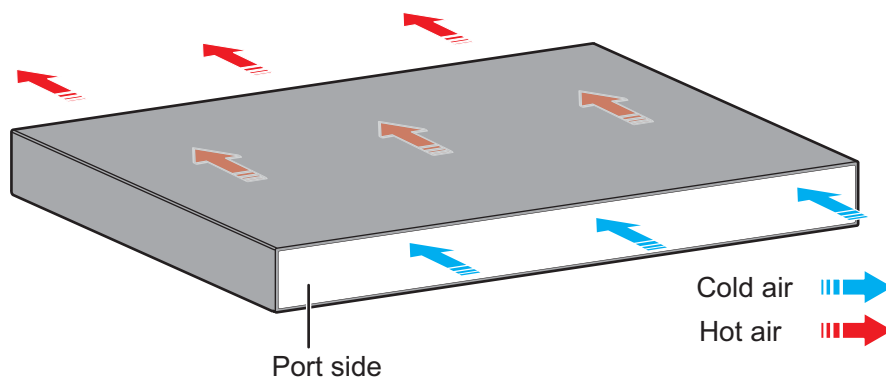
Figure 5-508 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5732-H24S6Q uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel. Fan modules support 3+1 backup.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1248 lists technical specifications of the S5732-H24S6Q.

Table 5-1248 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	62.27 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (with packaging)	8.9 kg (19.62 lb)
Stack ports	Any 40GE QSFP+ ports
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC

Item	Description
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	229 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	126 W
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 65 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	02353AJS

5.27.2 S5732-H48S6Q

Version Mapping

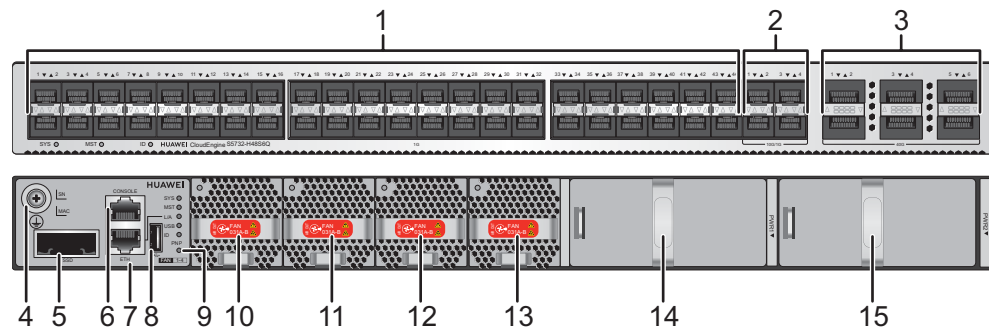
Table 5-1249 lists the mapping between the S5732-H48S6Q chassis and software versions.

Table 5-1249 Version mapping

Series	Model	Software Version
S5732-H	S5732-H48S6Q	V200R019C00 and later versions

Appearance and Structure

Figure 5-509 S5732-H48S6Q appearance



1	<p>Forty-four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables
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3	<p>Six 40GE QSFP+ optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module • 1 m, 3 m, and 5 m QSFP+ to QSFP+ high-speed copper cables • 10 m QSFP+ to QSFP+ AOC cable <p>NOTE A QSFP+ optical port cannot be split into four 10GE ports.</p>	4	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>
5	<p>SSD card slot</p> <p>NOTE This slot is reserved for future use.</p>	6	<p>One console port</p>
7	<p>One ETH management port</p>	8	<p>One USB port</p>
9	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	10	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>
11	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>	12	<p>Fan module slot 3</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>
13	<p>Fan module slot 4</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>	14	<p>Power module slot 1</p> <p>NOTE Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB)

1	Power module slot 2	-	-
5	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 6.13 600 W AC Power Module (PAC600S12-CB) • 6.20 1000 W DC Power Module (PDC1000S12-DB) 		

Port Description

1000BASE-X Ethernet Optical Port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1250](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1250 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1251](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1251 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s. [Table 5-1252](#) describes the attributes of a QSFP+ optical port.

Table 5-1252 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1253](#).

Table 5-1253 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1254](#) describes the attributes of an ETH management port.

Table 5-1254 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

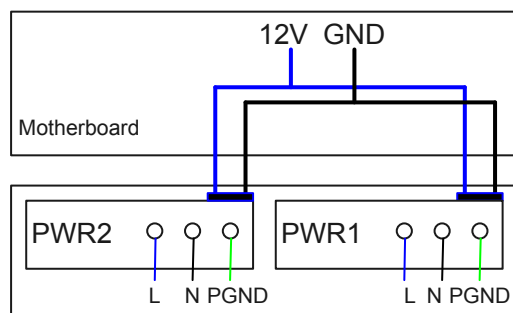
The S5732-H48S6Q has the same types of indicators as the S5732-H24S6Q. For details, see [Indicator Description](#).

Power Supply Configuration

The S5732-H48S6Q can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Figure 5-510 shows the power supply connections of dual AC power modules. After AC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

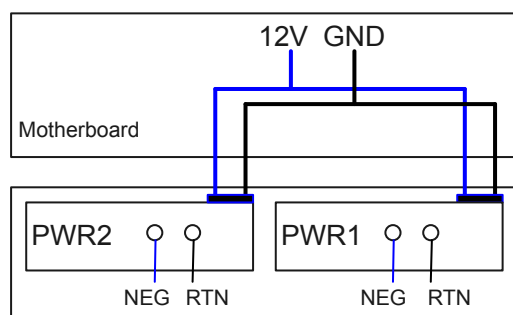
Figure 5-510 Power supply connections of dual AC power modules



L: Live wire N: Neutral wire PGND: Protection ground wire GND: 12 V reference ground

Figure 5-511 shows the power supply connections of dual DC power modules. After DC power is transmitted to the PWR module, the PWR module provides 12 V output voltage, and the motherboard provides power for the entire device.

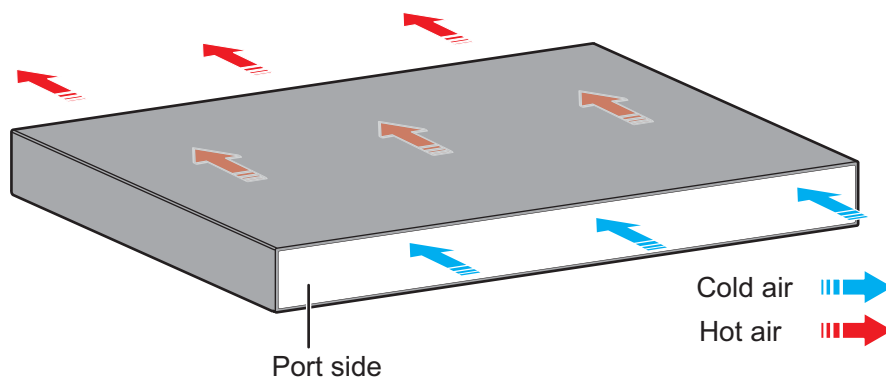
Figure 5-511 Power supply connections of dual DC power modules



NEG: negative wire RTN: positive wire GND: 12 V reference ground

Heat Dissipation

The S5732-H48S6Q uses pluggable fan modules for forced air cooling. Air flows in from the front side and exhausts from the rear panel. Fan modules support 3+1 backup.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1255 lists technical specifications of the S5732-H48S6Q.

Table 5-1255 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	56.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	N/A
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (with packaging)	9.2 kg (20.28 lb)
Stack ports	Any 40GE QSFP+ ports
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC

Item	Description
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC• DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	255 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	142 W
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 65 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	02353AJU

5.27.3 S5732-H24UM2CC

Version Mapping

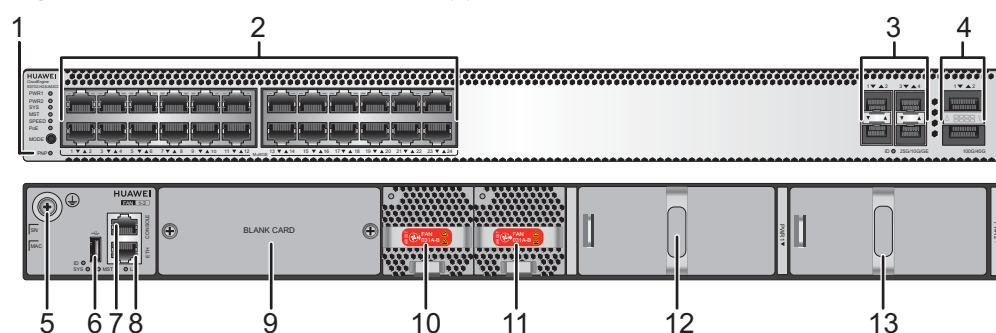
Table 5-1256 lists the mapping between the S5732-H24UM2CC chassis and software versions.

Table 5-1256 Version mapping

Series	Model	Software Version
S5732-H	S5732-H24UM2CC	V200R019C10SPC500 and later versions

Appearance and Structure

Figure 5-512 S5732-H24UM2CC appearance



1	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	2	<p>Twenty-four 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p>
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3	<p>Four 1GE/10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 25GE SFP28 Optical Module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 1 m, 3 m, and 5 m SFP28 high-speed copper cables • 3 m, 5 m, 7 m, and 10 m SFP28 AOC cables 	4	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module • QSFP28 optical module • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables • 10 m QSFP+ AOC cable • 1 m, 3 m, and 5 m QSFP28 high-speed copper cables • 10 m QSFP28 AOC cable <p>NOTE</p> <p>You can run the set device port-config-mode enable command to change the working mode of SFP28 and QSFP28 optical ports. By default, the working mode of SFP28 and QSFP28 optical ports is "4 x 25GE + 2 x 40GE".</p> <p>If any QSFP28 optical port is configured to work at 100 Gbit/s or split into four 25GE ports, the four SFP28 optical ports become unavailable.</p>
5	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	6	<p>One USB port</p>
7	<p>One console port</p>	8	<p>One ETH management port</p>
9	<p>Rear card slot</p> <p>NOTE Applicable card:</p> <ul style="list-style-type: none"> • S7X08000 • S7Y08000 	10	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>
11	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>	12	<p>Power module slot 1</p> <p>NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)</p>

1 3	Power module slot 2	-	-
	NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)		

Port Description

100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an [Ethernet cable](#). If the 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. [Table 5-1257](#) describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

Table 5-1257 Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

There are several S5732-H24UM2CC bundles, which consist of different power supplies and ports, as listed in [Table 5-1258](#).

Table 5-1258 S5732-H24UM2CC bundles

Part Number	Description	Remarks
02353HUC	S5732-H24UM2CC Premium(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.

Part Number	Description	Remarks
02353SJY	S5732-H24UM2CC Base(24*100M/1G Ethernet ports, Optional RTU upgrade to 2.5/5/10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	<p>By default, no power supply is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.</p>
02353SJY-001	S5732-H24UM2CC 2.5&10G Bundle(12*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE + 2*40GE or 2*100GE, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, the first 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, and 2.5 Gbit/s. You can purchase an RTU license to increase the port rate to 5 Gbit/s or 10 Gbit/s.</p> <p>By default, the last 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "12*2.5GE +12*10GE" supported by the multi-GE ports.</p>
02353SJY-004	S5732-H24UM2CC 10G Bundle(24*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "24*10GE" supported by the multi-GE ports.</p>

NOTE

A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

A switch with part number 02353SJY-001 is as an example. The switch has a label on its real panel, which shows the default rate of multi-GE ports on the switch.

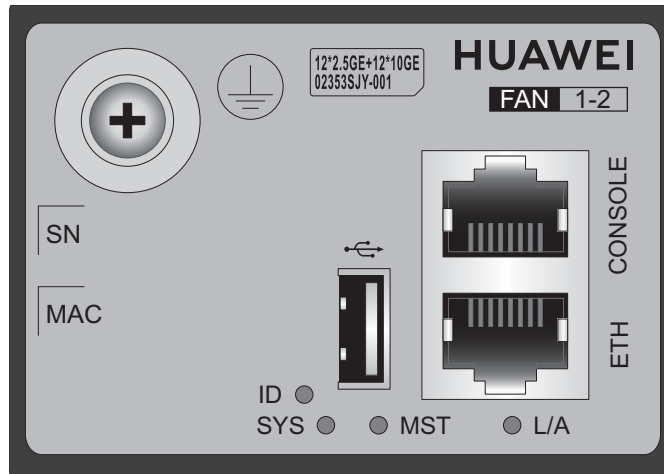


Table 5-1259 lists the maximum transmission distances of different cables on multi-GE ports.

Table 5-1259 Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> 55 m 100 m (6-a-1 bundle only for the first 30 m) Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

 **NOTE**

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Some cables pose high risks and are not recommended for the following reasons:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss.
- According the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

1GE/10GE/25GE SFP28 optical port

A 1GE/10GE/25GE SFP28 optical port sends and receives service data at 1 Gbit/s, 10 Gbit/s, or 25 Gbit/s. [Table 5-1260](#) describes the attributes of a 1GE/10GE/25GE SFP28 optical port.

Table 5-1260 Attributes of a 1GE/10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none">• When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s.• When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s.• Before installing a GE optical module or copper module on a port, run the port mode ge command to configure the port to work at 1 Gbit/s.

40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. [Table 5-1261](#) describes the attributes of a QSFP28 optical port.

Table 5-1261 Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1262](#).

Table 5-1262 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1263](#) describes the attributes of an ETH management port.

Table 5-1263 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-513 Indicators on the S5732-H24UM2CC

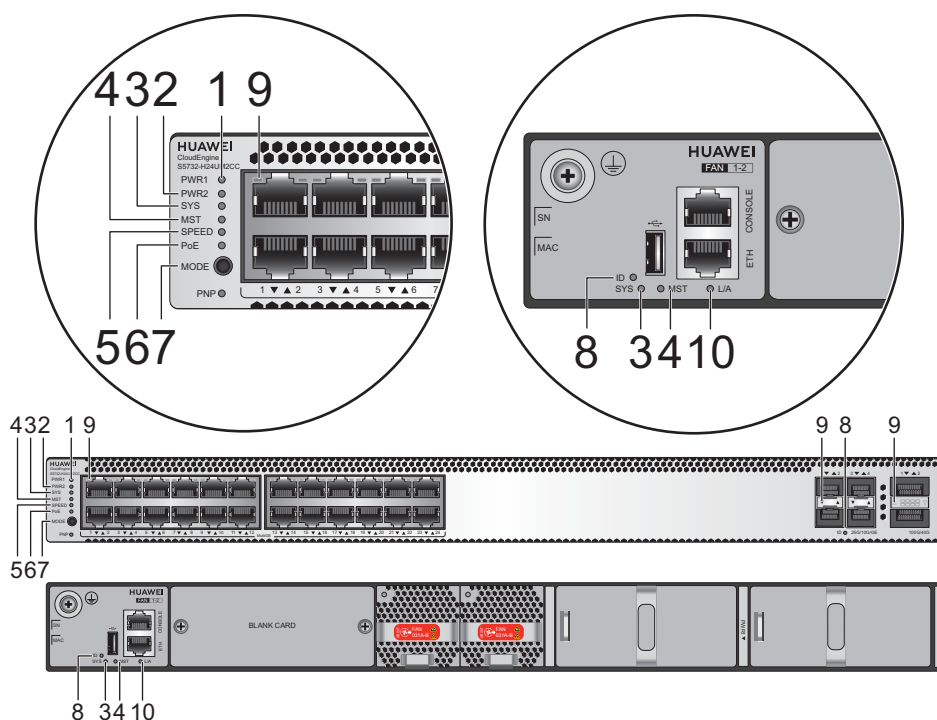


Table 5-1264 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR 1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> • A power module is available in this slot but it is not connected to a power source. • The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1265 .		
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

Table 5-1265 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	<ul style="list-style-type: none"> 100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 100 Mbit/s or 1000 Mbit/s. 1GE/10GE/25GE SFP28 port: The port is operating at 1 Gbit/s or 10 Gbit/s. 40GE/100GE QSFP28 port: The port is operating at 40 Gbit/s.

Display Mode	Color	Status	Description
	Green	Blinking	<ul style="list-style-type: none">100M/1000M/2.5GE/5GE/10GE BASE-T port: The port is operating at 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.1GE/10GE/25GE SFP28 port: The port is operating at 25 Gbit/s.40GE/100GE QSFP28 port: The port is operating at 100 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.The total power consumption of PDs has reached the maximum power of the switch.The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply Configuration

The S5732-H24UM2CC is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1266](#) lists its power supply configurations.

Table 5-1266 Power supply configurations

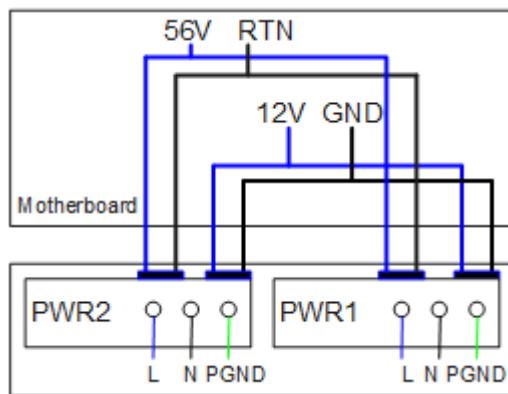
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	–	675 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 22 • 802.3bt (60 W per port): 11
1000 W (110 V)	–	580 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 19 • 802.3bt (60 W per port): 9
1000 W (220 V)	1000 W (220 V)	1440 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 24
1000 W (110 V)	1000 W (110 V)	1435 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24 • 802.3bt (60 W per port): 23

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-514 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 56 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and 56 V voltage for the PDs.

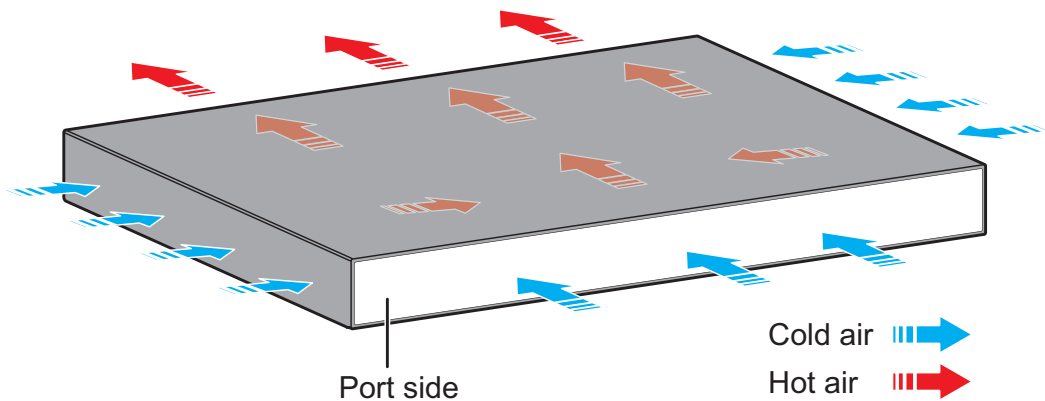
Figure 5-514 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: 56 V reference ground

Heat Dissipation

The S5732-H24UM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1267 lists technical specifications of the S5732-H24UM2CC.

Table 5-1267 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	38.05 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (including package)	8 kg (17.64 lb)
Stack ports	Any Ethernet electrical port (10GE) or optical port (10GE/25GE/40GE/100GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 285 W (without card) 100% PoE loads: 1933 W (PoE: 1440 W, without card)

Item	Description
Typical power consumption (30% of traffic load, tested according to ATIS standard)	161 W (without card)
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	<ul style="list-style-type: none">• 02353HUC• 02353SJY• 02353SJY-001• 02353SJY-004

5.27.4 S5732-H48UM2CC

Version Mapping

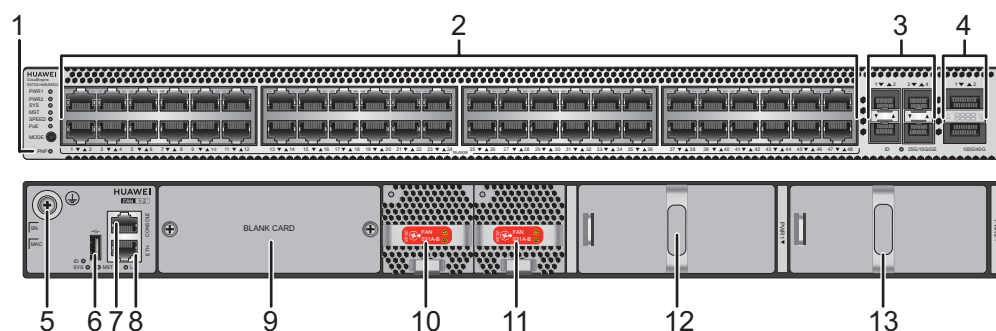
Table 5-1268 lists the mapping between the S5732-H48UM2CC chassis and software versions.

Table 5-1268 Version mapping

Series	Model	Software Version
S5732-H	S5732-H48UM2CC	V200R019C10SPC500 and later versions

Appearance and Structure

Figure 5-515 S5732-H48UM2CC appearance



1	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	2	<p>Forty-eight 100M/1000M/2.5GE/5GE/10GE BASE-T PoE++ ports (multi-GE ports)</p>
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3	<p>Four 1GE/10GE/25GE SFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 25GE SFP28 Optical Module • 1 m, 3 m, 5 m, and 10 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 1 m, 3 m, and 5 m SFP28 high-speed copper cables • 3 m, 5 m, 7 m, and 10 m SFP28 AOC cables 	4	<p>Two 40GE/100GE QSFP28 optical ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • QSFP+ optical module • QSFP28 optical module • 1 m, 3 m, and 5 m QSFP+ high-speed copper cables • 10 m QSFP+ AOC cable • 1 m, 3 m, and 5 m QSFP28 high-speed copper cables • 10 m QSFP28 AOC cable <p>NOTE</p> <p>You can run the set device port-config-mode enable command to change the working mode of SFP28 and QSFP28 optical ports. By default, the working mode of SFP28 and QSFP28 optical ports is "4 x 25GE + 2 x 40GE".</p> <p>If any QSFP28 optical port is configured to work at 100 Gbit/s or split into four 25GE ports, the four SFP28 optical ports become unavailable.</p>
5	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	6	<p>One USB port</p>
7	<p>One console port</p>	8	<p>One ETH management port</p>
9	<p>Rear card slot</p> <p>NOTE Applicable card:</p> <ul style="list-style-type: none"> • S7X08000 • S7Y08000 	10	<p>Fan module slot 1</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>
11	<p>Fan module slot 2</p> <p>NOTE Applicable fan module: 8.6 FAN-031A-B Fan Module</p>	12	<p>Power module slot 1</p> <p>NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)</p>

1	Power module slot 2	-	-
3	NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)		

Port Description

100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port)

A 100M/1000M/2.5GE/5GE/10GE BASE-T port (multi-GE port) sends and receives service data at 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s, and must use an [Ethernet cable](#). If the 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s speed is required, the port must use an Ethernet cable of Cat5e or higher category. [Table 5-1269](#) describes the attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port.

Table 5-1269 Attributes of a 100M/1000M/2.5GE/5GE/10GE BASE-T port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3u, IEEE802.3ab, IEEE802.3bz, IEEE802.3an
Working Mode	100/1000/2500/5000/10000 Mbit/s auto-sensing

There are several S5732-H48UM2CC bundles, which consists of different power supplies and ports, as listed in [Table 5-1270](#).

Table 5-1270 S5732-H48UM2CC bundles

Part Number	Description	Remarks
02353HUB	S5732-H48UM2CC Premium(48*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE ports or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	By default, no power supply is configured. By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.

Part Number	Description	Remarks
02353SJT	S5732-H48UM2CC Base(48*100M/1G Ethernet ports,Optional RTU upgrade to 2.5/5/10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, without power module)	<p>By default, no power supply is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s and 1000 Mbit/s. You can purchase an RTU license to increase the port rate to 2.5 Gbit/s, 5 Gbit/s, or 10 Gbit/s.</p>
02353SJT-001	S5732-H48UM2CC 2.5&10G Bundle(36*100M/1G/2.5G, 12*100M/1G/2.5G/5G/10G Ethernet ports, Optional RTU upgrade to 5/10G, 4*25GE + 2*40GE or 2*100GE, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, the first 36 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, and 2.5 Gbit/s. You can purchase an RTU license to increase the port rate to 5 Gbit/s or 10 Gbit/s.</p> <p>By default, the last 12 multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "36*2.5GE +12*10GE" supported by the multi-GE ports.</p>
02353SJT-003	S5732-H48UM2CC 5G Bundle(48*100M/1G/2.5G/5G Ethernet ports, Optional RTU upgrade to 10G, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, and 5 Gbit/s. You can purchase an RTU license to increase the port rate to 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "48*5GE" supported by the multi-GE ports.</p>

Part Number	Description	Remarks
02353SJT-004	S5732-H48UM2CC 10G Bundle(48*100M/1G/2.5G/5G/10G Ethernet ports, 4*25GE SFP28 + 2*40GE or 2*100GE QSFP28 ports, 1*expansion slot, PoE++, 1*1000W AC power)	<p>By default, one 1000 W AC power module is configured.</p> <p>By default, multi-GE ports support 100 Mbit/s, 1000 Mbit/s, 2.5 Gbit/s, 5 Gbit/s, and 10 Gbit/s.</p> <p>There is a label on the rear side of the device, which contains the default rate "48*10GE" supported by the multi-GE ports.</p>

NOTE

A pre-configured or loaded RTU (right to use) license of a device is bound to the device ESN and cannot be unbound or transferred to other devices.

For details about the RTU licenses supported by the device and how to load them, see the *License Usage Guide*.

A switch with part number 02353SJT-003 is as an example. The switch has a label on its real panel, which shows the default rate of multi-GE ports on the switch.

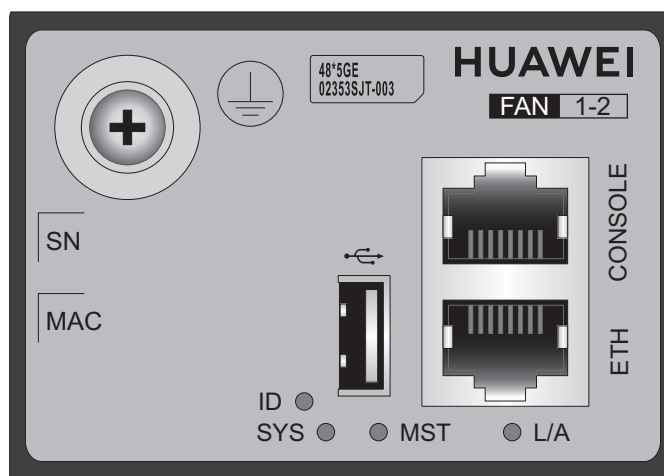


Table 5-1271 lists the maximum transmission distances of different cables on multi-GE ports.

Table 5-1271 Maximum transmission distances of different cables on multi-GE ports

Cable Type (6-a-1 Bundle)	Multi-GE Port (Different Rates)			
	100M/1000M	2.5GE	5GE	10GE
Category 5e unshielded twisted pair (Cat5e UTP)	100 m	100 m	<ul style="list-style-type: none"> • 55 m • 100 m (6-a-1 bundle only for the first 30 m) Not recommended due to high risk	Not supported
Category 5e shielded twisted pair (Cat5e STP)	100 m	100 m	100 m	Not supported
Category 6 unshielded twisted pair (Cat6 UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6 shielded twisted pair (Cat6 STP)	100 m	100 m	100 m	Not supported
Category 6A unshielded twisted pair (Cat6A U/UTP)	100 m	100 m	100 m Not recommended due to high risk	Not supported
Category 6A foiled/unshielded twisted pair (Cat6A F/UTP)	100 m	100 m	100 m	100 m
Category 6A shielded twisted pair (Cat6A STP)	100 m	100 m	100 m	100 m
Category 7 twisted pair (Cat7)	100 m	100 m	100 m	100 m

NOTE

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Some cables pose high risks and are not recommended for the following reasons:

- 802.3bz requires that the ALSNR value for alien crosstalk between Ethernet cables be greater than 0, but the standards for Cat5e and Cat6 unshielded twisted pairs do not specify the required ALSNR value. Therefore, such cables may not meet the crosstalk requirement in 802.3bz, causing severe problems such as continuous packet loss.
- According to the cabling specification TIA TSB-5021, using Cat5e and Cat6 cables for 5G poses high risks.
- Currently, no clear onsite testing or evaluation method is available for checking whether ALSNR of cables conforms to 802.3bz.

If Cat5e and Cat6 unshielded twisted pairs do not meet the 5G requirement, you are advised to replace them with shielded twisted pairs or reduce the rate of ports to 2.5G.

1GE/10GE/25GE SFP28 optical port

A 1GE/10GE/25GE SFP28 optical port sends and receives service data at 1 Gbit/s, 10 Gbit/s, or 25 Gbit/s. [Table 5-1260](#) describes the attributes of a 1GE/10GE/25GE SFP28 optical port.

Table 5-1272 Attributes of a 1GE/10GE/25GE SFP28 optical port

Attribute	Description
Connector Type	LC/PC
Optical port attributes	Depending on the optical module or cable in use
Standards compliance	IEEE802.3z, IEEE802.3ae, and IEEE802.3by
Working mode	<ul style="list-style-type: none">• When a 25GE optical module or cable is connected to a port, the port can automatically adjust its rate to 25 Gbit/s.• When a 10GE optical module or cable is connected to a port, the port can automatically adjust its rate to 10 Gbit/s.• Before installing a GE optical module or copper module on a port, run the port mode ge command to configure the port to work at 1 Gbit/s.

40GE/100GE QSFP28 optical port

A 40GE/100GE QSFP28 optical port sends and receives service traffic at 40 Gbit/s or 100 Gbit/s. [Table 5-1273](#) describes the attributes of a QSFP28 optical port.

Table 5-1273 Attributes of a QSFP28 optical port

Attribute	Description
Connector type	MPO/LC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ba

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1274](#).

Table 5-1274 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1275](#) describes the attributes of an ETH management port.

Table 5-1275 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the device for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5732-H48UM2CC has the same types of indicators as the S5732-H24UM2CC. For details, see [Indicator Description](#).

Power Supply Configuration

The S5732-H48UM2CC is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1276](#) lists its power supply configurations.

Table 5-1276 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	621 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 40802.3at (30 W per port): 20802.3bt (60 W per port): 10

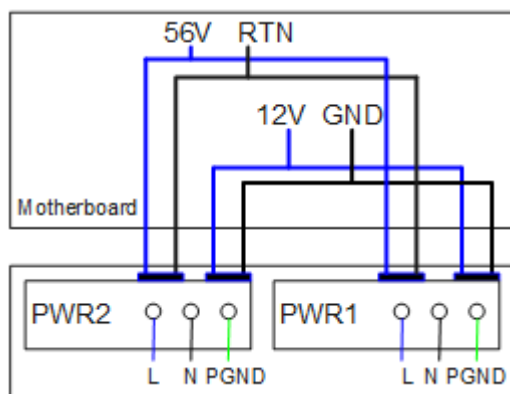
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	–	526 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 34• 802.3at (30 W per port): 17• 802.3bt (60 W per port): 8
1000 W (220 V)	1000 W (220 V)	1571 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 48• 802.3bt (60 W per port): 26
1000 W (110 V)	1000 W (110 V)	1381 W	<ul style="list-style-type: none">• 802.3af (15.4 W per port): 48• 802.3at (30 W per port): 46• 802.3bt (60 W per port): 23

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Figure 5-516 shows the power supply mode of dual AC PoE power modules (PWR1 and PWR2). After AC power is transmitted to the PWR modules, the PWR modules provide 56 V outputs. The outputs are combined on the motherboard, which then provides 12 V voltage for the switch and 56 V voltage for the PDs.

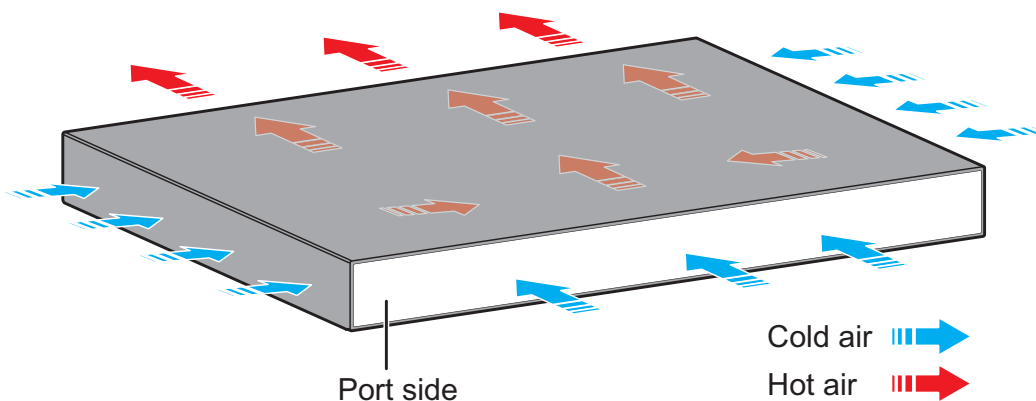
Figure 5-516 Power supply by dual AC PoE power modules



L: live wire N: neutral wire PGND: protection ground wire
GND: 12 V reference ground RTN: 56 V reference ground

Heat Dissipation

The S5732-H48UM2CC uses pluggable fan modules for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1277](#) lists technical specifications of the S5732-H48UM2CC.

Table 5-1277 Technical specifications

Item	Description
Memory (RAM)	4 GB
Flash	2 GB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	32.38 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 6 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 446.0 mm (1.72 in. x 17.4 in. x 17.6 in.)
Weight (including package)	8.4 kg (18.52 lb)
Stack ports	Any Ethernet electrical port (10GE) or optical port (10GE/25GE/40GE/100GE)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">• AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 347 W (without card)• 100% PoE loads: 2043 W (PoE: 1571 W, without card)

Item	Description
Typical power consumption (30% of traffic load, tested according to ATIS standard)	215 W (without card)
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.2 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	<ul style="list-style-type: none">• 02353HUB• 02353SJT• 02353SJT-001• 02353SJT-003• 02353SJT-004

5.28 S5735-L

5.28.1 S5735-L12T4S-A

Version Mapping

Table 5-1278 lists the mapping between the S5735-L12T4S-A chassis and software versions.

Table 5-1278 Version mapping

Series	Model	Software Version
S5735-L	S5735-L12T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-517 S5735-L12T4S-A appearance



1	Twelve 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1279](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1279 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1280](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1280 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1281](#).

Table 5-1281 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1282](#) describes the attributes of an ETH management port.

Table 5-1282 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735-L12T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L12T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L12T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L12T4S-A has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-1283](#) lists technical specifications of the S5735-L12T4S-A.

Table 5-1283 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	98.6 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	3.83 kg (8.44 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	29 W
Typical power consumption (30% of traffic load)	23 W <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010918

5.28.2 S5735-L12P4S-A

Version Mapping

[Table 5-1284](#) lists the mapping between the S5735-L12P4S-A chassis and software versions.

Table 5-1284 Version mapping

Series	Model	Software Version
S5735-L	S5735-L12P4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-518 S5735-L12P4S-A appearance



1	Twelve PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1285](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1285 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1286](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1286 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-1287](#).

Table 5-1287 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1288](#) describes the attributes of an ETH management port.

Table 5-1288 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-519 Indicators on the S5735-L12P4S-A

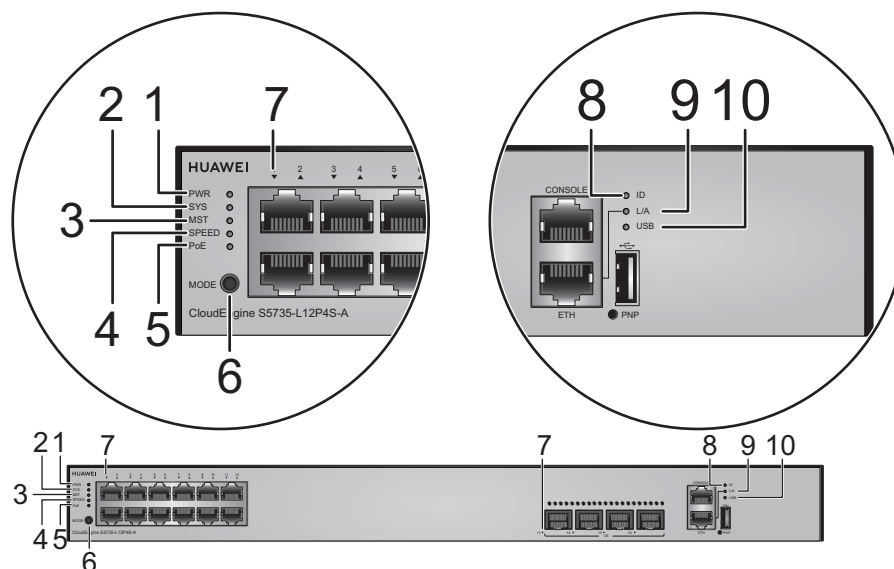


Table 5-1289 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.

No.	Indicator	Name	Color	Status	Description
			Yellow	Steady on	The built-in PoE power module has failed.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch.If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.

No.	Indicator	Name	Color	Status	Description
			Green	Blinking	<ul style="list-style-type: none">If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled.If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
5	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
6	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
7	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1290 .		
8	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
9	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
10	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1290 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).

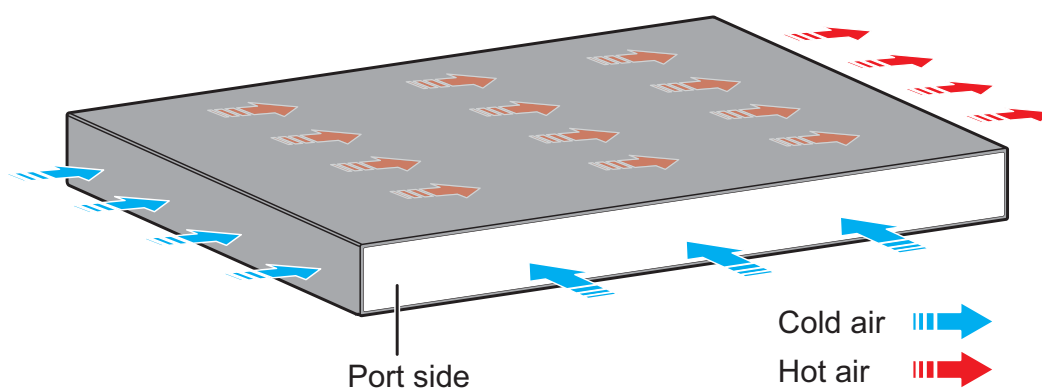
Display Mode	Color	Status	Description
	Green and yellow	Blinking green and yellow alternately	The port fails to supply power to a PD due to one of the following reasons: <ul style="list-style-type: none">• The power required by the connected PD exceeds the maximum power or the configured power threshold of the port.• The total power consumption of PDs has reached the maximum power of the switch.• The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply Configuration

The S5735-L12P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 360 W PoE power, which ensures full PoE power on 12 ports in compliance with 802.3af or 802.3at.

Heat Dissipation

The S5735-L12P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1291](#) lists technical specifications of the S5735-L12P4S-A.

Table 5-1291 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.52 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.24 kg (9.35 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 49 W100% PoE loads: 441 W (PoE: 360 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	38 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010922

5.28.3 S5735-L24T4S-A

Version Mapping

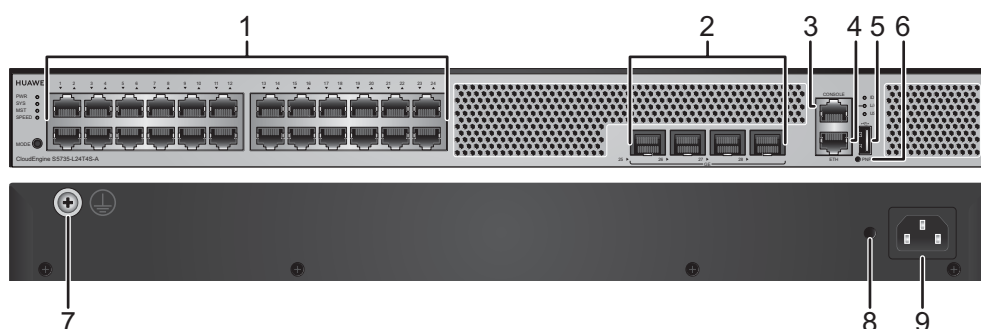
Table 5-1292 lists the mapping between the S5735-L24T4S-A chassis and software versions.

Table 5-1292 Version mapping

Series	Model	Software Version
S5735-L	S5735-L24T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-520 S5735-L24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1293](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1293 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1294](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1294 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1295](#).

Table 5-1295 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1296](#) describes the attributes of an ETH management port.

Table 5-1296 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735-L24T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L24T4S-A has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-1297](#) lists technical specifications of the S5735-L24T4S-A.

Table 5-1297 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	111.94 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	28 W

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010914

5.28.4 S5735-L24P4S-A

Version Mapping

[Table 5-1298](#) lists the mapping between the S5735-L24P4S-A chassis and software versions.

Table 5-1298 Version mapping

Series	Model	Software Version
S5735-L	S5735-L24P4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-521 S5735-L24P4S-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1299](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1299 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1300](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1300 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-1301](#).

Table 5-1301 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1302](#) describes the attributes of an ETH management port.

Table 5-1302 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

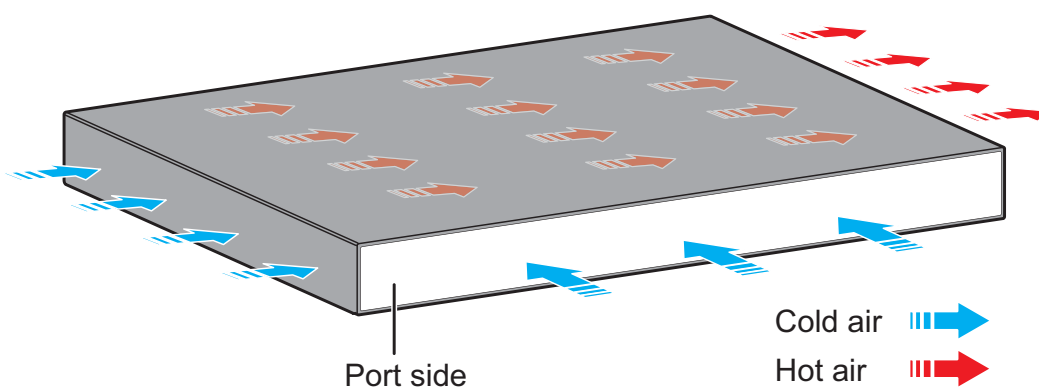
The S5735-L24P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735-L24P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1303](#) lists technical specifications of the S5735-L24P4S-A.

Table 5-1303 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	92.2 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 53 W• 100% PoE loads: 451 W (PoE: 380 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	39 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010924

5.28.5 S5735-L24T4X-A

Version Mapping

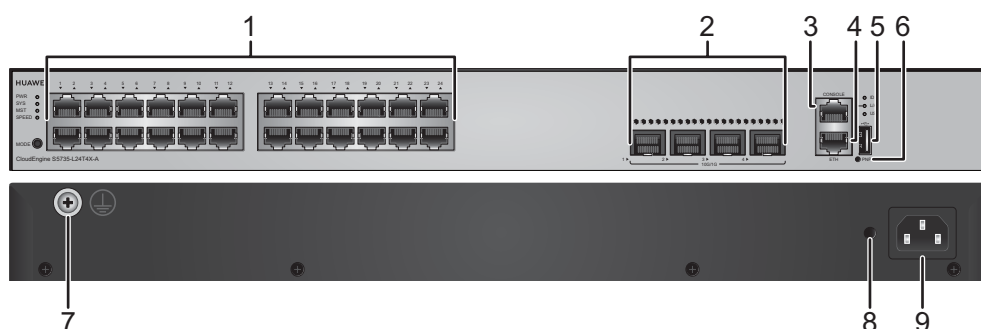
Table 5-1304 lists the mapping between the S5735-L24T4X-A chassis and software versions.

Table 5-1304 Version mapping

Series	Model	Software Version
S5735-L	S5735-L24T4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-522 S5735-L24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1305](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1305 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1306](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1306 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1307](#).

Table 5-1307 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1308](#) describes the attributes of an ETH management port.

Table 5-1308 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

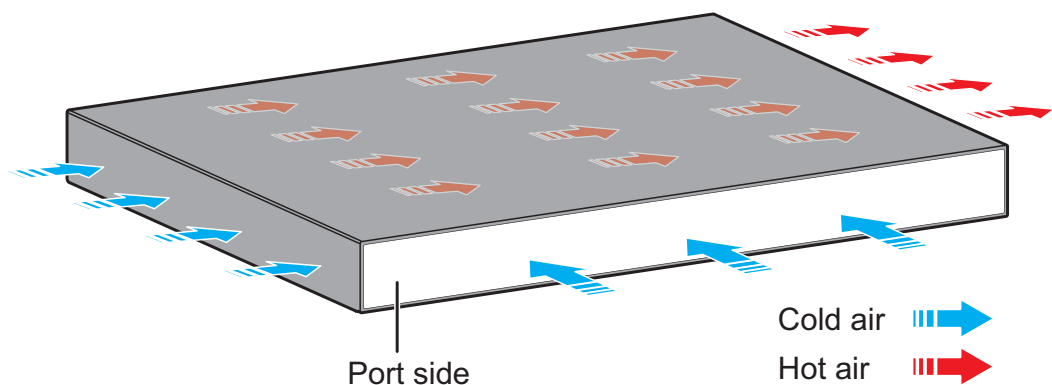
The S5735-L24T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24T4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L24T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1309](#) lists technical specifications of the S5735-L24T4X-A.

Table 5-1309 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.68 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4 kg (8.82 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	43 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	27 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.8 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010920

5.28.6 S5735-L24P4X-A

Version Mapping

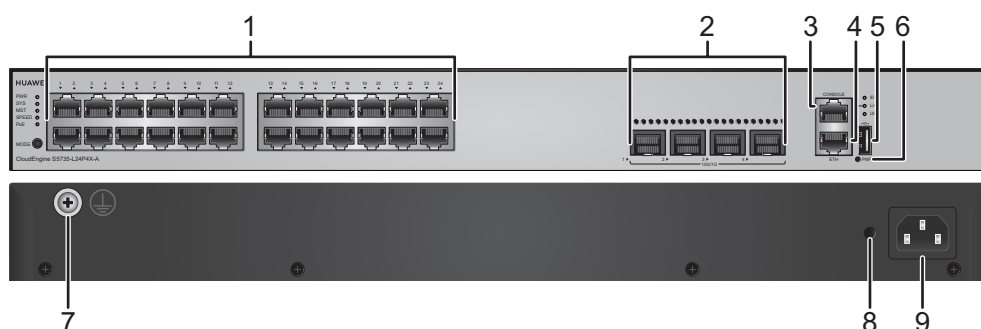
Table 5-1310 lists the mapping between the S5735-L24P4X-A chassis and software versions.

Table 5-1310 Version mapping

Series	Model	Software Version
S5735-L	S5735-L24P4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-523 S5735-L24P4X-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (100M/1000M auto-sensing)• 10GE SFP+ optical module (OSXD22N00 not supported)• 10GE-CWDM optical module• 10GE-DWDM optical module• 1 m and 3 m SFP+ high-speed copper cables• 3 m and 10 m SFP+ AOC cables• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1311](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1311 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1312](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1312 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1313](#).

Table 5-1313 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1314](#) describes the attributes of an ETH management port.

Table 5-1314 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

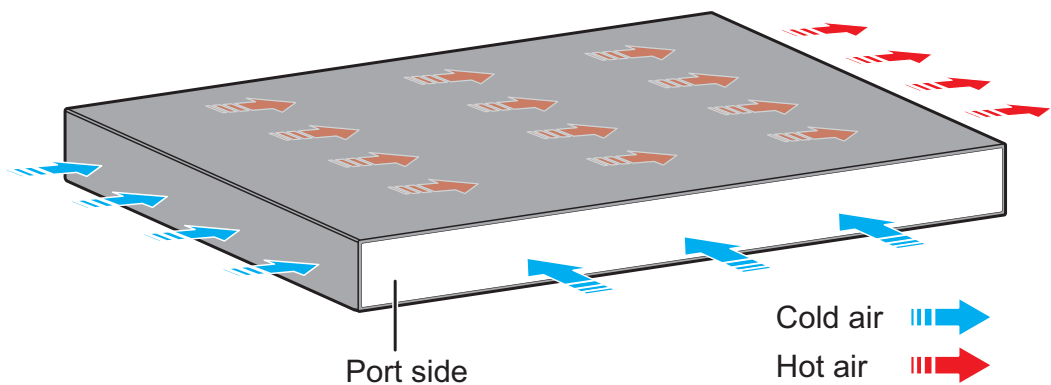
The S5735-L24P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L24P4X-A has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735-L24P4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1315](#) lists technical specifications of the S5735-L24P4X-A.

Table 5-1315 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	57.07 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 56 W 100% PoE loads: 458 W (PoE: 380 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	43 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010927

5.28.7 S5735-L32ST4X-A

Version Mapping

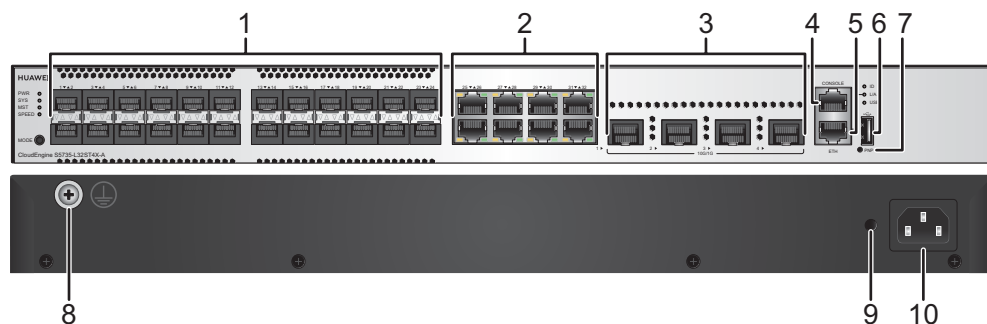
Table 5-1316 lists the mapping between the S5735-L32ST4X-A chassis and software versions.

Table 5-1316 Version mapping

Series	Model	Software Version
S5735-L	S5735-L32ST4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-524 S5735-L32ST4X-A appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • FE optical module • GE optical module (maximum transmission distance ≤ 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions) 	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	8	Ground screw NOTE It is used with a ground cable .

9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	1 0	AC socket NOTE It is used with an AC power cable .
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Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1317](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1317 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1318](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1318 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1319](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1319 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1320](#).

Table 5-1320 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1321](#) describes the attributes of an ETH management port.

Table 5-1321 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-525 Indicators on the S5735-L32ST4X-A

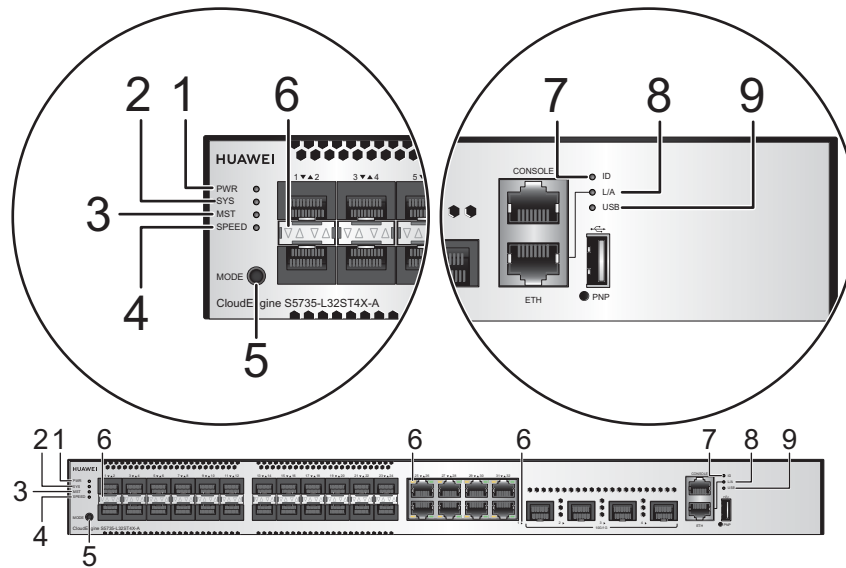


Table 5-1322 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR	Power module indicator	-	Off	The switch is powered off.
			Green	Steady on	The system power supply is normal.
2	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.

No.	Indicator	Name	Color	Status	Description
3	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
4	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.

No.	Indicator	Name	Color	Status	Description
5	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press the button a third time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED indicators are off.</p>
6	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1323 .		
7	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
8	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
9	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1323 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

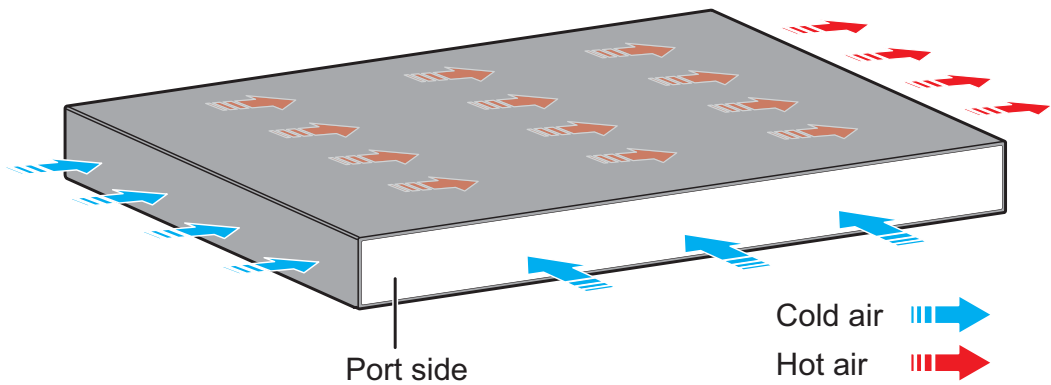
Display Mode	Color	Status	Description
	Green and yellow	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is steady on, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green and yellow	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none">• If the indicator of a port is blinking, the number of this port is the stack ID of the switch.• If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green and yellow	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green and yellow	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.

Power Supply Configuration

The S5735-L32ST4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1324 lists technical specifications of the S5735-L32ST4X-A.

Table 5-1324 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> • AC input: 100 V AC to 240 V AC, 50/60 Hz • High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> • AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz • High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	65 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	46 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010929

5.28.8 S5735-L48T4S-A

Version Mapping

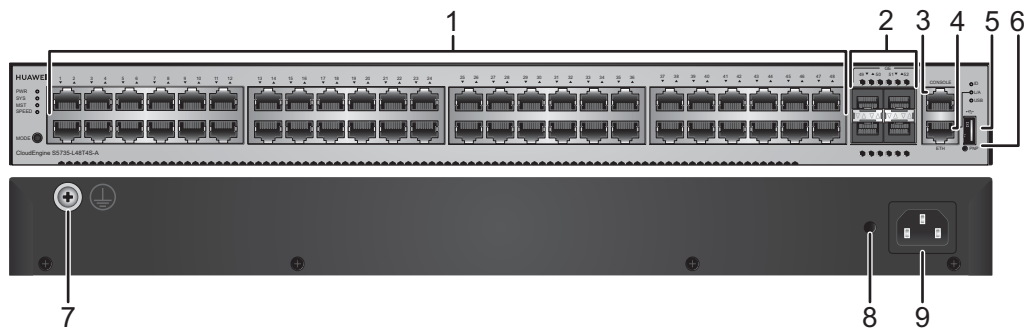
[Table 5-1325](#) lists the mapping between the S5735-L48T4S-A chassis and software versions.

Table 5-1325 Version mapping

Series	Model	Software Version
S5735-L	S5735-L48T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-526 S5735-L48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1326](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1326 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1327](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1327 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-1328](#).

Table 5-1328 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1329](#) describes the attributes of an ETH management port.

Table 5-1329 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

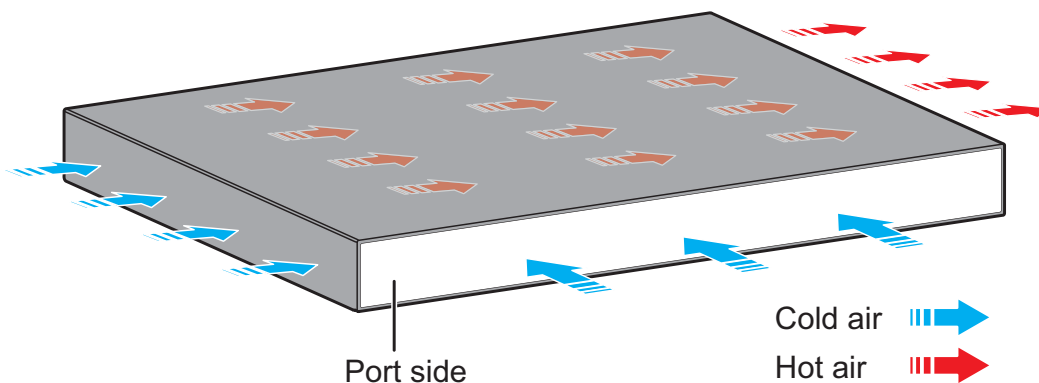
The S5735-L48T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L48T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L48T4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1330](#) lists technical specifications of the S5735-L48T4S-A.

Table 5-1330 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	53 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	37 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010933

5.28.9 S5735-L48T4X-A

Version Mapping

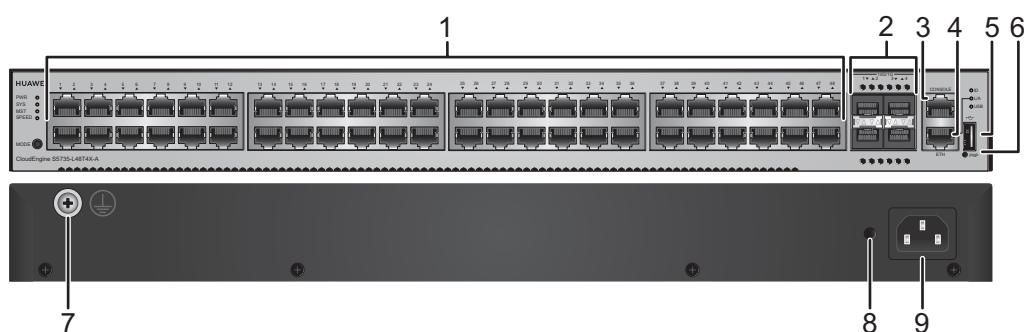
Table 5-1331 lists the mapping between the S5735-L48T4X-A chassis and software versions.

Table 5-1331 Version mapping

Series	Model	Software Version
S5735-L	S5735-L48T4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-527 S5735-L48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1332](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1332 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1333](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1333 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1334](#).

Table 5-1334 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1335](#) describes the attributes of an ETH management port.

Table 5-1335 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

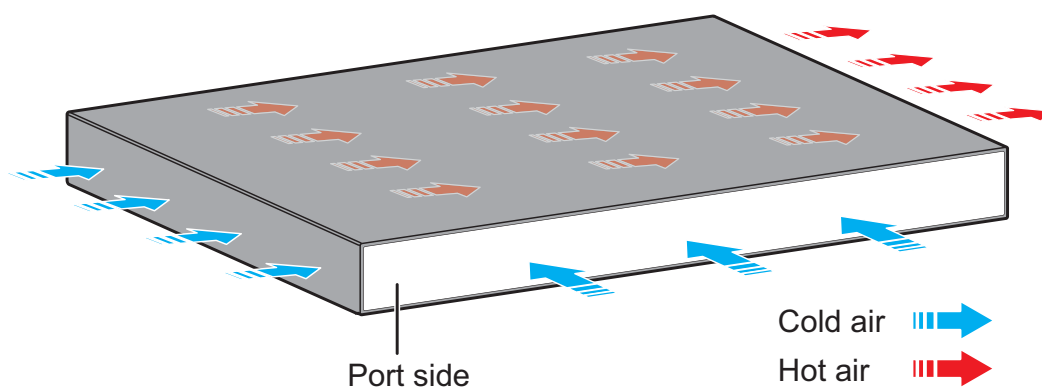
The S5735-L48T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735-L48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-L48T4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735-L48T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1336](#) lists technical specifications of the S5735-L48T4X-A.

Table 5-1336 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41.48 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	54 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	39 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F). The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when it uses 10GE SFP+ optical modules with 40 km or longer transmission distances.
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010936

5.28.10 S5735-L48P4X-A

Version Mapping

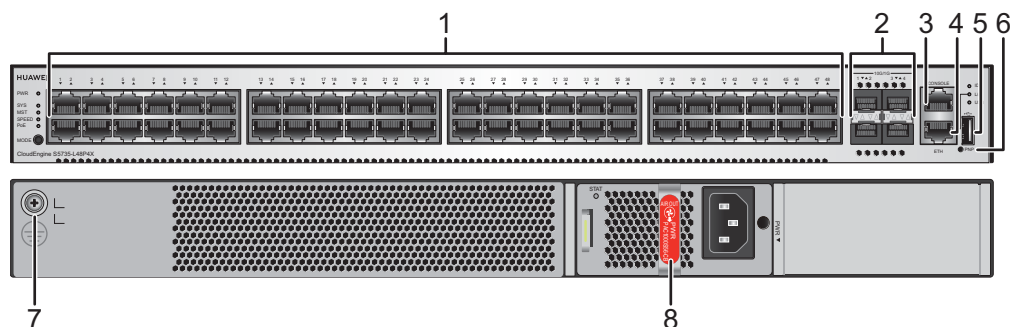
[Table 5-1337](#) lists the mapping between the S5735-L48P4X-A chassis and software versions.

Table 5-1337 Version mapping

Series	Model	Software Version
S5735-L	S5735-L48P4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-528 S5735-L48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Power module slot</p> <p>NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. [Table 5-1338](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1338 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1339](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1339 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1340](#).

Table 5-1340 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1341](#) describes the attributes of an ETH management port.

Table 5-1341 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735-L48P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

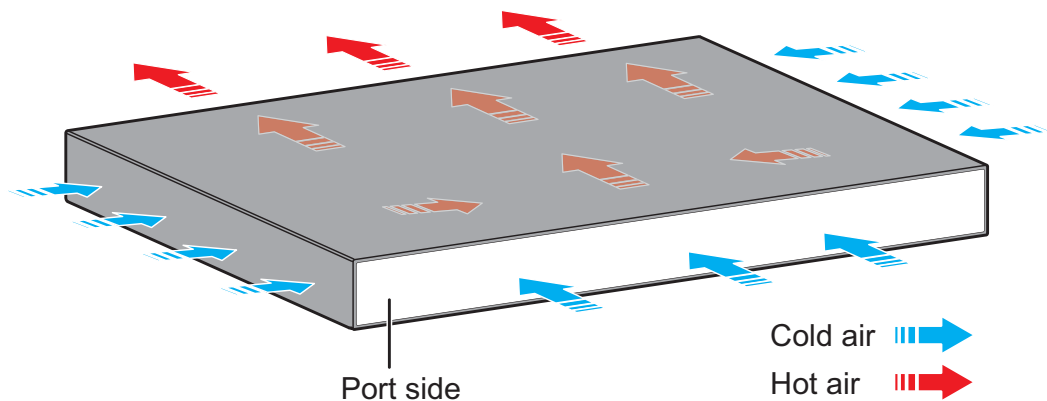
The S5735-L48P4X-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE power module installed. [Table 5-1342](#) lists its power supply configurations.

Table 5-1342 Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (110 V)	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25

Heat Dissipation

The S5735-L48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1343](#) lists technical specifications of the S5735-L48P4X-A.

Table 5-1343 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 80 W 100% PoE loads: 914 W (PoE: 874 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	59 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010944

5.29 S5735S-L

5.29.1 S5735S-L12T4S-A

Version Mapping

Table 5-1344 lists the mapping between the S5735S-L12T4S-A chassis and software versions.

Table 5-1344 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L12T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-529 S5735S-L12T4S-A appearance



1	Twelve 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1345](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1345 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1346](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1346 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1347](#).

Table 5-1347 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1348](#) describes the attributes of an ETH management port.

Table 5-1348 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L12T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L12T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L12T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L12T4S-A has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-1349](#) lists technical specifications of the S5735S-L12T4S-A.

Table 5-1349 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	98.6 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	3.83 kg (8.44 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	29 W
Typical power consumption (30% of traffic load)	23 W <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010919

5.29.2 S5735S-L12P4S-A

Version Mapping

Table 5-1350 lists the mapping between the S5735S-L12P4S-A chassis and software versions.

Table 5-1350 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L12P4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-530 S5735S-L12P4S-A appearance



1	Twelve PoE+ 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1351](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1351 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1352](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1352 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-1353](#).

Table 5-1353 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1354](#) describes the attributes of an ETH management port.

Table 5-1354 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

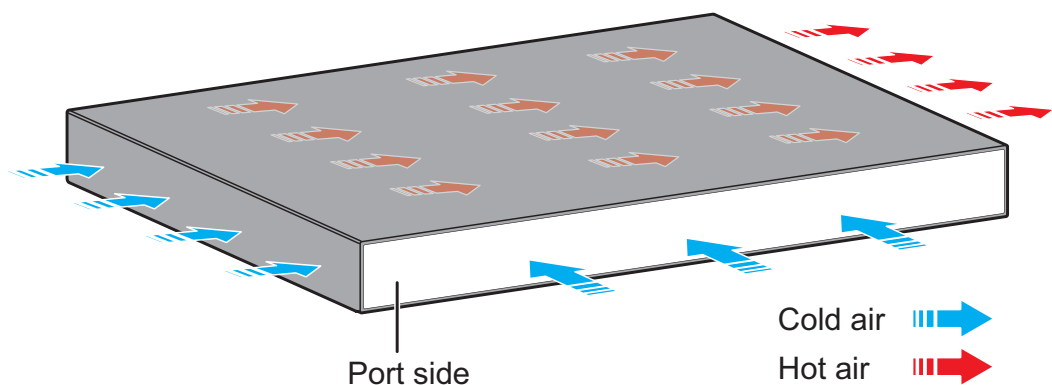
The S5735S-L12P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L12P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 360 W PoE power, which ensures full PoE power on 12 ports in compliance with 802.3af or 802.3at.

Heat Dissipation

The S5735S-L12P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1355](#) lists technical specifications of the S5735S-L12P4S-A.

Table 5-1355 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	85.52 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.24 kg (9.35 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 49 W• 100% PoE loads: 441 W (PoE: 360 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	38 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010923

5.29.3 S5735S-L24FT4S-A

Version Mapping

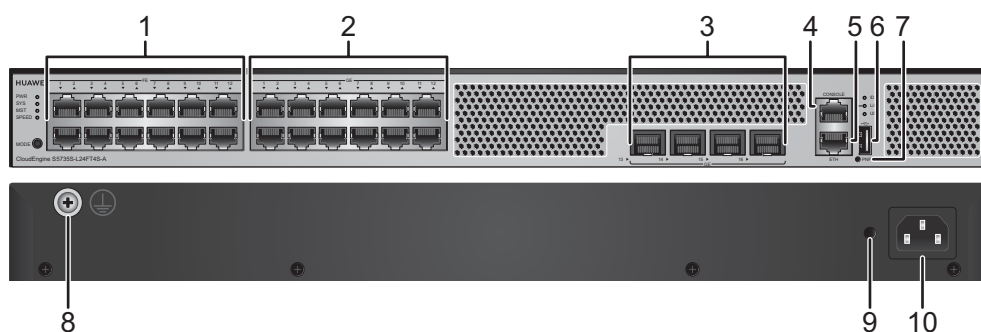
Table 5-1356 lists the mapping between the S5735S-L24FT4S-A chassis and software versions.

Table 5-1356 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24FT4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-531 S5735S-L24FT4S-A appearance



1	Twelve 10/100BASE-TX ports	2	Twelve 10/100/1000BASE-T ports
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3	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	8	Ground screw NOTE It is used with a ground cable .

9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	1 0	AC socket NOTE It is used with an AC power cable .
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Port Description

10/100BASE-TX port

A 10/100BASE-TX Ethernet electrical port sends and receives service data at 10/100 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1357](#) lists the attributes of a 10/100BASE-TX Ethernet electrical port.

Table 5-1357 Attributes of a 10/100BASE-TX Ethernet electrical port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1358](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1358 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1359](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1359 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1360](#).

Table 5-1360 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1361](#) describes the attributes of an ETH management port.

Table 5-1361 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L24FT4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24FT4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24FT4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L24FT4S-A has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-1362](#) lists technical specifications of the S5735S-L24FT4S-A.

Table 5-1362 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	55.89 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	32 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	26 W
Operating temperature	-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> • -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> • -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification

Item	Description
Part number	98010917

5.29.4 S5735S-L24T4S-A

Version Mapping

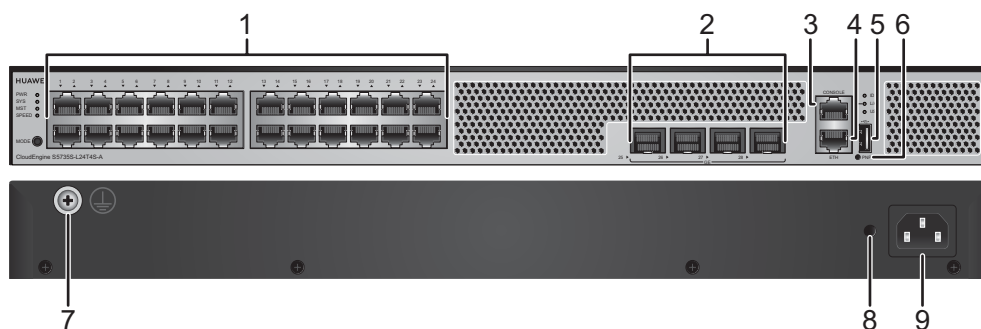
Table 5-1363 lists the mapping between the S5735S-L24T4S-A chassis and software versions.

Table 5-1363 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-532 S5735S-L24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.

7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1364](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1364 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1365](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1365 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1366](#).

Table 5-1366 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1367](#) describes the attributes of an ETH management port.

Table 5-1367 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L24T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L24T4S-A has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-1368](#) lists technical specifications of the S5735S-L24T4S-A.

Table 5-1368 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	92.82 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load)	28 W <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none"> -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> EMC certification Safety certification Manufacturing certification
Part number	98010915

5.29.5 S5735S-L24T4X-A

Version Mapping

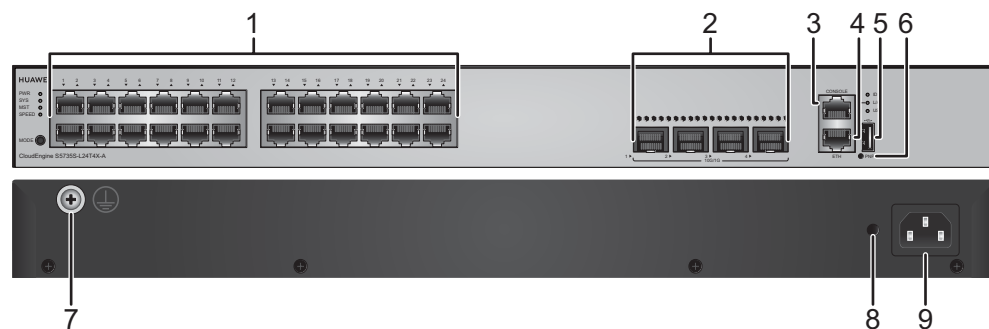
[Table 5-1369](#) lists the mapping between the S5735S-L24T4X-A chassis and software versions.

Table 5-1369 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24T4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-533 S5735S-L24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1370](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1370 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1371](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1371 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1372](#).

Table 5-1372 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1373](#) describes the attributes of an ETH management port.

Table 5-1373 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

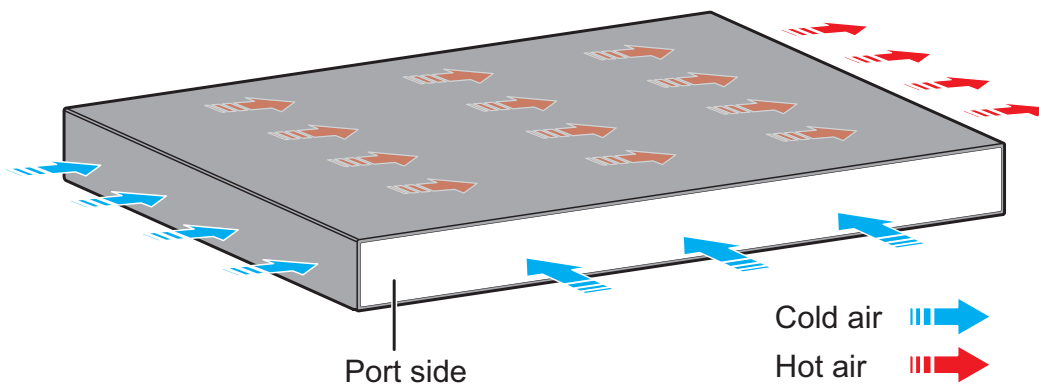
The S5735S-L24T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24T4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L24T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1374 lists technical specifications of the S5735S-L24T4X-A.

Table 5-1374 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.68 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4 kg (8.82 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	43 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	27 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 50.8 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010921

5.29.6 S5735S-L24P4S-A

Version Mapping

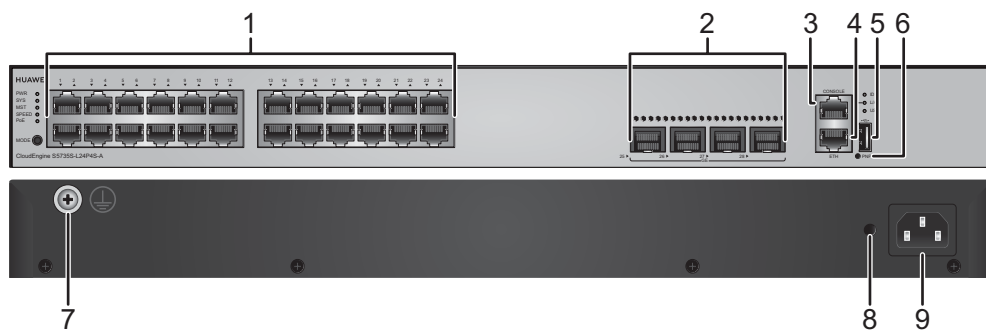
[Table 5-1375](#) lists the mapping between the S5735S-L24P4S-A chassis and software versions.

Table 5-1375 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24P4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-534 S5735S-L24P4S-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1376](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1376 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1377](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1377 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-1378](#).

Table 5-1378 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1379](#) describes the attributes of an ETH management port.

Table 5-1379 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

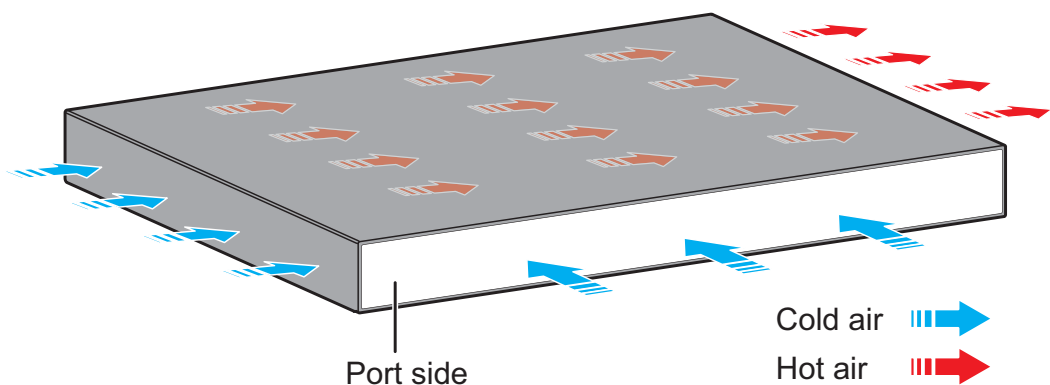
The S5735S-L24P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24P4S-A has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735S-L24P4S-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1380](#) lists technical specifications of the S5735S-L24P4S-A.

Table 5-1380 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	92.2 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 53 W 100% PoE loads: 451 W (PoE: 380 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	39 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010925

5.29.7 S5735S-L24P4X-A

Version Mapping

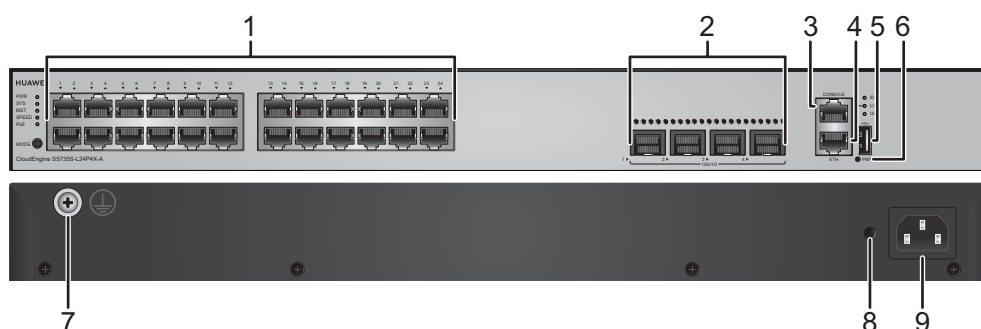
Table 5-1381 lists the mapping between the S5735S-L24P4X-A chassis and software versions.

Table 5-1381 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L24P4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-535 S5735S-L24P4X-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1382](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1382 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1383](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1383 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1384](#).

Table 5-1384 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1385](#) describes the attributes of an ETH management port.

Table 5-1385 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

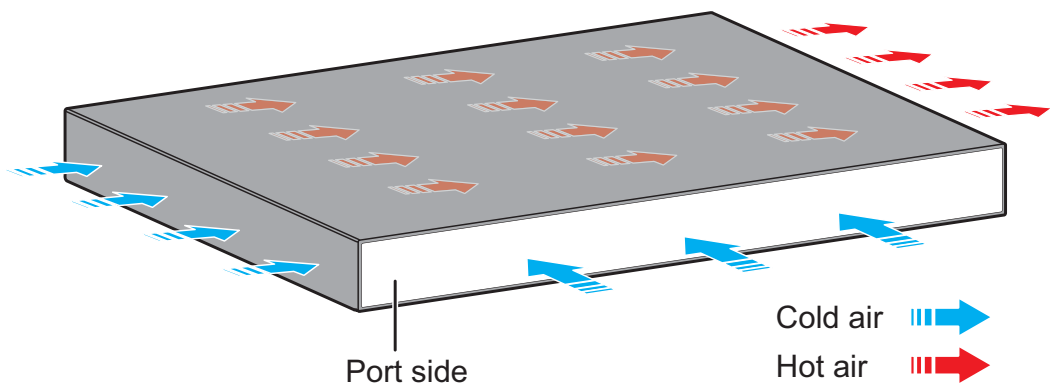
The S5735S-L24P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24P4X-A has a built-in AC power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735S-L24P4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1386](#) lists technical specifications of the S5735S-L24P4X-A.

Table 5-1386 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	57.07 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 56 W 100% PoE loads: 458 W (PoE: 380 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	43 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010928

5.29.8 S5735S-L32ST4X-A

Version Mapping

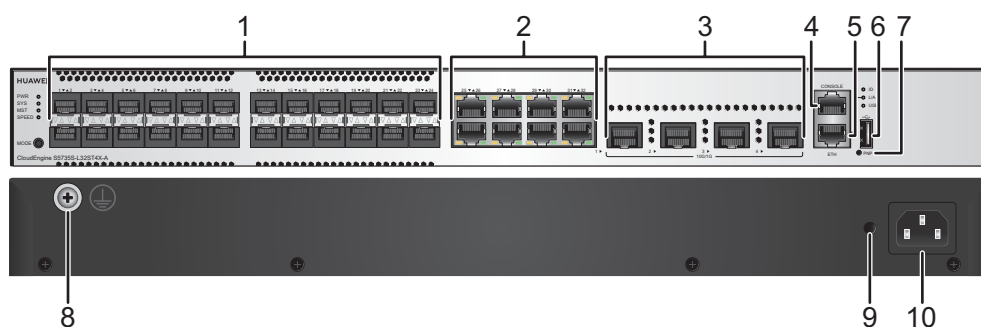
[Table 5-1387](#) lists the mapping between the S5735S-L32ST4X-A chassis and software versions.

Table 5-1387 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L32ST4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-536 S5735S-L32ST4X-A appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • FE optical module • GE optical module (maximum transmission distance ≤ 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	Eight 10/100/1000BASE-T ports
3	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions) 	4	One console port
5	One ETH management port	6	One USB port
7	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.	8	Ground screw NOTE It is used with a ground cable .

9	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.	1 0	AC socket NOTE It is used with an AC power cable .
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Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1388](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1388 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1389](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1389 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1390](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1390 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1391](#).

Table 5-1391 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1392](#) describes the attributes of an ETH management port.

Table 5-1392 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

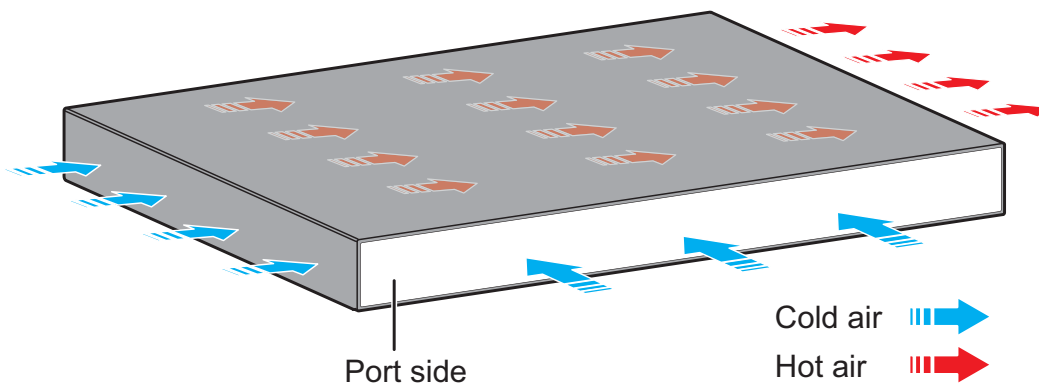
The S5735S-L32ST4X-A has the same types of indicators as the S5735-L32ST4X-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L32ST4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1393 lists technical specifications of the S5735S-L32ST4X-A.

Table 5-1393 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	85.87 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9.5 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> • AC input: 100 V AC to 240 V AC, 50/60 Hz • High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> • AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz • High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	65 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	46 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010930

5.29.9 S5735S-L48FT4S-A

Version Mapping

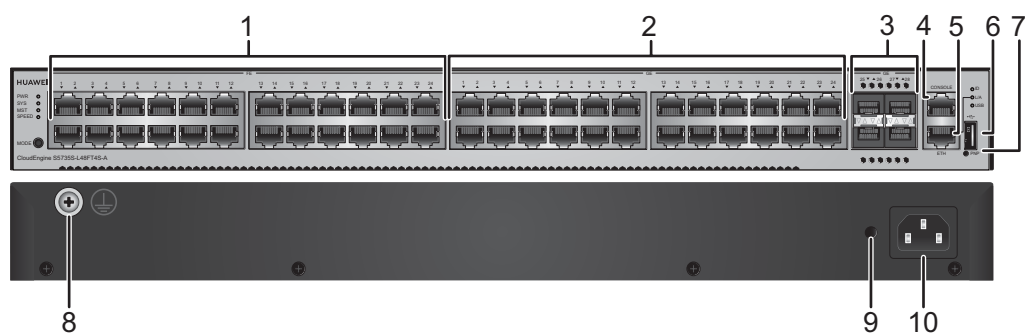
[Table 5-1394](#) lists the mapping between the S5735S-L48FT4S-A chassis and software versions.

Table 5-1394 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48FT4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-537 S5735S-L48FT4S-A appearance



1	Twenty-four 10/100BASE-TX ports	2	Twenty-four 10/100/1000BASE-T ports
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3	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions) 	4	One console port
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>Jack for AC power cable locking strap</p> <p>NOTE</p> <p>The AC power cable locking strap is not delivered with the switch.</p>	10	<p>AC socket</p> <p>NOTE</p> <p>It is used with an AC power cable.</p>

Port Description

10/100BASE-TX port

A 10/100BASE-TX Ethernet electrical port sends and receives service data at 10/100 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1395](#) lists the attributes of a 10/100BASE-TX Ethernet electrical port.

Table 5-1395 Attributes of a 10/100BASE-TX Ethernet electrical port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1396](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1396 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1397](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1397 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1398](#).

Table 5-1398 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1399](#) describes the attributes of an ETH management port.

Table 5-1399 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

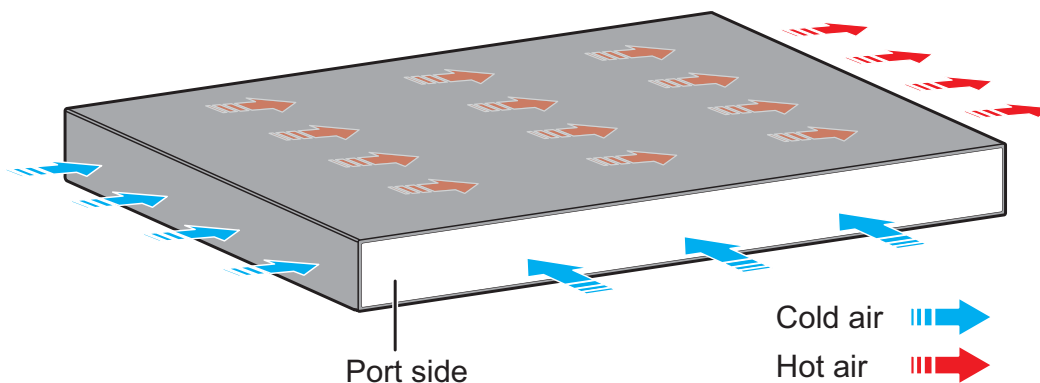
The S5735S-L48FT4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48FT4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48FT4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L48FT4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



 **NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1400 lists technical specifications of the S5735S-L48FT4S-A.

Table 5-1400 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	50.68 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	44 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	30 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010935

5.29.10 S5735S-L48T4S-A

Version Mapping

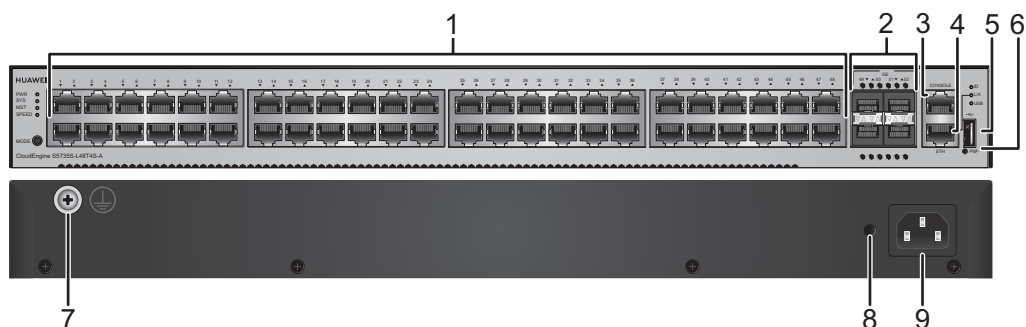
Table 5-1401 lists the mapping between the S5735S-L48T4S-A chassis and software versions.

Table 5-1401 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-538 S5735S-L48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1402](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1402 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1403](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1403 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-1404](#).

Table 5-1404 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1405](#) describes the attributes of an ETH management port.

Table 5-1405 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

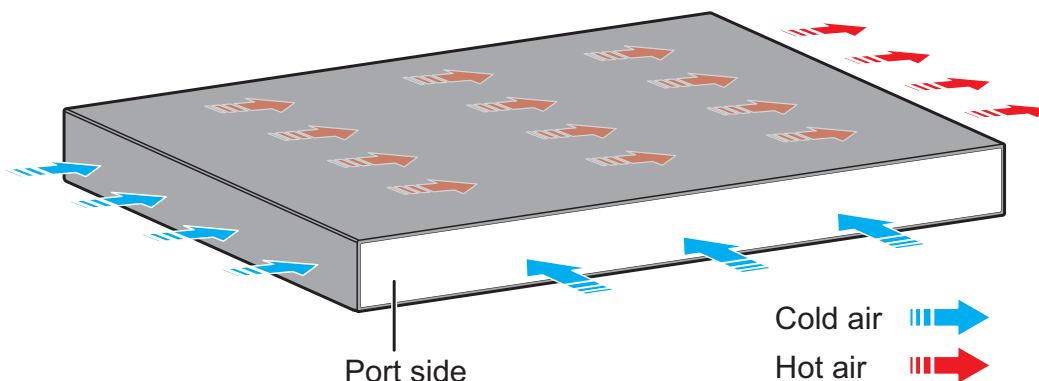
The S5735S-L48T4S-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48T4S-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L48T4S-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1406](#) lists technical specifications of the S5735S-L48T4S-A.

Table 5-1406 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	53 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	37 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010934

5.29.11 S5735S-L48T4X-A

Version Mapping

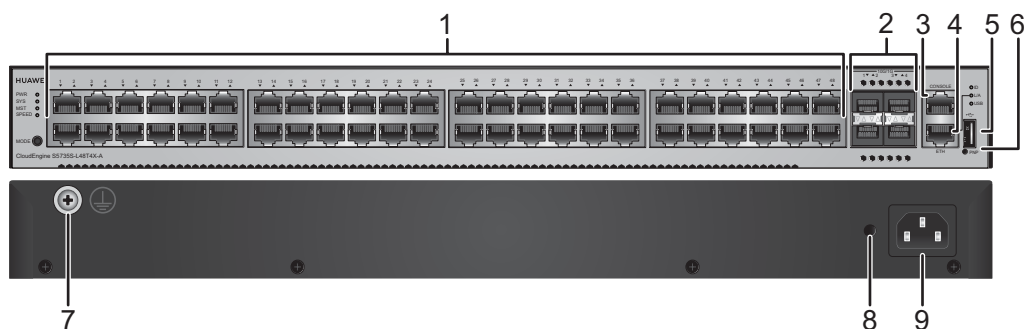
Table 5-1407 lists the mapping between the S5735S-L48T4X-A chassis and software versions.

Table 5-1407 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48T4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-539 S5735S-L48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (100M/1000M auto-sensing)• 10GE SFP+ optical module (OSXD22N00 not supported)• 10GE-CWDM optical module• 10GE-DWDM optical module• 1 m and 3 m SFP+ high-speed copper cables• 3 m and 10 m SFP+ AOC cables• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1408](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1408 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1409](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1409 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1410](#).

Table 5-1410 Attributes of a console port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1411](#) describes the attributes of an ETH management port.

Table 5-1411 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

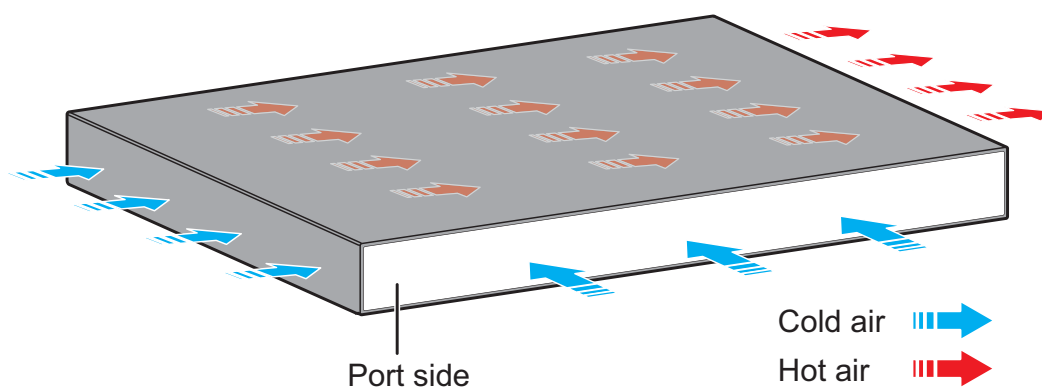
The S5735S-L48T4X-A has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48T4X-A has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L48T4X-A has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.

**NOTE**

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1412](#) lists technical specifications of the S5735S-L48T4X-A.

Table 5-1412 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	41.48 years

Item	Description
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	54 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">• Tested according to ATIS standard• EEE enabled• No PoE power consumption	39 W
Operating temperature	<p>-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +45°C (23°F to 113°F) when it uses 10GE SFP+ optical modules with 40 km or longer transmission distances.</p>
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010937

5.29.12 S5735S-L48P4S-A

Version Mapping

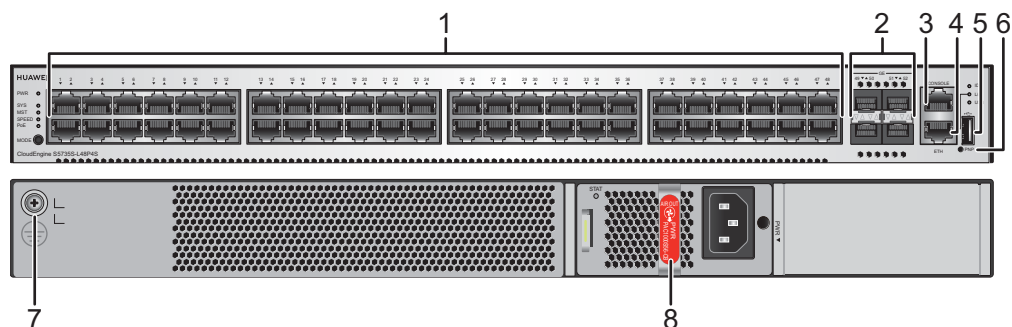
Table 5-1413 lists the mapping between the S5735S-L48P4S-A chassis and software versions.

Table 5-1413 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48P4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-540 S5735S-L48P4S-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 1000BASE-X ports Applicable modules: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module• 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions)• 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions)• 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions)• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1414](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1414 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1415](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1415 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1416](#).

Table 5-1416 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1417](#) describes the attributes of an ETH management port.

Table 5-1417 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L48P4S-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

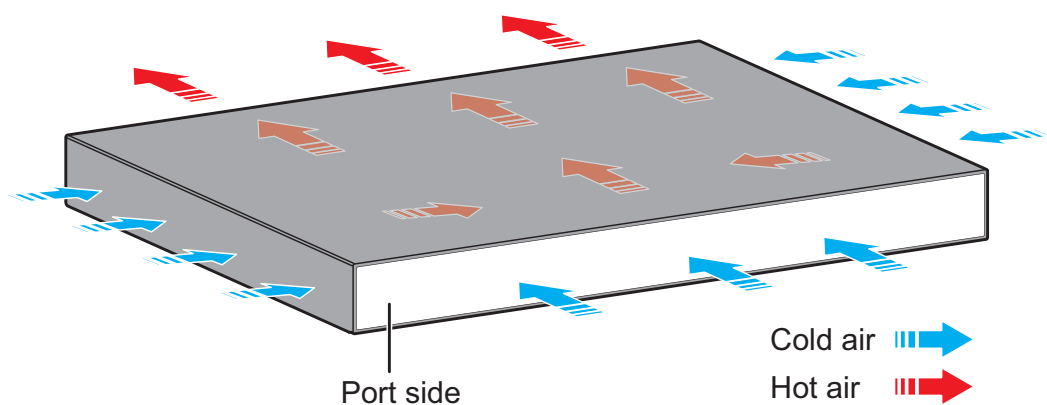
The S5735S-L48P4S-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE power module installed. [Table 5-1418](#) lists its power supply configurations.

Table 5-1418 Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (110 V)	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25

Heat Dissipation

The S5735S-L48P4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1419](#) lists technical specifications of the S5735S-L48P4S-A.

Table 5-1419 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 75 W 100% PoE loads: 911 W (PoE: 874 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	58 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010946

5.29.13 S5735S-L48P4X-A

Version Mapping

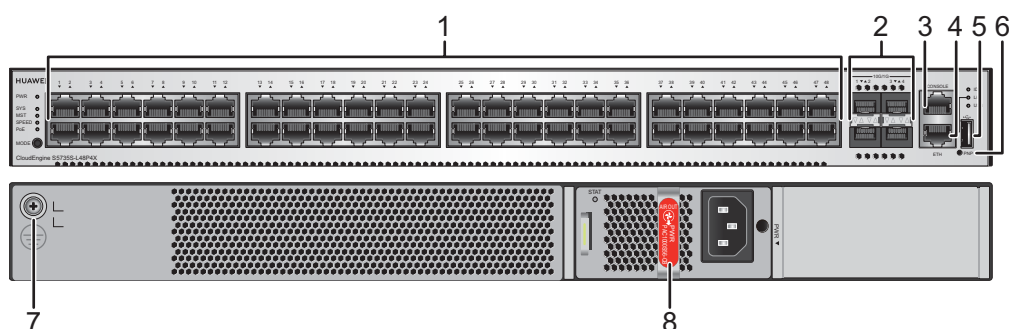
Table 5-1420 lists the mapping between the S5735S-L48P4X-A chassis and software versions.

Table 5-1420 Version mapping

Series	Model	Software Version
S5735S-L	S5735S-L48P4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-541 S5735S-L48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-1421** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1421 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ optical port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1422](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1422 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1423](#).

Table 5-1423 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1424](#) describes the attributes of an ETH management port.

Table 5-1424 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L48P4X-A has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

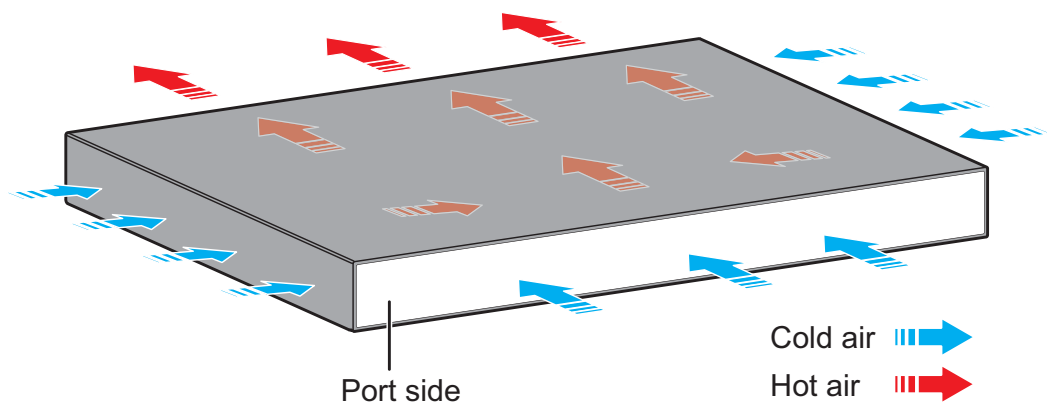
The S5735S-L48P4X-A is a PoE switch. It has one power module slot, which can have a 1000 W PoE power module installed. [Table 5-1425](#) lists its power supply configurations.

Table 5-1425 Power supply configurations

Power Module	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (110 V)	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25

Heat Dissipation

The S5735S-L48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1426](#) lists technical specifications of the S5735S-L48P4X-A.

Table 5-1426 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	61.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.7 kg (19.18 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 130 V AC, 200 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 80 W 100% PoE loads: 914 W (PoE: 874 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	59 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010945

5.30 S5735S-L-M

5.30.1 S5735S-L24T4S-MA

Version Mapping

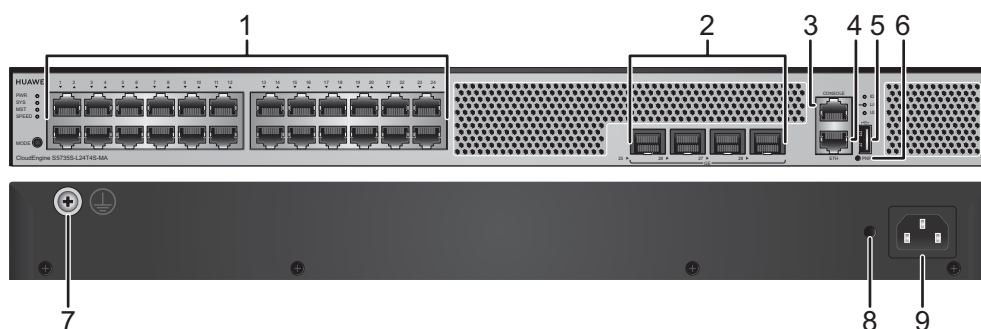
[Table 5-1427](#) lists the mapping between the S5735S-L24T4S-MA chassis and software versions.

Table 5-1427 Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L24T4S-MA	V200R019C00 and later versions

Appearance and Structure

Figure 5-542 S5735S-L24T4S-MA appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, a maximum transmission distance of 0.4 km, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw NOTE It is used with a ground cable .	8	Jack for AC power cable locking strap NOTE The AC power cable locking strap is not delivered with the switch.
9	AC socket NOTE It is used with an AC power cable .	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1428](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1428 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1429](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1429 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used

Attribute	Description
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1430](#).

Table 5-1430 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1431](#) describes the attributes of an ETH management port.

Table 5-1431 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-L24T4S-MA has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L24T4S-MA does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24T4S-MA has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L24T4S-MA has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-1432](#) lists technical specifications of the S5735S-L24T4S-MA.

Table 5-1432 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	92.82 years
Mean time to repair (MTTR)	2 hours

Item	Description
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.08 kg (9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput)	34 W
Typical power consumption (30% of traffic load)	28 W <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption

Item	Description
Operating temperature	<p>-5°C to +45°C (23°F to 113°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The switch cannot be started when the ambient temperature is lower than 0°C (32°F).</p> <p>The operating temperature of the switch is -5°C to +40°C (23°F to 104°F) when it uses GE SFP optical modules with 40 km or longer transmission distance.</p> <p>When SFP+ copper cables or dedicated stack cables are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">• -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet, with the wind speed of at least 40 LFM) <p>When SFP+ AOC cables or 10GE SFP+ optical modules are used to set up a stack, the switch can operate in the following temperature range:</p> <ul style="list-style-type: none">• -5°C to +45°C (23°F to 113°F) (installed in the ventilation cabinet shipped with fans with a fan speed of at least 200 LFM)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010916

5.30.2 S5735S-L24P4S-MA

Version Mapping

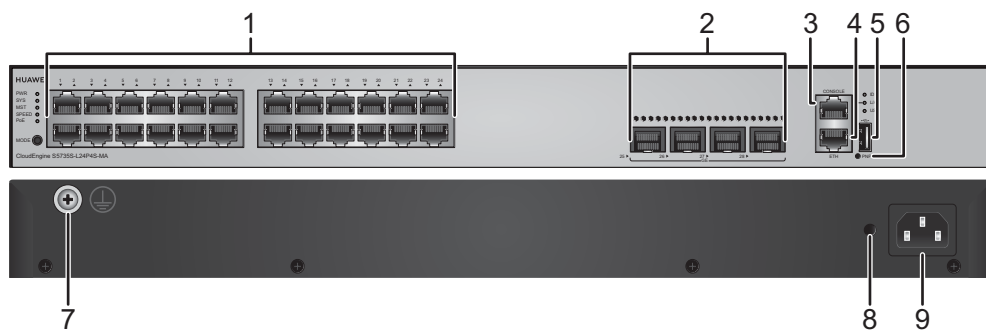
[Table 5-1433](#) lists the mapping between the S5735S-L24P4S-MA chassis and software versions.

Table 5-1433 Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L24P4S-MA	V200R019C00 and later versions

Appearance and Structure

Figure 5-543 S5735S-L24P4S-MA appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1434](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1434 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1435](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1435 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-1436](#).

Table 5-1436 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1437](#) describes the attributes of an ETH management port.

Table 5-1437 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

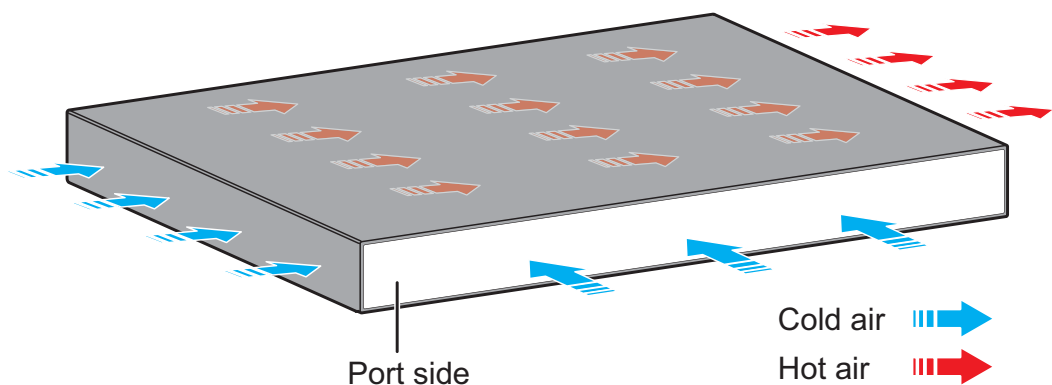
The S5735S-L24P4S-MA has the same types of indicators as the S5735-L12P4S-A. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L24P4S-MA has a built-in power module and does not support pluggable power modules. The built-in power module can provide 380 W PoE power, which ensures full PoE power on 24 ports in compliance with 802.3af or on 12 ports in compliance with 802.3at.

Heat Dissipation

The S5735S-L24P4S-MA has two built-in fans for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1438](#) lists technical specifications of the S5735S-L24P4S-MA.

Table 5-1438 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	76.1 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> ● Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.) ● Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.31 kg (9. lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> ● AC input: 100 V AC to 240 V AC, 50/60 Hz ● High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> ● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz ● High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Not providing the PoE function: 53 W ● 100% PoE loads: 451 W (PoE: 380 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	39 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 57.7 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010926

5.30.3 S5735S-L48T4S-MA

Version Mapping

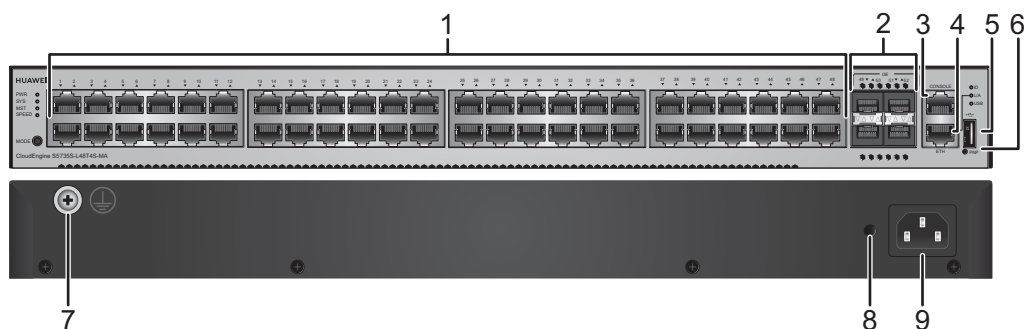
Table 5-1439 lists the mapping between the S5735S-L48T4S-MA chassis and software versions.

Table 5-1439 Version mapping

Series	Model	Software Version
S5735S-L-M	S5735S-L48T4S-MA	V200R019C10SPC500 and later versions

Appearance and Structure

Figure 5-544 S5735S-L48T4S-MA appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Jack for AC power cable locking strap</p> <p>NOTE The AC power cable locking strap is not delivered with the switch.</p>

9	AC socket	-	-
	NOTE It is used with an AC power cable .		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1440](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1440 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1441](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1441 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on

for the first time. For details about the attributes of a console port, see [Table 5-1442](#).

Table 5-1442 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1443](#) describes the attributes of an ETH management port.

Table 5-1443 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

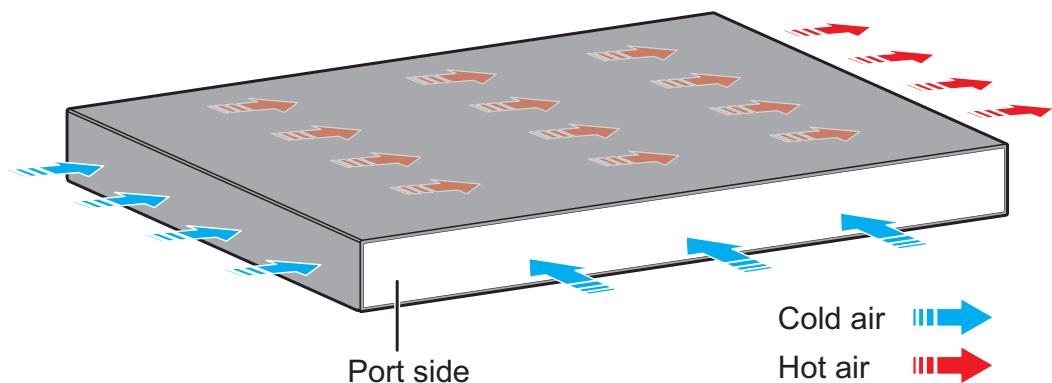
The S5735S-L48T4S-MA has similar indicators to those on the S5735-L12P4S-A except that the S5735S-L48T4S-MA does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-L48T4S-MA has a built-in AC power module and does not support pluggable power modules.

Heat Dissipation

The S5735S-L48T4S-MA has one built-in fan for forced air cooling. Air flows in from the left side and front panel, and exhausts from the right side.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1444](#) lists technical specifications of the S5735S-L48T4S-MA.

Table 5-1444 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.

Item	Description
Mean time between failures (MTBF)	46.36 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.7 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the parts protruding from the rear panel): 43.6 mm x 442.0 mm x 227.0 mm (1.72 in. x 17.4 in. x 8.94 in.)
Weight (with packaging)	4.42 kg (9.75 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	53 W

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	37 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 53.3 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010971

5.31 S5735-S

5.31.1 S5735-S24T4X

Version Mapping

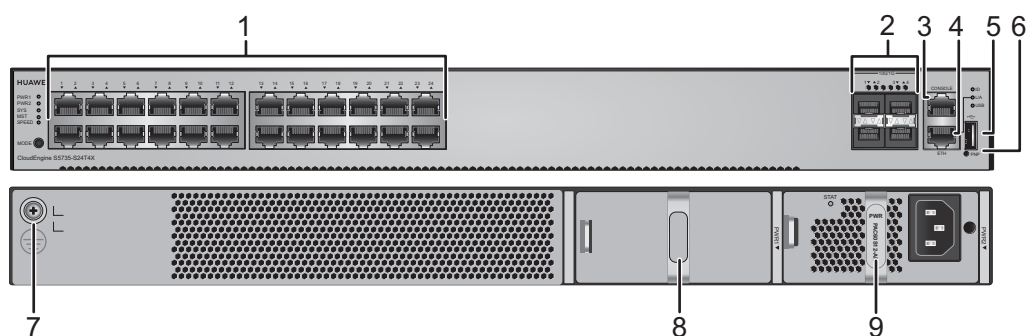
[Table 5-1445](#) lists the mapping between the S5735-S24T4X chassis and software versions.

Table 5-1445 Version mapping

Series	Model	Software Version
S5735-S	S5735-S24T4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-545 S5735-S24T4X appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB)

9	Power module slot 2	-	-
	NOTE Applicable power module: <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB) 		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1446](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1446 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1447](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1447 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1448](#).

Table 5-1448 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1449](#) describes the attributes of an ETH management port.

Table 5-1449 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to

the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

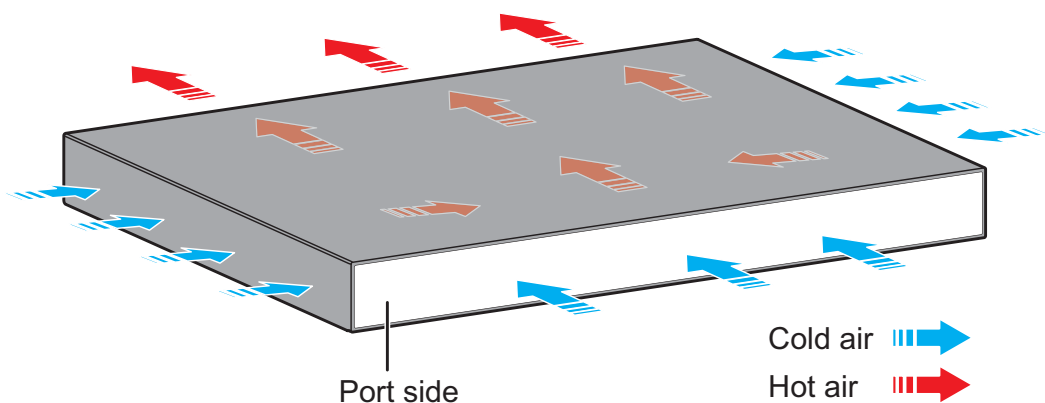
The S5735-S24T4X has similar indicators to those on the S5735-S24P4X except that the S5735-S24T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-S24T4X can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735-S24T4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1450](#) lists technical specifications of the S5735-S24T4X.

Table 5-1450 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.21 kg (15.9 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	46 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	31 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010938

5.31.2 S5735-S24P4X

Version Mapping

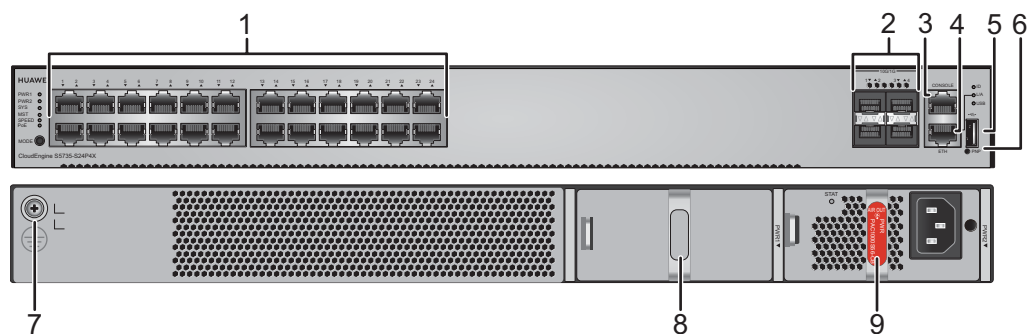
Table 5-1451 lists the mapping between the S5735-S24P4X chassis and software versions.

Table 5-1451 Version mapping

Series	Model	Software Version
S5735-S	S5735-S24P4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-546 S5735-S24P4X appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)
9	Power module slot 2 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1452](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1452 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1453](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1453 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1454](#).

Table 5-1454 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1455](#) describes the attributes of an ETH management port.

Table 5-1455 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

NOTE

Hold down the mode switch button for 6s and release it to start the web initial login mode. Either of the following situations will occur:

- If the switch has no configuration file, the system attempts to enter the web initial login mode. In this mode, the status of mode indicators is as follows:
 - If the system enters the web initial login mode successfully, all mode indicators turn green and stay on for a maximum of 10 minutes.
 - If the system fails to enter the initial login mode, all mode indicators fast blink for 10 seconds and then restore the default status.
- If the switch has a configuration file, the system cannot enter the web initial login mode. In this case, all mode indicators fast blink for 10s, and then return to the default states.

Figure 5-547 Indicators on the S5735-S24P4X

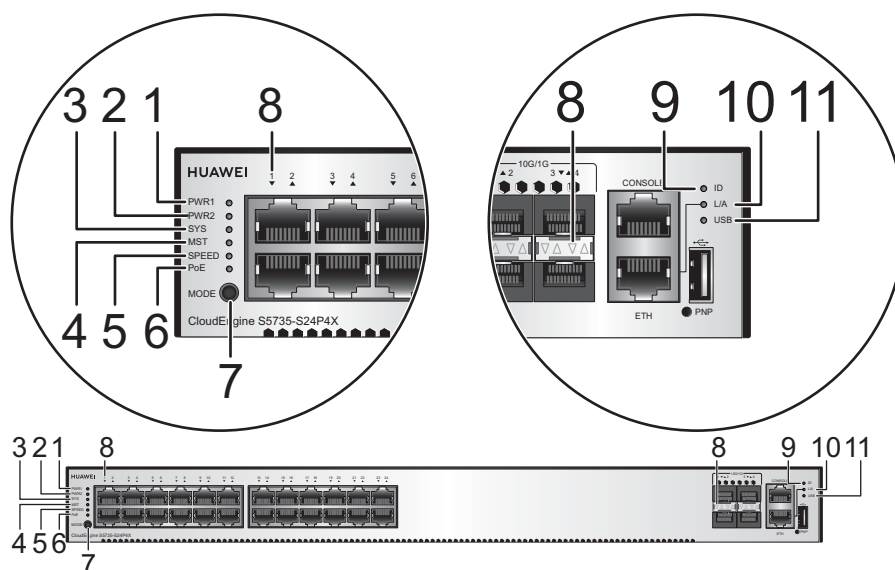


Table 5-1456 Description of indicators on the switch

No.	Indicator	Name	Color	Status	Description
1	PWR1	Power module indicator	-	Off	No power module is available in power module slot 1, or the switch has only one power module but the power module does not work normally.

No.	Indicator	Name	Color	Status	Description
			Green	Steady on	A power module is installed in power module slot 1 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 1: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
2	PWR 2	Power module indicator	-	Off	No power module is available in power module slot 2, or the switch has only one power module but the power module does not work normally.
			Green	Steady on	A power module is installed in power module slot 2 and is working normally.
			Yellow	Steady on	The switch has two power modules installed. Any of the following situations occurs in power module slot 2: <ul style="list-style-type: none"> A power module is available in this slot but it is not connected to a power source. The power module in this slot has failed.
3	SYS	System status indicator	-	Off	The system is not running.
			Green	Fast blinking	The system is starting.
			Green	Steady on	During the system startup preparation phase, the SYS indicator is steady green, which lasts for a maximum of 30 seconds.
			Green	Slow blinking	The system is running normally.

No.	Indicator	Name	Color	Status	Description
			Red	Steady on	The system does not work normally after registration, or a fan alarm or a temperature alarm has been generated.
4	MST	Stack indicator	-	Off	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is a standby or slave switch in a stack or the stacking function is not enabled on the switch. If you are changing the indicator mode: The stack mode is not selected.
			Green	Steady on	The stack mode is selected. The switch is a standby or slave switch in a stack, and the service port indicators show the stack ID of the switch.
			Green	Blinking	<ul style="list-style-type: none"> If you are not changing the indicator mode (default): The switch is the master switch in a stack or a standalone switch with the stacking function enabled. If you are changing the indicator mode: The stack mode is selected. The switch is the master switch in a stack or a standalone switch, and the service port indicators show the stack ID of the master switch. After 45 seconds, the service port indicators automatically restore to the status mode.
5	SPEED	Speed indicator	-	Off	The speed mode is not selected.
			Green	Steady on	The speed mode is selected, and service port indicators show the speed of each port.
6	PoE	PoE indicator	-	Off	The PoE mode is not selected.
			Green	Steady on	The PoE mode is selected, and service port indicators show the PoE status of each port.

No.	Indicator	Name	Color	Status	Description
7	MODE	Mode switch button	-	-	<ul style="list-style-type: none"> When you press this button once, the service port indicators change to the stack mode and show the stack ID of the local switch. When you press this button a second time, the service port indicators change to the speed mode and show the speed of each service port. When you press this button a third time, the service port indicators change to the PoE mode and show the PoE status of each service port. When you press this button a fourth time, the service port indicators restore to the default mode and show the connection status and link activity of each service port. <p>If you do not press the MODE button within 45 seconds, the service port indicators restore to the default mode. In this case, the SPEED and PoE indicators are off.</p>
8	-	Service port indicator	Meanings of service port indicators vary in different modes. For details, see Table 5-1457 .		
9	ID	ID indicator	-	Off	The ID indicator is not used (default state).
			Blue	Steady on	The indicator identifies the switch to maintain. The ID indicator can be turned on or off remotely to help field engineers find the switch to maintain.
10	L/A	ETH port indicator	-	Off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The ETH port is sending or receiving data.

No.	Indicator	Name	Color	Status	Description
11	USB	USB-based deployment indicator	-	Off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.

Table 5-1457 Description of service port indicators in different modes

Display Mode	Color	Status	Description
Default mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	A link has been established on the port.
	Green	Blinking	The port is sending or receiving data.
MST stack mode	-	Off	Port indicators do not show the stack ID of the switch.

Display Mode	Color	Status	Description
	Green	Steady on	The switch is not the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is steady on, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are steady on, the stack ID of the switch is 0.
	Green	Blinking	The switch is the master switch in a stack. <ul style="list-style-type: none"> If the indicator of a port is blinking, the number of this port is the stack ID of the switch. If the indicators of ports 1 to 9 are blinking, the stack ID of the switch is 0.
Speed mode	-	Off	The port is not connected or has been shut down.
	Green	Steady on	10M/100M/1000M port: The port is operating at 10 Mbit/s or 100 Mbit/s. 1000M/10GE port: The port is operating at 1000 Mbit/s.
	Green	Blinking	10M/100M/1000M port: The port is operating at 1000 Mbit/s. 1000M/10GE port: The port is operating at 10 Gbit/s.
PoE mode	-	Off	The port is not providing power to a powered device (PD).
	Green	Steady on	The port is providing power to a PD.
	Yellow	Steady on	The PoE function is disabled on the port.
	Yellow	Blinking	The port stops providing PoE power because of an exception (for example, an incompatible PD is connected to the port).

Display Mode	Color	Status	Description
	Green and yellow	Blinking green and yellow alternately	<p>The port fails to supply power to a PD due to one of the following reasons:</p> <ul style="list-style-type: none"> • The power required by the connected PD exceeds the maximum power or the configured power threshold of the port. • The total power consumption of PDs has reached the maximum power of the switch. • The manual power management mode is used and the port is not enabled to provide power to the PD.

Power Supply Configuration

The S5735-S24P4X is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1458](#) lists its power supply configurations.

Table 5-1458 Power supply configurations

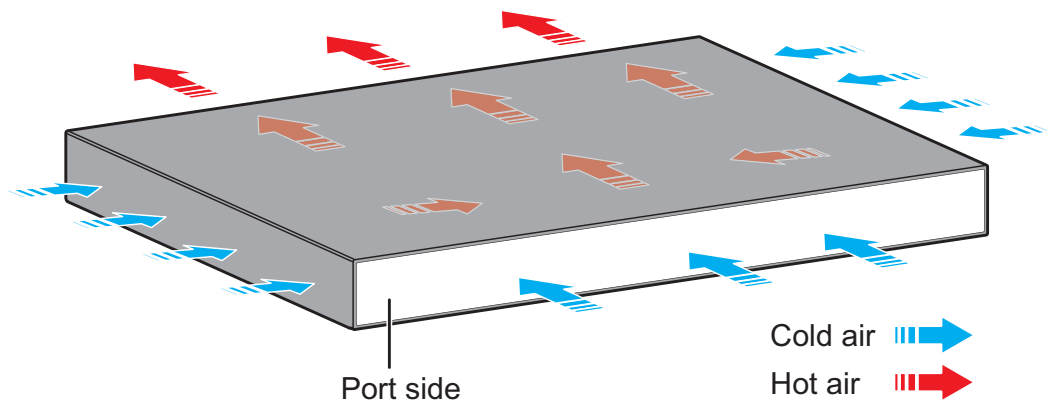
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	–	874 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24
1000 W (110 V)	–	779 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24
1000 W (110 V)	1000 W (110 V)	1558 W	<ul style="list-style-type: none"> • 802.3af (15.4 W per port): 24 • 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5735-S24P4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1459](#) lists technical specifications of the S5735-S24P4X.

Table 5-1459 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	59.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.39 kg (16.29 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> Not providing the PoE function: 65 W 100% PoE loads: 847 W (PoE: 720 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	51 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010940

5.31.3 S5735-S32ST4X

Version Mapping

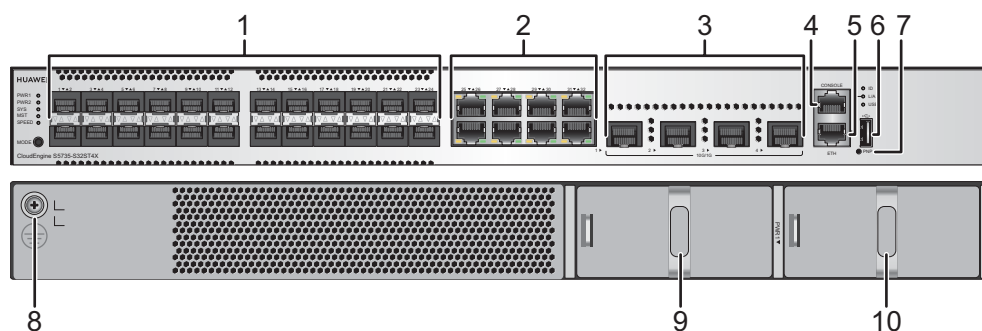
[Table 5-1460](#) lists the mapping between the S5735-S32ST4X chassis and software versions.

Table 5-1460 Version mapping

Series	Model	Software Version
S5735-S	S5735-S32ST4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-548 S5735-S32ST4X appearance



1	<p>Twenty-four 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module (maximum transmission distance ≤ 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Eight 10/100/1000BASE-T ports</p>
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions) 	4	One console port
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB) 	10	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1461](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1461 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1462](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1462 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1463](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1463 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1464](#).

Table 5-1464 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1465](#) describes the attributes of an ETH management port.

Table 5-1465 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

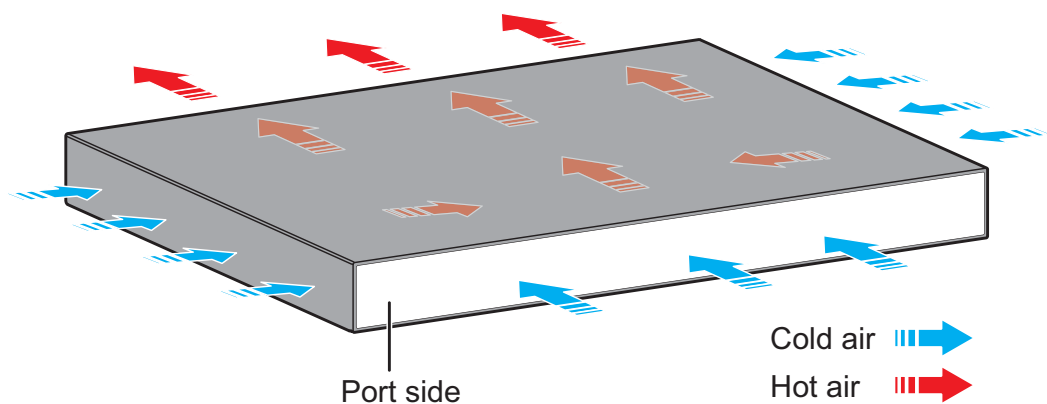
The S5735-S32ST4X has similar indicators to those on the S5735-S24P4X except that the S5735-S32ST4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-S32ST4X can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735-S32ST4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1466 lists technical specifications of the S5735-S32ST4X.

Table 5-1466 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	68.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none">Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common modeUsing DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.47 kg (16.47 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC

Item	Description
Maximum voltage range	<ul style="list-style-type: none"> • AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz • High-Voltage DC input: 190 V DC to 290 V DC • DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	66 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	47 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010931

5.31.4 S5735-S48T4X

Version Mapping

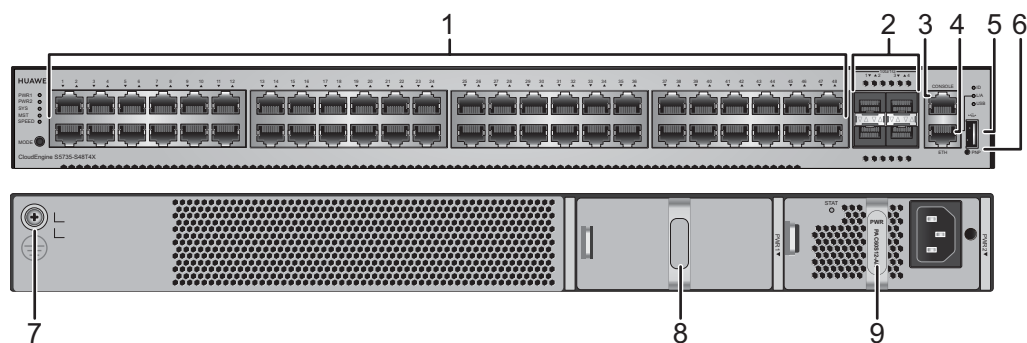
Table 5-1467 lists the mapping between the S5735-S48T4X chassis and software versions.

Table 5-1467 Version mapping

Series	Model	Software Version
S5735-S	S5735-S48T4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-549 S5735-S48T4X appearance



1	Forty-eight 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none">• GE optical module• GE-CWDM optical module• GE-DWDM optical module• GE copper module (100M/1000M auto-sensing)• 10GE SFP+ optical module (OSXD22N00 not supported)• 10GE-CWDM optical module• 10GE-DWDM optical module• 1 m and 3 m SFP+ high-speed copper cables• 3 m and 10 m SFP+ AOC cables• 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none">• 60 W AC Power Module (PAC60S12-AR)• 1000 W DC Power Module (PDC1000S12-DB)

9	Power module slot 2	-	-
	NOTE Applicable power module: <ul style="list-style-type: none">• 60 W AC Power Module (PAC60S12-AR)• 1000 W DC Power Module (PDC1000S12-DB)		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1468](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1468 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1469](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1469 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1470](#).

Table 5-1470 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1471](#) describes the attributes of an ETH management port.

Table 5-1471 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to

the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

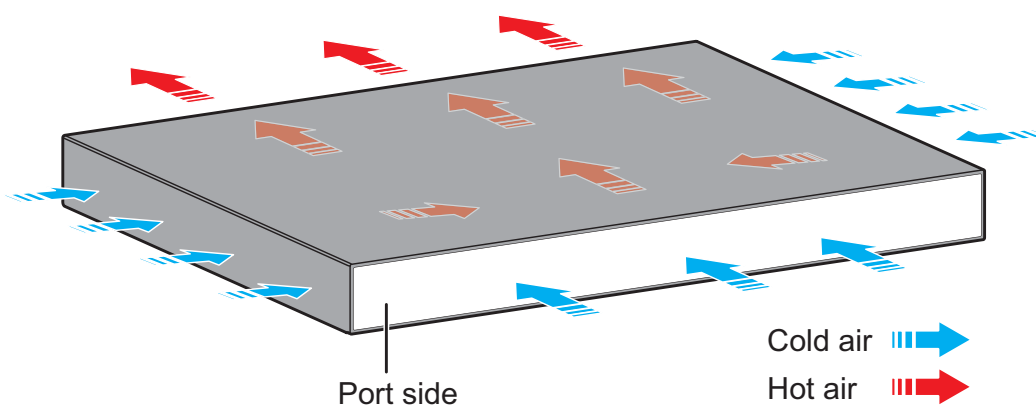
The S5735-S48T4X has similar indicators to those on the S5735-S24P4X except that the S5735-S48T4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-S48T4X can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735-S48T4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1472](#) lists technical specifications of the S5735-S48T4X.

Table 5-1472 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.69 kg (16.95 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	59 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	40 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010941

5.31.5 S5735-S48P4X

Version Mapping

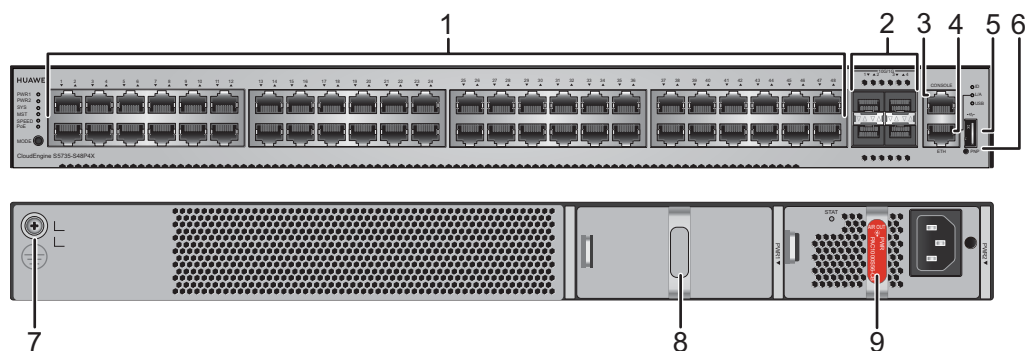
[Table 5-1473](#) lists the mapping between the S5735-S48P4X chassis and software versions.

Table 5-1473 Version mapping

Series	Model	Software Version
S5735-S	S5735-S48P4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-550 S5735-S48P4X appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Power module slot 1</p> <p>NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)</p>
9	<p>Power module slot 2</p> <p>NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1474](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1474 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1475](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1475 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1476](#).

Table 5-1476 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1477](#) describes the attributes of an ETH management port.

Table 5-1477 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735-S48P4X has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-S48P4X is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1478](#) lists its power supply configurations.

Table 5-1478 Power supply configurations

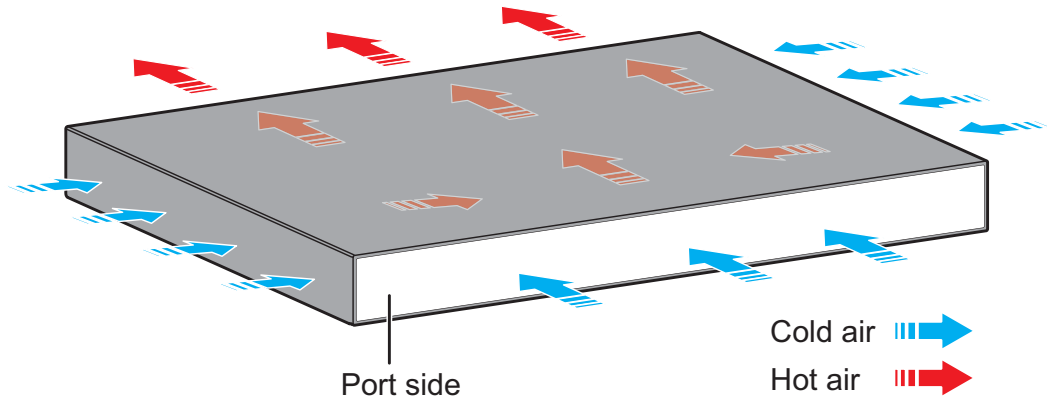
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 29
1000 W (110 V)	-	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48
1000 W (110 V)	1000 W (110 V)	1558 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 48 802.3at (30 W per port): 48

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5735-S48P4X has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1479 lists technical specifications of the S5735-S48P4X.

Table 5-1479 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	54.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.64 kg (16.84 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 290 V AC, 45 Hz to 65 HzHigh-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">Not providing the PoE function: 77 W100% PoE loads: 1661 W (PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	59 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010943

5.31.6 S5735-S48S4X

Version Mapping

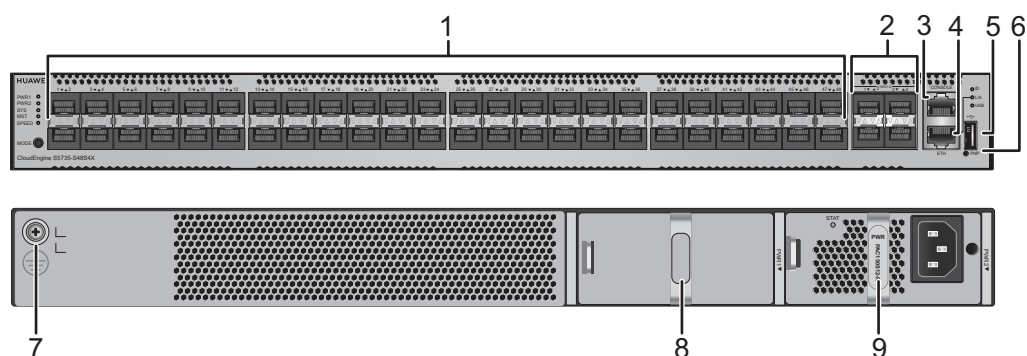
Table 5-1480 lists the mapping between the S5735-S48S4X chassis and software versions.

Table 5-1480 Version mapping

Series	Model	Software Version
S5735-S	S5735-S48S4X	V200R019C00 and later versions

Appearance and Structure

Figure 5-551 S5735-S48S4X appearance



1	<p>Forty-eight 100/1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • FE optical module • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 150 W AC Power Module (PAC150S12-R) • 1000 W DC Power Module (PDC1000S12-DB)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 150 W AC Power Module (PAC150S12-R) • 1000 W DC Power Module (PDC1000S12-DB) 	-	-

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1481](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1481 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1482](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1482 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1483](#).

Table 5-1483 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1484](#) describes the attributes of an ETH management port.

Table 5-1484 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

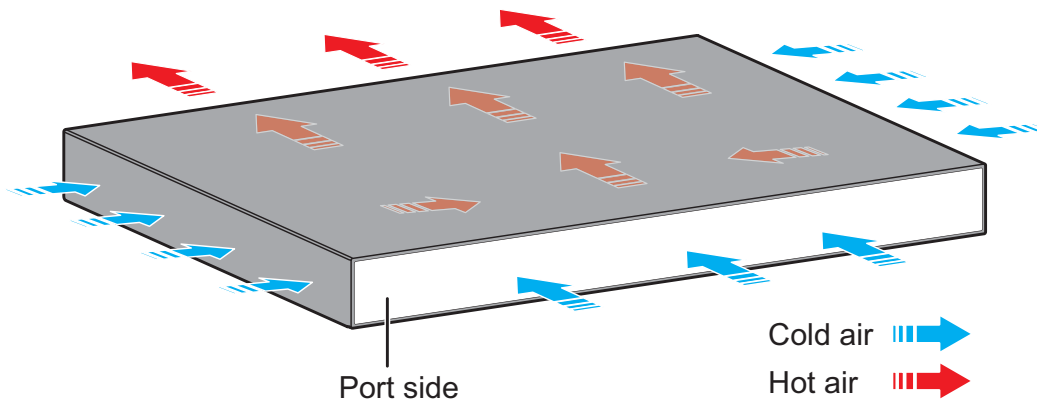
The S5735-S48S4X has similar indicators to those on the S5735-S24P4X except that the S5735-S48S4X does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735-S48S4X can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735-S48S4X has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1485 lists technical specifications of the S5735-S48S4X.

Table 5-1485 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	66.33 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	NA
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)

Item	Description
Weight (with packaging)	8.27 kg (18.23 lb)
Stack ports	Any 100/1000BASE-X ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	89 W
Typical power consumption (30% of traffic load, tested according to ATIS standard)	67 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 61 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010947

5.32 S5735-S-I

5.32.1 S5735-S4T2X-IA150G1

Version Mapping

Table 5-1486 lists the mapping between the S5735-S4T2X-IA150G1 chassis and software versions.

Table 5-1486 Version mapping

Series	Model	Software Version
S5730-S-I	S5735-S4T2X-IA150G1	V200R019C10 and later versions

Appearance and Structure

Figure 5-552 S5735-S4T2X-IA150G1 appearance

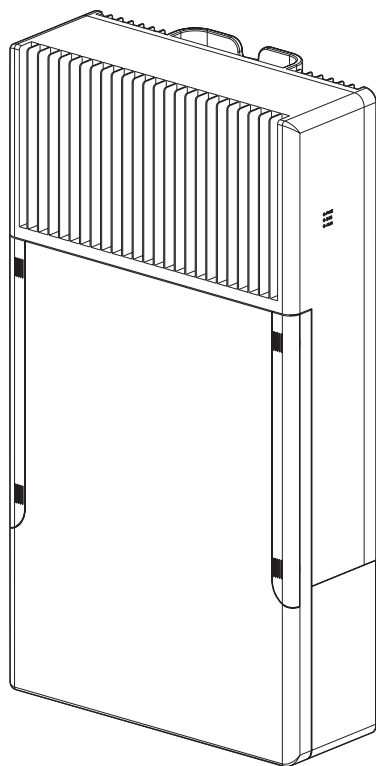
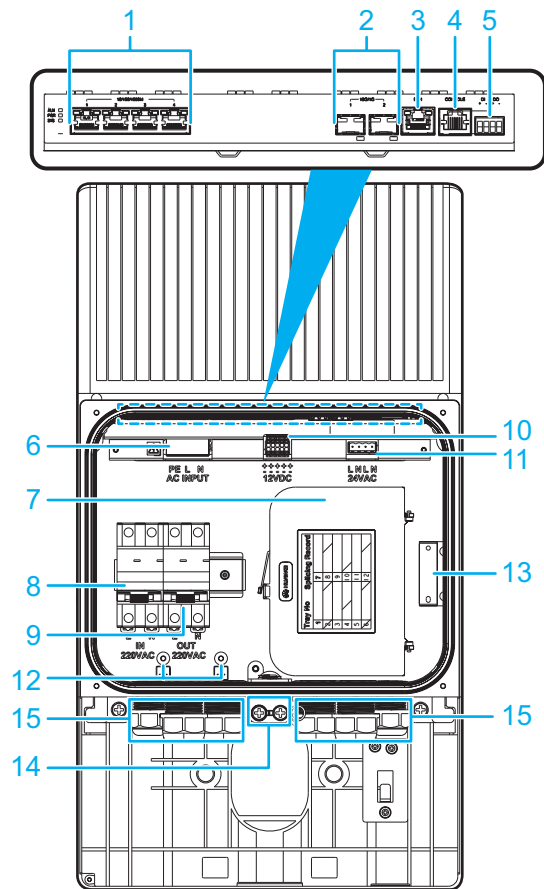


Figure 5-553 Interior of the S5735-S4T2X-IA150G1 maintenance compartment



1	Four 10/100/1000BASE-T ports	2 Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • Industrial optical module • GPON optical module • Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S) NOTE If one port uses a GPON optical module, the other port cannot be used at the same time.
3	One ETH management port	4 One console port

5	<p>Monitoring port</p> <ul style="list-style-type: none"> • DI: signal input line, which connects to a door status sensor. • DO: signal output line, which connects to a camera alarm signal cable. <p>NOTE</p> <p>The monitoring port can be used to detect the status of a connected external device, such as the opening and closing of the maintenance compartment door.</p> <p>The monitoring port is used with a conductive cable. The minimum cross-sectional area of the conductor connected to a conductive cable is 0.3 mm² or 22 AWG, and the maximum cross-sectional area of the conductor is 1.3 mm² or 16 AWG.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the <i>Configuration Guide - Device Management Configuration</i>.</p>	6	220 V AC power input socket
7	<p>Fiber management tray (FMT)</p> <p>NOTE</p> <p>The FMT is optional.</p>	8	<p>220 V AC power input circuit breaker</p> <p>NOTICE</p> <p>This circuit breaker is optional.</p> <p>Connect an external power cable to the 220 V AC power input circuit breaker when it is in use.</p> <p>An external power cable needs to be prepared onsite. Ensure that the wires of the external cable are correctly connected to the L and N sockets of a plug.</p> <p>The circuit breaker supports a maximum of 32 A input current and provides two 220 V AC outputs.</p> <ul style="list-style-type: none"> • One output is connected to the AC power input socket of the switch to supply power to the switch. • The other output is connected to the 220 V AC power output circuit breaker of the switch to supply power to connected PDs (such as strobe lights and non-PoE PTZ dome cameras).

9	<p>220 V AC power output circuit breaker</p> <p>NOTICE</p> <p>This circuit breaker is optional.</p> <p>The 220 V AC power output circuit breaker provides overcurrent protection only, and is only used for external power conversion. It supports a maximum of 10 A output current.</p> <p>The connected external devices need to provide certain surge protection capabilities. It is recommended that the surge protection capabilities for both differential and common modes be 20 kA.</p>	10	<p>12 V DC power output socket</p> <p>NOTE</p> <p>The switch provides five 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>
11	<p>24 V AC power output socket</p> <p>NOTE</p> <p>The switch provides two 24 V AC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>	12	<p>PE cable ground terminal</p> <p>NOTE</p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>
13	<p>Door status sensor</p> <p>NOTE</p> <p>It reports an alarm when the maintenance compartment door of the switch is opened.</p>	14	<p>Ground screw</p> <p>NOTE</p> <p>It is used to ground the switch. The ground cable needs to be purchased separately.</p>
15	<p>Cable outlet</p>	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1487](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1487 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1488](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1488 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1489](#).

Table 5-1489 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-1490** describes the attributes of an ETH management port.

Table 5-1490 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

Indicator Description

Figure 5-554 Indicators on the outside of the S5735-S4T2X-IA150G1

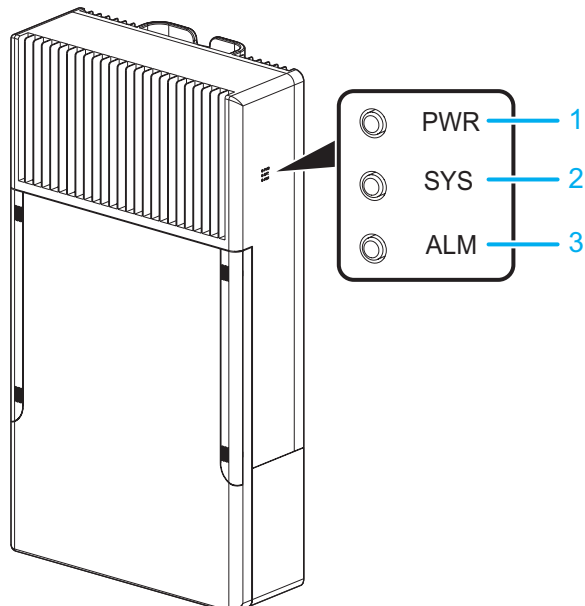


Figure 5-555 Indicators inside the maintenance compartment of the S5735-S4T2X-IA150G1

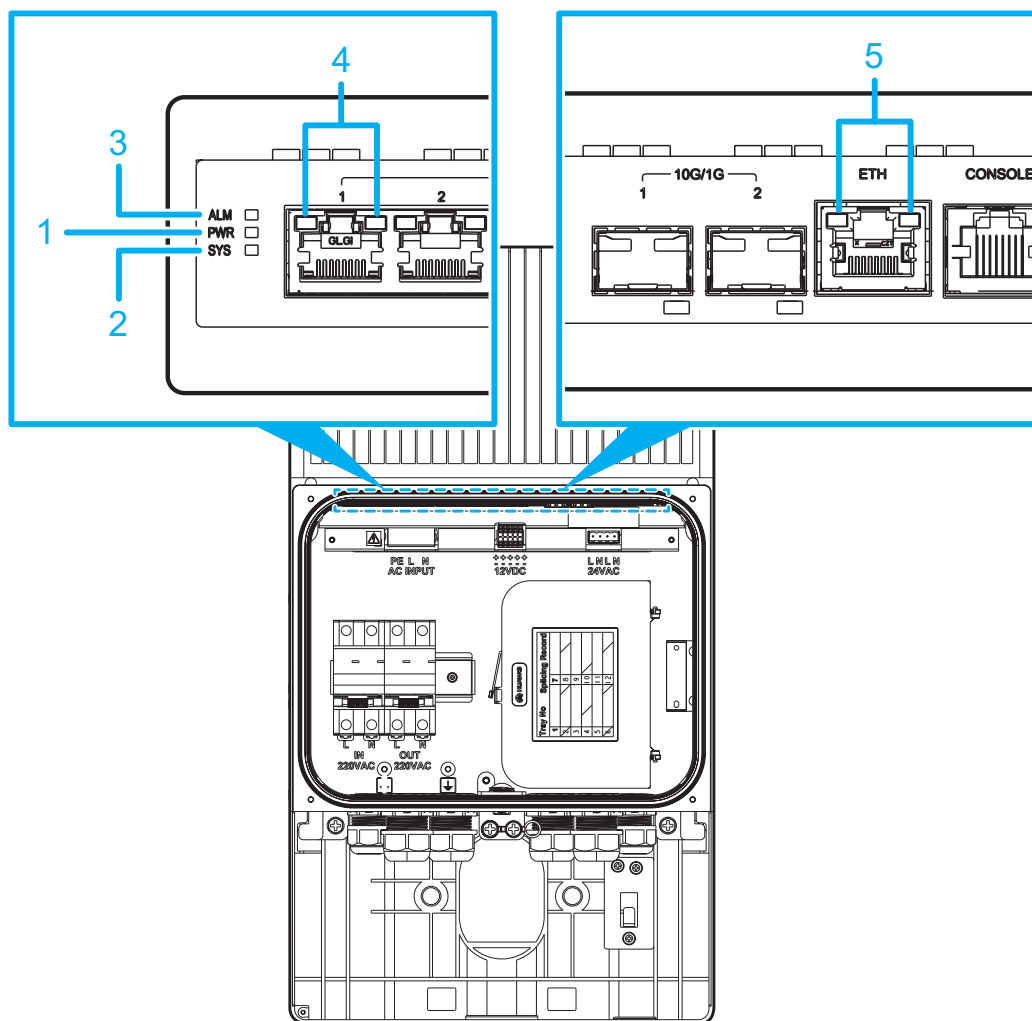


Table 5-1491 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Power indicator	-	Steady off	The switch is powered off.
			Green	Steady on	The switch is powered on and can communicate with the built-in power module properly.
			Yellow	Steady on	The switch is powered on but cannot communicate with the built-in power module properly.
2	SYS	System status indicator	-	Steady off	The system is not running.

No.	Indicator	Name	Color	Status	Description
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
3	ALM	Alarm indicator	-	Steady off	There is no AC input or power supply is normal.
			Red	Steady on	The power supply to the switch is abnormal.
4	-	Service port indicator	-	Steady off	The port is not connected or has been shut down.
			Green and yellow	Steady on	The port is connected.
			Green and yellow	Blinking	The port is sending or receiving data.
5	-	ETH port indicator	-	Steady off	The ETH port is not connected.
			Green and yellow	Steady on	The ETH port is connected.
			Green and yellow	Blinking	The port is sending or receiving data.

Power Supply Configuration

The S5735-S4T2X-IA150G1 has a built-in power module and does not support pluggable power modules. The S5735-S4T2X-IA150G1 can be directly connected to an external 220 V AC power supply and provide power for external devices. [Table 5-1492](#) lists the power supply configurations of the S5735-S4T2X-IA150G1.

Table 5-1492 Power supply configurations

Power Supply Mode	Available Power
12 V DC	Five 12 V DC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.
24 V AC	Two 24 V AC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.

NOTE

The five 12 V DC outputs and two 24 V AC outputs provides a combined total power output of 144 W.

Heat Dissipation

The S5735-S4T2X-IA150G1 has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-1493](#) lists technical specifications of the S5735-S4T2X-IA150G1.

Table 5-1493 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode

Item	Description
Power supply surge protection	Surge current: <ul style="list-style-type: none"> ● AC input: 20 kA Surge: <ul style="list-style-type: none"> ● AC input: ±6 kV in differential mode; ±6 kV in common mode ● 12 V DC output: ±2 kV in differential mode; ±4 kV in common mode ● 24 V AC output: ±2 kV in differential mode; ±6 kV in common mode
Dimensions (H x W x D)	550 mm x 300 mm x 135 mm (21.65 in. x 11.81 in. x 5.31 in.)
Weight (including packaging)	12.2 kg (26.9 lb)
Stack ports	Not supported
RTC	Not supported
RPS	Not supported
PoE	Not supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	29 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	28 W

Item	Description
Operating temperature	-40°C to +75°C (-40°F to 167°F) NOTE -25°C to +75°C (-13°F to +167°F): sunshade needed; 400 LFM air velocity (minimum); GPON optical modules not supported -25°C to +70°C (-13°F to +158°F): sunshade needed; 200 LFM air velocity (minimum); GPON optical modules supported -30°C to +60°C (-22°F to +140°F): sunshade needed; 40 LFM air velocity (minimum); GPON optical modules supported -35°C to +55°C (-31°F to +131°F): sunshade needed; no requirement on the air velocity; GPON optical modules supported -35°C to +45°C (-31°F to +113°F): 1120 W/m ² solar radiation (maximum); no requirement on the air velocity -40°C to -35°C (-40°F to -31°F): At least four Ethernet electrical ports must be working. When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
IP rating	IP55
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Product certification	<ul style="list-style-type: none"> ● EMC certification ● Safety certification ● Manufacturing certification
Part number	02312NTA

5.32.2 S5735-S8P2X-IA200G1

Version Mapping

[Table 5-1494](#) lists the mapping between the S5735-S8P2X-IA200G1 chassis and software versions.

Table 5-1494 Version mapping

Series	Model	Software Version
S5730-S-I	S5735-S8P2X-IA200G1	V200R019C10 and later versions

Appearance and Structure

Figure 5-556 S5735-S8P2X-IA200G1 appearance

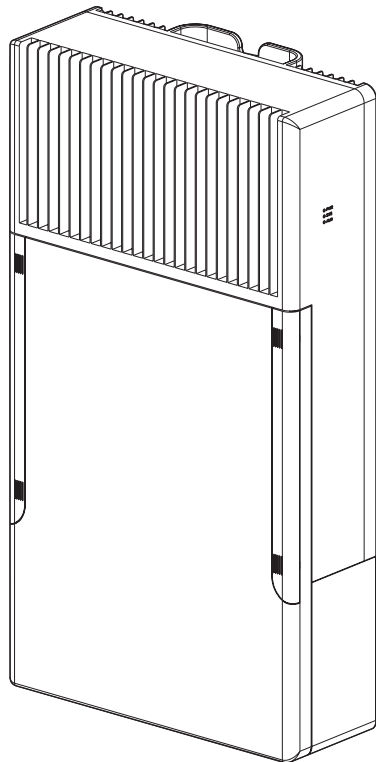
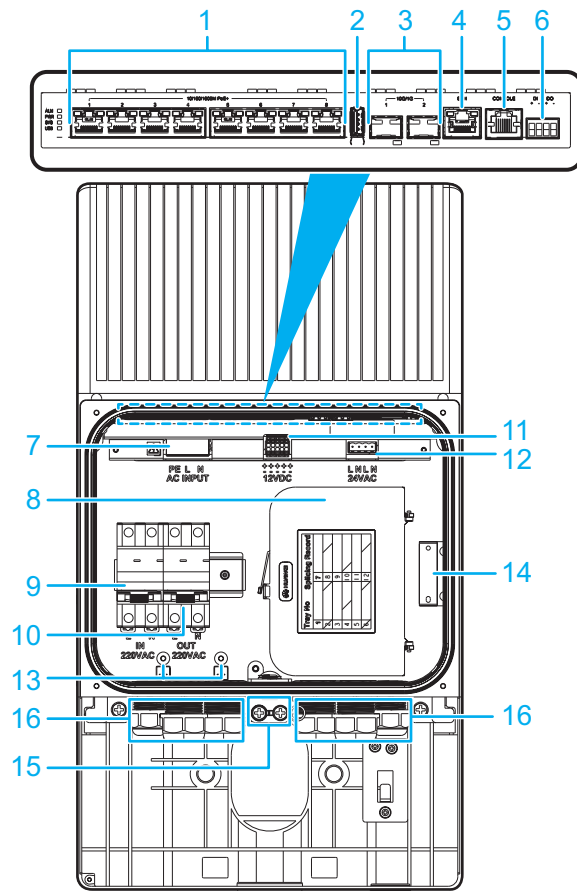


Figure 5-557 Interior of the S5735-S8P2X-IA200G1 maintenance compartment



1	Eight PoE+ 10/100/1000BASE-T ports	2	One USB port
3	Two 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> ● Industrial optical module ● GPON optical module ● Third-party GPON optical modules (Hisense LTE3415-SH+ and CIG G-97S) NOTE If one port uses a GPON optical module, the other port cannot be used at the same time.	4	One ETH management port

5	One console port	6	<p>Monitoring port</p> <ul style="list-style-type: none"> • DI: signal input line, which connects to a door status sensor. • DO: signal output line, which connects to a camera alarm signal cable. <p>NOTE</p> <p>The monitoring port can be used to detect the status of a connected external device, such as the opening and closing of the maintenance compartment door.</p> <p>The monitoring port is used with a conductive cable. The minimum cross-sectional area of the conductor connected to a conductive cable is 0.3 mm² or 22 AWG, and the maximum cross-sectional area of the conductor is 1.3 mm² or 16 AWG.</p> <p>For details about how to use a monitoring port, see "Monitoring Interface Configuration" in the <i>Configuration Guide - Device Management Configuration</i>.</p>
7	220 V AC power input socket	8	<p>Fiber management tray (FMT)</p> <p>NOTE</p> <p>The FMT is optional.</p>

9	<p>220 V AC power input circuit breaker</p> <p>NOTICE</p> <p>This circuit breaker is optional.</p> <p>Connect an external power cable to the 220 V AC power input circuit breaker when it is in use.</p> <p>An external power cable needs to be prepared onsite. Ensure that the wires of the external cable are correctly connected to the L and N sockets of a plug.</p> <p>The circuit breaker supports a maximum of 32 A input current and provides two 220 V AC outputs.</p> <ul style="list-style-type: none"> • One output is connected to the AC power input socket of the switch to supply power to the switch. • The other output is connected to the 220 V AC power output circuit breaker of the switch to supply power to connected PDs (such as strobe lights and non-PoE PTZ dome cameras). 	10	<p>220 V AC power output circuit breaker</p> <p>NOTICE</p> <p>This circuit breaker is optional.</p> <p>The 220 V AC power output circuit breaker provides overcurrent protection only, and is only used for external power conversion. It supports a maximum of 10 A output current.</p> <p>The connected external devices need to provide certain surge protection capabilities. It is recommended that the surge protection capabilities for both differential and common modes be 20 kA.</p>
11	<p>12 V DC power output socket</p> <p>NOTE</p> <p>The switch provides five 12 V DC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>	12	<p>24 V AC power output socket</p> <p>NOTE</p> <p>The switch provides two 24 V AC outputs to external devices, such as strobe lights and non-PoE PTZ dome cameras.</p>
13	<p>PE cable ground terminal</p> <p>NOTE</p> <p>It is used to ground a PE power cable for 220 V AC input or output.</p>	14	<p>Door status sensor</p> <p>NOTE</p> <p>It reports an alarm when the maintenance compartment door of the switch is opened.</p>
15	<p>Ground screw</p> <p>NOTE</p> <p>It is used to ground the switch. The ground cable needs to be purchased separately.</p>	16	<p>Cable outlet</p>

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1495](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1495 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1496](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1496 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1497](#).

Table 5-1497 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)

Attribute	Description
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1498](#) describes the attributes of an ETH management port.

Table 5-1498 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

Figure 5-558 Indicators on the outside of the S5735-S8P2X-IA200G1

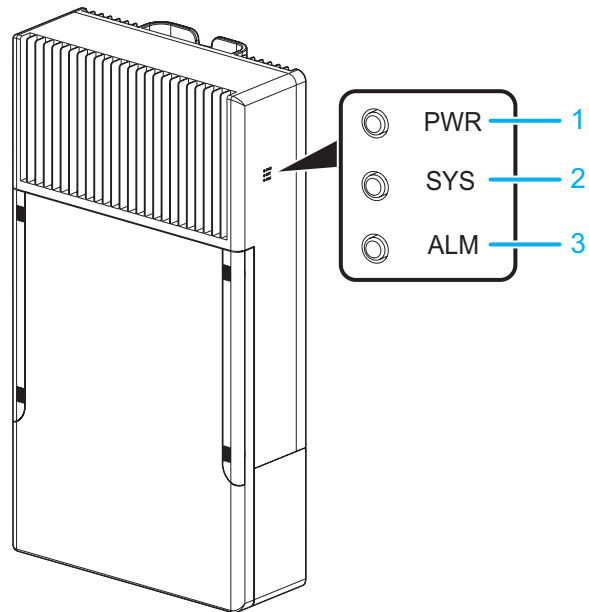


Figure 5-559 Indicators inside the maintenance compartment of the S5735-S8P2X-IA200G1

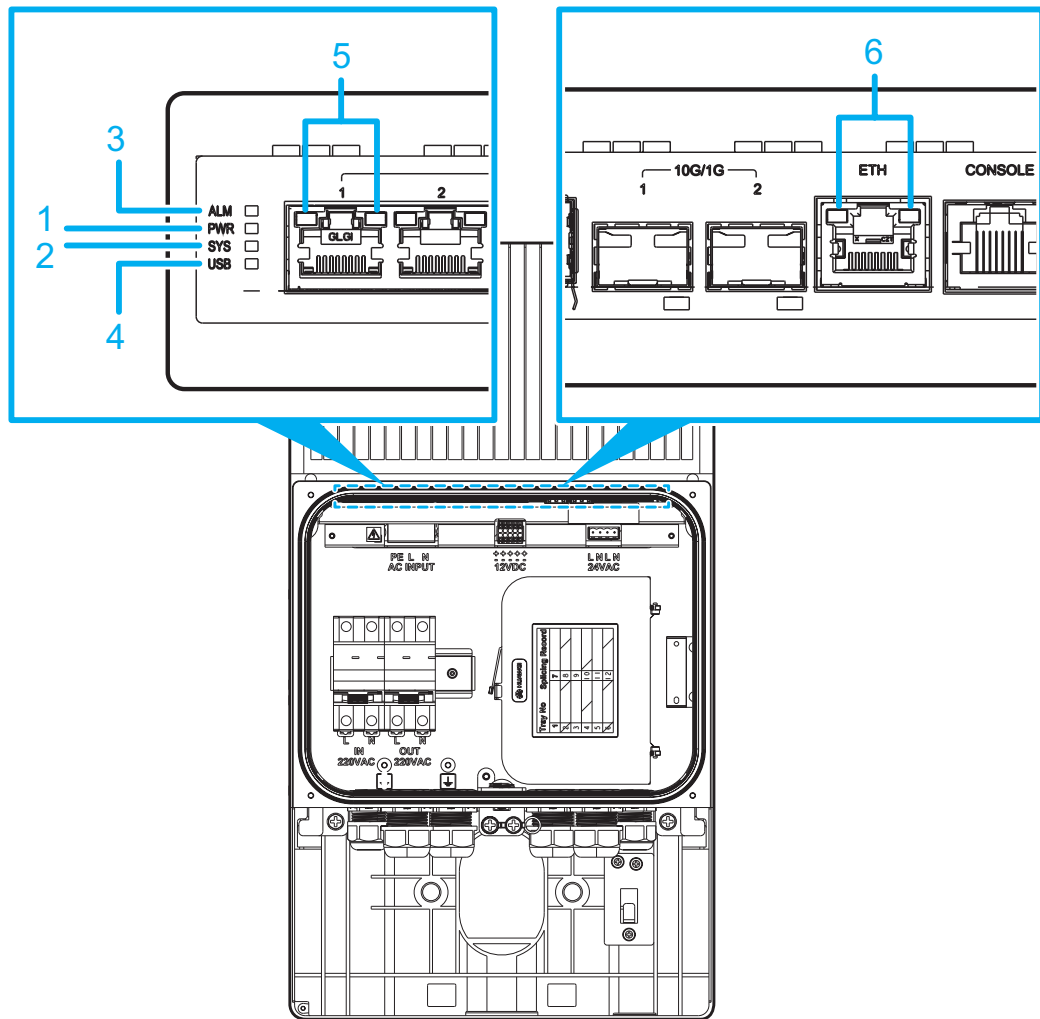


Table 5-1499 Description of indicators

No.	Indicator	Name	Color	Status	Description
1	PWR	Power indicator	-	Steady off	The switch is powered off.
			Green	Steady on	The switch is powered on and can communicate with the built-in power module properly.
			Yellow	Steady on	The switch is powered on but cannot communicate with the built-in power module properly.
2	SYS	System status indicator	-	Steady off	The system is not running.

No.	Indicator	Name	Color	Status	Description
			Green	Fast blinking	The system is starting.
			Green	Steady on	In the system startup preparation phase, the SYS indicator is steady green for no more than 30 seconds.
			Green	Slow blinking	The system is running normally.
			Red	Steady on	The system does not work normally after registration, or a temperature alarm has been generated.
3	ALM	Alarm indicator	-	Steady off	There is no AC input or power supply is normal.
			Red	Steady on	The power supply to the switch is abnormal.
4	USB	USB-based deployment indicator	-	Steady off	<ul style="list-style-type: none"> No USB flash drive is connected to the switch. The USB port is damaged. The indicator is damaged. The USB flash drive does not have any configuration file and cannot be used for deployment. The switch has been upgraded using the USB flash drive and is restarting.
			Green	Steady on	A USB-based deployment has been completed.
			Green	Blinking	The system is reading data from a USB flash drive.
			Yellow	Steady on	The switch has copied all the required files and completed the file check. The USB flash drive can be removed from the switch.
			Red	Blinking	An error has occurred when the system is executing the configuration file or reading data from the USB flash drive.
5	-	Service port indicator	Green	Steady off	The port is not connected or has been shut down.

No.	Indicator	Name	Color	Status	Description
				Steady on	The port is connected.
				Blinking	The port is sending or receiving data.
			Yellow	Steady off	The port does not supply power to any PD.
				Steady on	The port is supplying power to the connected PD.
				Blinking	The PD connected to the port is not a standard PD or its power exceeds the maximum power or power threshold of the port.
6	-	ETH port indicator	-	Steady off	The ETH port is not connected.
			Green	Steady on	The ETH port is connected.
			Green	Blinking	The port is sending or receiving data.

Power Supply Configuration

The S5735-S8P2X-IA200G1 has a built-in power module and does not support pluggable power modules. The S5735-S8P2X-IA200G1 can be directly connected to an external 220 V AC power supply and provide power for external devices. [Table 5-1500](#) lists the power supply configurations of the S5735-S8P2X-IA200G1.

Table 5-1500 Power supply configurations

Power Supply Mode	Available Power
PoE	160 W Maximum number of PoE ports (fully loaded): <ul style="list-style-type: none"> ● 802.3af (15.4 W per port): 8 ● 802.3at (30 W per port): 5
12 V DC	Five 12 V DC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.
24 V AC	Two 24 V AC outputs provide a total of 72 W power. The maximum power of a single output is 72 W.

 **NOTE**

The total maximum output power of PoE power output, five 12 V DC outputs, and two 24 V AC outputs is 160 W.

Heat Dissipation

The S5735-S8P2X-IA200G1 has no fans and uses natural heat dissipation.

Technical Specifications

[Table 5-1501](#) lists technical specifications of the S5735-S8P2X-IA200G1.

Table 5-1501 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	57.28 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	±1.5 kV in differential mode, ±6 kV in common mode
Power supply surge protection	Surge current: <ul style="list-style-type: none">AC input: 20 kA Surge: <ul style="list-style-type: none">AC input: ±6 kV in differential mode; ±6 kV in common mode12 V DC output: ±2 kV in differential mode; ±4 kV in common mode24 V AC output: ±2 kV in differential mode; ±6 kV in common mode
Dimensions (H x W x D)	550 mm x 300 mm x 135 mm (21.65 in. x 11.81 in. x 5.31 in.)
Weight (including packaging)	12.2 kg (26.9 lb)
Stack ports	Not supported
RTC	Not supported

Item	Description
RPS	Not supported
PoE	Supported
Rated voltage range	220 V AC to 240 V AC, 50/60 Hz
Maximum voltage range	176 V AC to 264 V AC, 45 Hz to 66 Hz
Maximum power consumption (100% throughput)	<ul style="list-style-type: none"> • With no output power: 34 W • With output power: 209 W (device power consumption: 49 W; output power: 160 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	31 W
Operating temperature	-40°C to +75°C (-40°F to 167°F) NOTE -25°C to +75°C (-13°F to +167°F): sunshade needed; 400 LFM air velocity (minimum); GPON optical modules not supported -25°C to +70°C (-13°F to +158°F): sunshade needed; 200 LFM air velocity (minimum); GPON optical modules supported -30°C to +60°C (-22°F to +140°F): sunshade needed; 40 LFM air velocity (minimum); GPON optical modules supported -35°C to +55°C (-31°F to +131°F): sunshade needed; no requirement on the air velocity; GPON optical modules supported -35°C to +45°C (-31°F to +113°F): 1120 W/m ² solar radiation (maximum); no requirement on the air velocity -40°C to -35°C (-40°F to -31°F): At least four Ethernet electrical ports must be working. When the altitude is 1800-4000 m (5906-13123 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).
Storage temperature	-40°C to +85°C (-40°F to +185°F)
IP rating	IP55

Item	Description
Noise under normal temperature (27°C, sound power)	Noise-free (no fans)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-4000 m (0-13123 ft.)
Product certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	02312NTA-001

5.32.3 S5735-S24T4X-I

Version Mapping

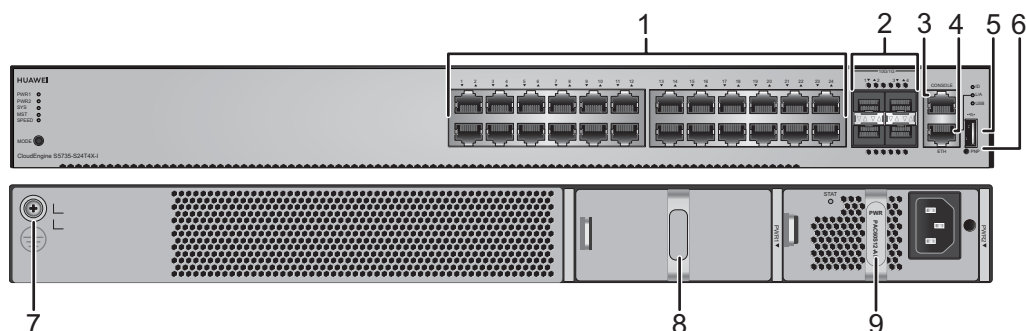
Table 5-1502 lists the mapping between the S5735-S24T4X-I chassis and software versions.

Table 5-1502 Version mapping

Series	Model	Software Version
S5735-S-I	S5735-S24T4X-I	V200R019C10SPC500 and later versions

Appearance and Structure

Figure 5-560 S5735-S24T4X-I appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: • Industrial optical module
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: • 60 W AC Power Module (PAC60S12-AR)
9	Power module slot 2 NOTE Applicable power module: • 60 W AC Power Module (PAC60S12-AR)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an **Ethernet cable**. **Table 5-1503** describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1503 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing

Attribute	Description
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1504](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1504 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1505](#).

Table 5-1505 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. **Table 5-1506** describes the attributes of an ETH management port.

Table 5-1506 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

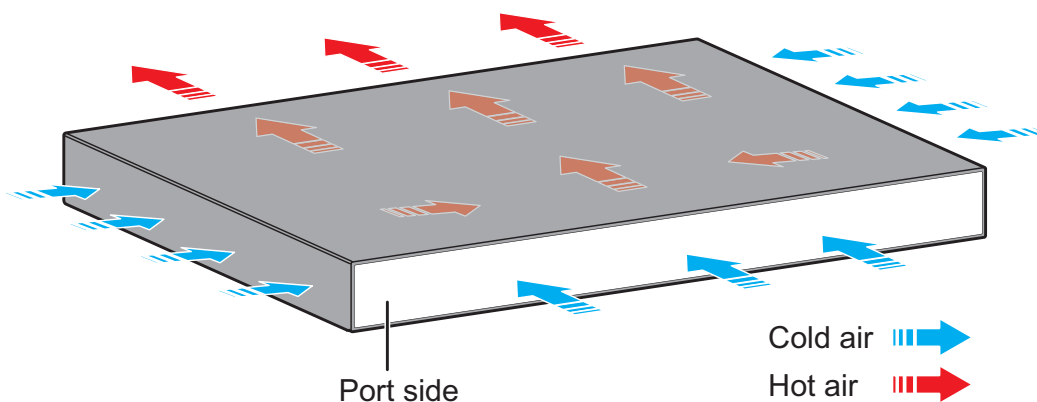
The S5735-S24T4X-I has similar indicators to those on the S5735-S24P4X except that the S5735-S24T4X-I does not have a PoE mode indicator. For details, see **Indicator Description**.

Power Supply Configuration

The S5735-S24T4X-I can use a single power module or double power modules for 1+1 power redundancy.

Heat Dissipation

The S5735-S24T4X-I has three built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1507](#) lists technical specifications of the S5735-S24T4X-I.

Table 5-1507 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	62.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	7.02 kg (15.48 lb)
Stack ports	Not supported
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	55.2 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> Tested according to ATIS standard EEE enabled No PoE power consumption 	36.8 W
Operating temperature	-40°C to +65°C (-40°F to +149°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).

Item	Description
Short-term operating temperature	<p>-40°C to +70°C (-40°F to 158°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 65°C (149°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 65°C (149°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 65°C (149°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +75°C (-40°F to +167°F)
Noise under normal temperature (27°C, sound power)	< 49.5 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010960

5.33 S5735S-S

5.33.1 S5735S-S24T4S-A

Version Mapping

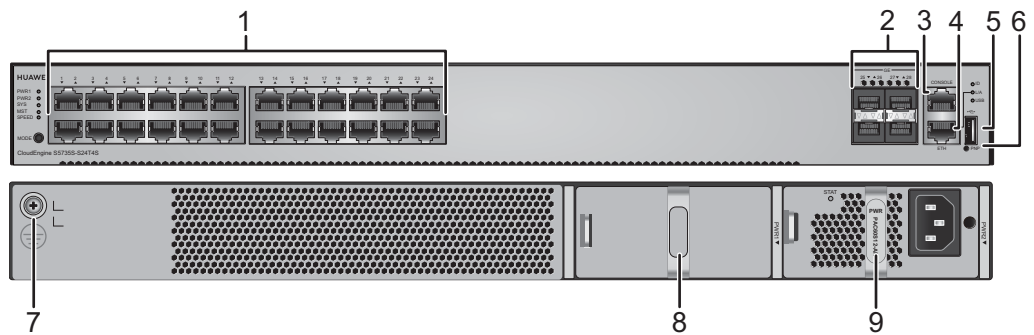
Table 5-1508 lists the mapping between the S5735S-S24T4S-A chassis and software versions.

Table 5-1508 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S24T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-561 S5735S-S24T4S-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1509](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1509 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1510](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1510 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1511](#).

Table 5-1511 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1512](#) describes the attributes of an ETH management port.

Table 5-1512 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

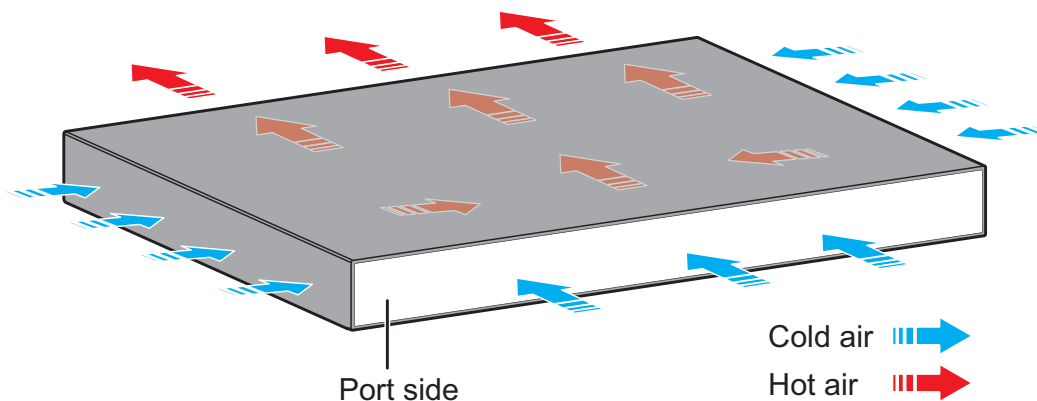
The S5735S-S24T4S-A has similar indicators to those on the S5735S-S24P4X except that the S5735S-S24T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-S24T4S-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735S-S24T4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1513 lists technical specifications of the S5735S-S24T4S-A.

Table 5-1513 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)

Item	Description
Weight (with packaging)	7.89 kg (17.4 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> ● AC input: 100 V AC to 240 V AC, 50/60 Hz ● High-Voltage DC input: 240 V DC ● DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> ● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz ● High-Voltage DC input: 190 V DC to 290 V DC ● DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	44 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	29 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010939

5.33.2 S5735S-S32ST4X-A

Version Mapping

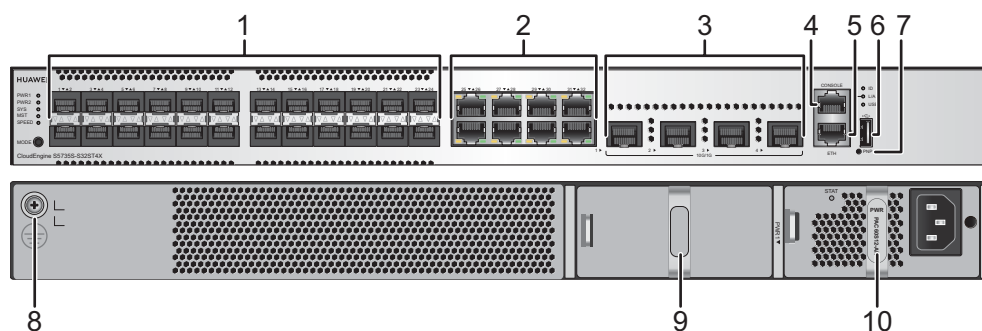
[Table 5-1514](#) lists the mapping between the S5735S-S32ST4X-A chassis and software versions.

Table 5-1514 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S32ST4X-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-562 S5735S-S32ST4X-A appearance



1	Twenty-four 100/1000BASE-X ports Applicable modules: <ul style="list-style-type: none"> • FE optical module • GE optical module (maximum transmission distance ≤ 40 km) • GE copper module (works at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s) 	2	Eight 10/100/1000BASE-T ports
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3	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions) 	4	One console port
5	One ETH management port	6	One USB port
7	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>	8	<p>Ground screw</p> <p>NOTE</p> <p>It is used with a ground cable.</p>
9	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB) 	10	<p>Power module slot 2</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB)

Port Description

100/1000BASE-X port

A 100/1000BASE-X port can send and receive data at 100 Mbit/s or 1000 Mbit/s. [Table 5-1515](#) describes the attributes of a 100/1000BASE-X port.

Table 5-1515 Attributes of a 100/1000BASE-X port

Attribute	Description
Connector type	LC/PC
Optical interface attributes	Depend on the optical module used
Standards compliance	IEEE802.3z
Working mode	100/1000 Mbit/s auto-sensing

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1516](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1516 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1517](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1517 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae

Attribute	Description
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1518](#).

Table 5-1518 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1519](#) describes the attributes of an ETH management port.

Table 5-1519 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

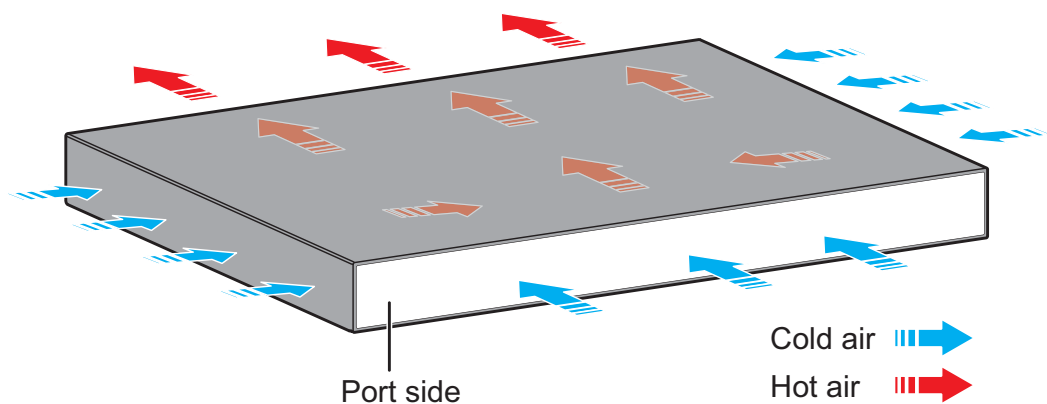
The S5735S-S32ST4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S32ST4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-S32ST4X-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735S-S32ST4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1520 lists technical specifications of the S5735S-S32ST4X-A.

Table 5-1520 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	68.59 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.15 kg (17.97 lb)
Stack ports	Any 10/100/1000BASE-T ports, 100/1000BASE-X ports, or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC

Item	Description
Maximum voltage range	<ul style="list-style-type: none"> ● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz ● High-Voltage DC input: 190 V DC to 290 V DC ● DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	66 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	47 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> ● The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. ● The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. ● The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.

Item	Description
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 59.3 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010932

5.33.3 S5735S-S48T4S-A

Version Mapping

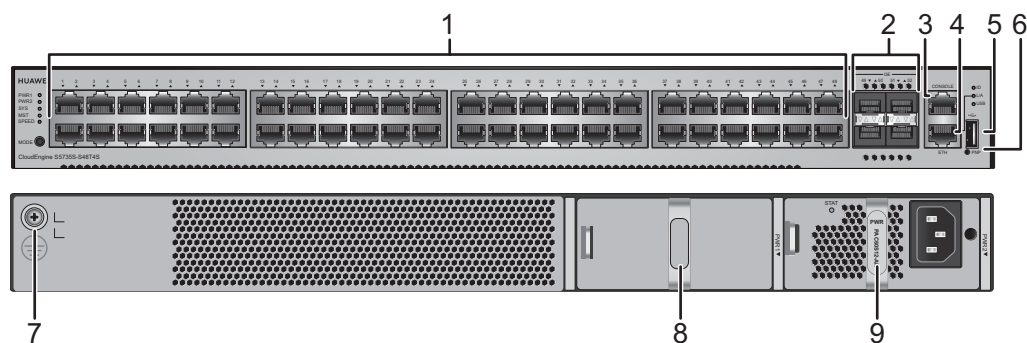
Table 5-1521 lists the mapping between the S5735S-S48T4S-A chassis and software versions.

Table 5-1521 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48T4S-A	V200R019C00 and later versions

Appearance and Structure

Figure 5-563 S5735S-S48T4S-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 1000BASE-X ports</p> <p>Applicable modules:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module • 10GE SFP+ optical module (only used for stack connection, OSXD22N00 not supported, applicable in V200R019C10 and later versions) • 1 m and 3 m SFP+ high-speed copper cables (only used for stack connection, applicable in V200R019C10 and later versions) • 3 m and 10 m SFP+ AOC cables (only used for stack connection, applicable in V200R019C10 and later versions) • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>

7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none">• 60 W AC Power Module (PAC60S12-AR)• 1000 W DC Power Module (PDC1000S12-DB)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none">• 60 W AC Power Module (PAC60S12-AR)• 1000 W DC Power Module (PDC1000S12-DB)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1522](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1522 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

1000BASE-X port

When a 1000BASE-X port uses a GE optical module, it can only transmit and receive data at 1000 Mbit/s and does not support the 100 Mbit/s transmission speed. When a 1000BASE-X port uses a GE copper module, it can transmit and receive data at 10 Mbit/s, 100 Mbit/s, or 1000 Mbit/s. [Table 5-1523](#) describes the attributes of a 1000BASE-X Ethernet optical port.

Table 5-1523 Attributes of a 1000BASE-X Ethernet optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the module used
Standards compliance	IEEE802.3z

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1524](#).

Table 5-1524 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1525](#) describes the attributes of an ETH management port.

Table 5-1525 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3

Attribute	Description
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

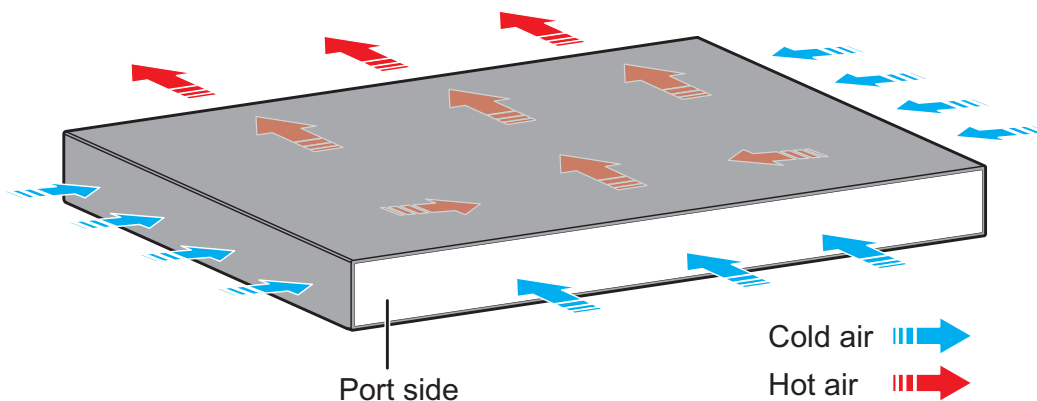
The S5735S-S48T4S-A has similar indicators to those on the S5735S-S24P4X except that the S5735S-S48T4S-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-S48T4S-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735S-S48T4S-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1526 lists technical specifications of the S5735S-S48T4S-A.

Table 5-1526 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)

Item	Description
Weight (with packaging)	8.37 kg (18.45 lb)
Stack ports	Any 10/100/1000BASE-T ports or 1000BASE-X ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none">AC input: 100 V AC to 240 V AC, 50/60 HzHigh-Voltage DC input: 240 V DCDC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none">AC input: 90 V AC to 264 V AC, 47 Hz to 63 HzHigh-Voltage DC input: 190 V DC to 290 V DCDC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	58 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none">Tested according to ATIS standardEEE enabledNo PoE power consumption	41 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010942

5.33.4 S5735S-S24T4X-A

Version Mapping

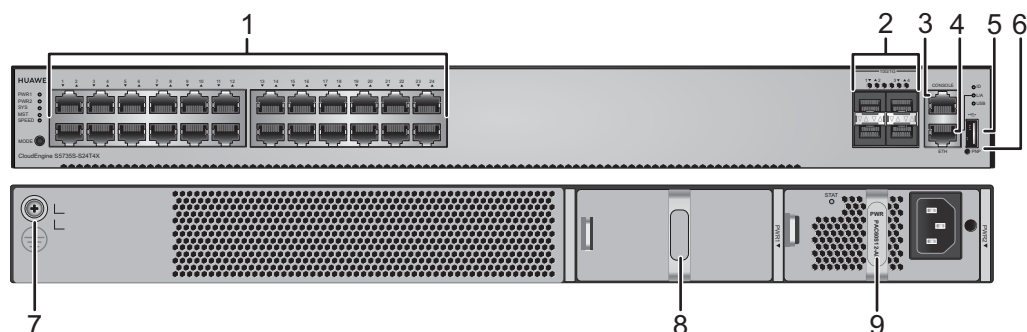
[Table 5-1527](#) lists the mapping between the S5735S-S24T4X-A chassis and software versions.

Table 5-1527 Version mapping

Series	Model	Software Version
S5735-S	S5735S-S24T4X-A	V200R019C10SPC500 and later versions

Appearance and Structure

Figure 5-564 S5735S-S24T4X-A appearance



1	Twenty-four 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB)
9	Power module slot 2 NOTE Applicable power module: <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB) 	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1528](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1528 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1529](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1529 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1530](#).

Table 5-1530 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1531](#) describes the attributes of an ETH management port.

Table 5-1531 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

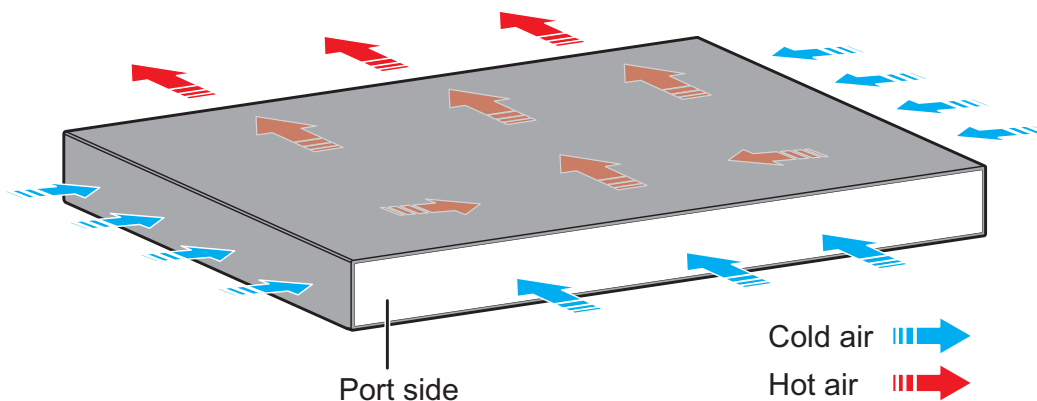
The S5735S-S24T4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S24T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-S24T4X-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735S-S24T4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1532 lists technical specifications of the S5735S-S24T4X-A.

Table 5-1532 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	69.42 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)

Item	Description
Weight (with packaging)	7.89 kg (17.4 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> ● AC input: 100 V AC to 240 V AC, 50/60 Hz ● High-Voltage DC input: 240 V DC ● DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> ● AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz ● High-Voltage DC input: 190 V DC to 290 V DC ● DC input: -38.4 V DC to -72 V DC
Maximum power consumption (100% throughput, full speed of fans)	46 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	31 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) NOTE When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none">• The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year.• The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none">• EMC certification• Safety certification• Manufacturing certification
Part number	98010967

5.33.5 S5735S-S24P4X-A

Version Mapping

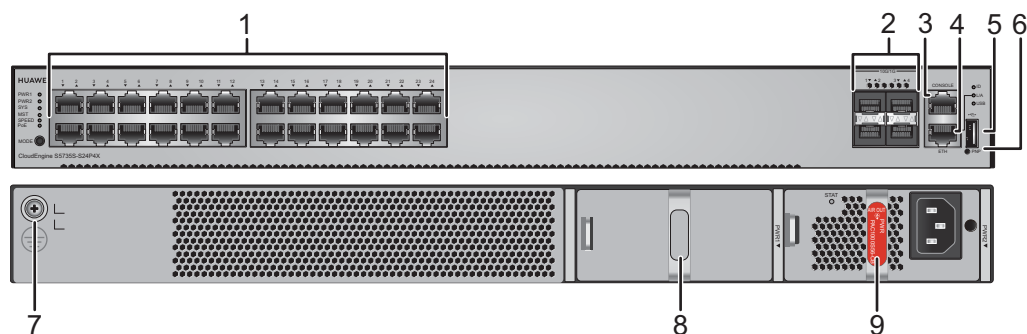
[Table 5-1533](#) lists the mapping between the S5735S-S24P4X-A chassis and software versions.

Table 5-1533 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S24P4X-A	V200R019C10SPC500 and later versions

Appearance and Structure

Figure 5-565 S5735S-S24P4X-A appearance



1	Twenty-four PoE + 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port

5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)
9	Power module slot 2 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1534](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1534 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1535](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1535 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1536](#).

Table 5-1536 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an [Ethernet cable](#). You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1537](#) describes the attributes of an ETH management port.

Table 5-1537 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45

Attribute	Description
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-S24P4X-A has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-S24P4X-A is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1538](#) lists its power supply configurations.

Table 5-1538 Power supply configurations

Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	–	874 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

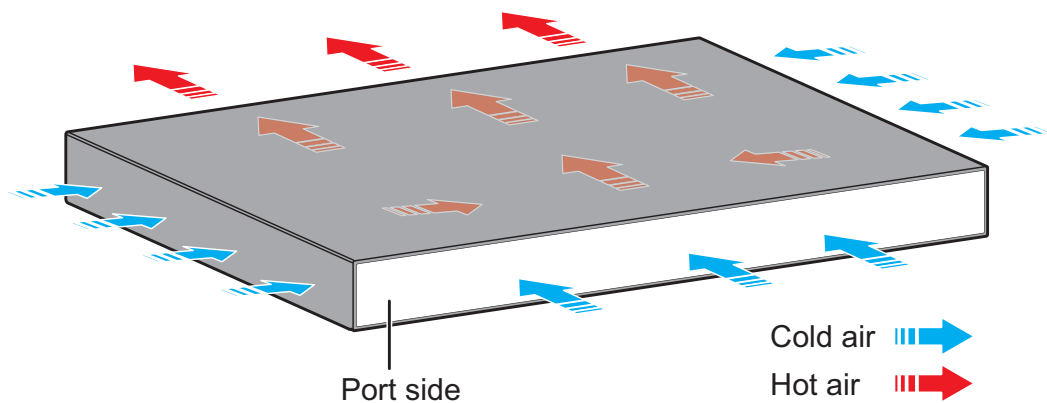
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (110 V)	–	779 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24
1000 W (110 V)	1000 W (110 V)	1558 W	<ul style="list-style-type: none"> 802.3af (15.4 W per port): 24 802.3at (30 W per port): 24

NOTE

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5735S-S24P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1539](#) lists technical specifications of the S5735S-S24P4X-A.

Table 5-1539 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	59.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none">• Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.)• Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.49 kg (18.72 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none">• AC input: 100 V AC to 240 V AC, 50/60 Hz• High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none">• AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz• High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none">• Not providing the PoE function: 65 W• 100% PoE loads: 847 W (PoE: 720 W)

Item	Description
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	51 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing

Item	Description
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010969

5.33.6 S5735S-S48T4X-A

Version Mapping

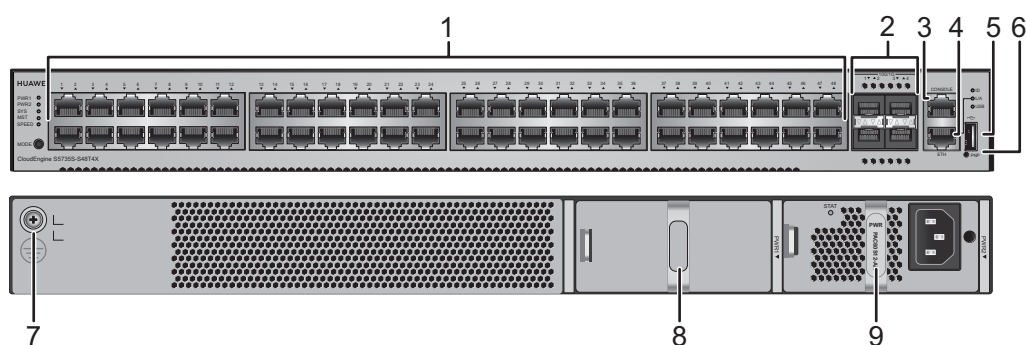
Table 5-1540 lists the mapping between the S5735S-S48T4X-A chassis and software versions.

Table 5-1540 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48T4X-A	V200R019C10SPC500 and later versions

Appearance and Structure

Figure 5-566 S5735S-S48T4X-A appearance



1	Forty-eight 10/100/1000BASE-T ports	2	<p>Four 10GE SFP+ ports</p> <p>Applicable modules and cables:</p> <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	<p>One PNP button</p> <p>NOTICE</p> <p>To restore the factory settings and reset the switch, hold down the button for at least 6 seconds.</p> <p>To reset the switch, press the button.</p> <p>Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.</p>
7	<p>Ground screw</p> <p>NOTE It is used with a ground cable.</p>	8	<p>Power module slot 1</p> <p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB)

9	Power module slot 2	-	-
	<p>NOTE</p> <p>Applicable power module:</p> <ul style="list-style-type: none"> • 60 W AC Power Module (PAC60S12-AR) • 1000 W DC Power Module (PDC1000S12-DB) 		

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1541](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1541 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1542](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1542 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a **console cable**. The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1543](#).

Table 5-1543 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1544](#) describes the attributes of an ETH management port.

Table 5-1544 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to

the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

NOTE

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

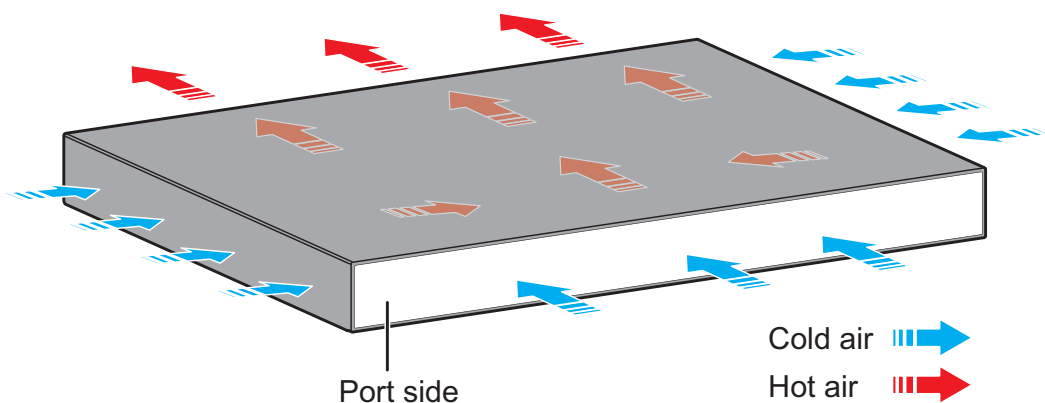
The S5735S-S48T4X-A has similar indicators to those on the S5735-S24P4X except that the S5735S-S48T4X-A does not have a PoE mode indicator. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-S48T4X-A can use a single power module or double power modules for 1+1 power redundancy. Pluggable AC and DC power modules can be used together in the same switch.

Heat Dissipation

The S5735S-S48T4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

[Table 5-1545](#) lists technical specifications of the S5735S-S48T4X-A.

Table 5-1545 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	74.7 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	<ul style="list-style-type: none"> Using AC power modules: ± 6 kV in differential mode, ± 6 kV in common mode Using DC power modules: ± 2 kV in differential mode, ± 4 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.37 kg (18.45 lb)
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Not supported
Rated voltage range	<ul style="list-style-type: none"> AC input: 100 V AC to 240 V AC, 50/60 Hz High-Voltage DC input: 240 V DC DC input: -48 V DC to -60 V DC
Maximum voltage range	<ul style="list-style-type: none"> AC input: 90 V AC to 264 V AC, 47 Hz to 63 Hz High-Voltage DC input: 190 V DC to 290 V DC DC input: -38.4 V DC to -72 V DC

Item	Description
Maximum power consumption (100% throughput, full speed of fans)	59 W
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> • Tested according to ATIS standard • EEE enabled • No PoE power consumption 	40 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).
Short-term operating temperature	-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met: <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded. The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.
Storage temperature	-40°C to +70°C (-40°F to +158°F)

Item	Description
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010968

5.33.7 S5735S-S48P4X-A

Version Mapping

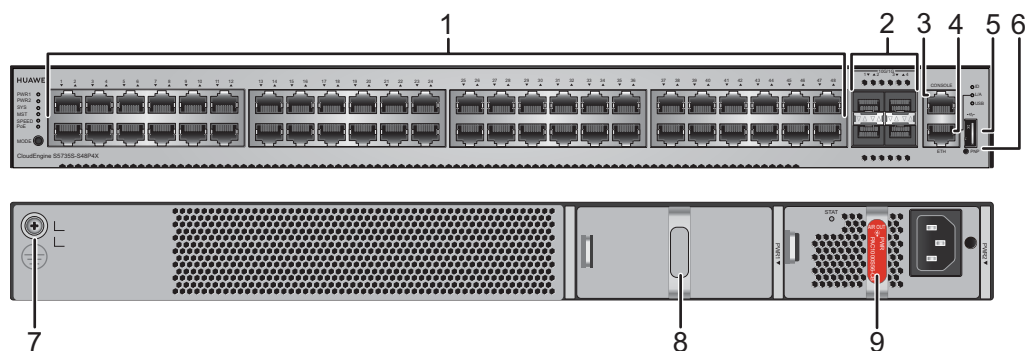
[Table 5-1546](#) lists the mapping between the S5735S-S48P4X-A chassis and software versions.

Table 5-1546 Version mapping

Series	Model	Software Version
S5735S-S	S5735S-S48P4X-A	V200R019C10SPC500 and later versions

Appearance and Structure

Figure 5-567 S5735S-S48P4X-A appearance



1	Forty-eight PoE+ 10/100/1000BASE-T ports	2	Four 10GE SFP+ ports Applicable modules and cables: <ul style="list-style-type: none"> • GE optical module • GE-CWDM optical module • GE-DWDM optical module • GE copper module (100M/1000M auto-sensing) • 10GE SFP+ optical module (OSXD22N00 not supported) • 10GE-CWDM optical module • 10GE-DWDM optical module • 1 m and 3 m SFP+ high-speed copper cables • 3 m and 10 m SFP+ AOC cables • 0.5 m and 1.5 m SFP+ dedicated stack copper cables (used for zero-configuration stacking, applicable in V200R019C10 and later versions)
3	One console port	4	One ETH management port
5	One USB port	6	One PNP button NOTICE To restore the factory settings and reset the switch, hold down the button for at least 6 seconds. To reset the switch, press the button. Resetting the switch will cause service interruption. Exercise caution when you press the PNP button.
7	Ground screw NOTE It is used with a ground cable .	8	Power module slot 1 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)
9	Power module slot 2 NOTE Applicable power module: 6.19 1000 W AC PoE Power Module (PAC1000S56-CB)	-	-

Port Description

10/100/1000BASE-T port

A 10/100/1000BASE-T Ethernet electrical port sends and receives service data at 10/100/1000 Mbit/s, and must use an [Ethernet cable](#). [Table 5-1547](#) describes the attributes of a 10/100/1000BASE-T Ethernet electrical port.

Table 5-1547 Attributes of a 10/100/1000BASE-T Ethernet electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab
Working mode	10/100/1000 Mbit/s auto-sensing
Maximum transmission distance	100 m

10GE SFP+ port

A 10GE SFP+ Ethernet optical port supports auto-sensing to 1000 Mbit/s. It sends and receives service data at 1000 Mbit/s or 10 Gbit/s. [Table 5-1548](#) describes the attributes of a 10GE SFP+ Ethernet optical port.

Table 5-1548 Attributes of a 10GE SFP+ port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used
Standards compliance	IEEE802.3ae
Working mode	GE/10GE auto-sensing

Console port

The console port is connected to a console for on-site configuration. The port must use a [console cable](#). The console port is used when a switch is powered on for the first time. For details about the attributes of a console port, see [Table 5-1549](#).

Table 5-1549 Attributes of a console port

Attribute	Description
Connector type	RJ45
Standards compliance	RS-232
Working mode	Duplex Universal Asynchronous Receiver/Transmitter (UART)
Baud rate	9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, or 115200 bit/s Default value: 9600 bit/s

ETH management port

You can connect a switch to a configuration terminal or network management workstation through the ETH management port to configure the switch locally or remotely. The port must use an **Ethernet cable**. You can choose to download the software package through the ETH management port in the BootLoad menu. File transfer through the ETH management port is faster than transfer through the console port. [Table 5-1550](#) describes the attributes of an ETH management port.

Table 5-1550 Attributes of an ETH management port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3
Working Mode	10/100 Mbit/s auto-sensing
Maximum transmission distance	100 m

In V200R012C00 and later versions, you can log in to the switch that contains the ETH management port for the first time through the ETH port. For details, see "First Login to a Switch" in the *Configuration Guide - Basic Configuration*. If you have logged in to the switch for the first time by pressing and holding the MODE button for 6 seconds or longer and saved the configuration, the default configuration on the ETH port will be cleared. In this case, you cannot log in to the switch for the first time through the ETH port. You are advised to log in to the switch for the first time through the ETH port.

USB port

The USB port can have a USB flash drive connected to upgrade the switch, or transfer configuration files or other files. The USB port can only connect to a USB flash drive that complies with USB 2.0.

 **NOTE**

USB flash drives from different vendors differ in model compatibility and drivers. If a USB flash drive cannot be used, try to replace it with another one from a mainstream vendor. Switches support a maximum of 128 GB USB flash drives.

Indicator Description

The S5735S-S48P4X-A has the same types of indicators as the S5735-S24P4X. For details, see [Indicator Description](#).

Power Supply Configuration

The S5735S-S48P4X-A is a PoE switch. It has two power module slots, each of which can have a 1000 W PoE power module installed. [Table 5-1551](#) lists its power supply configurations.

Table 5-1551 Power supply configurations

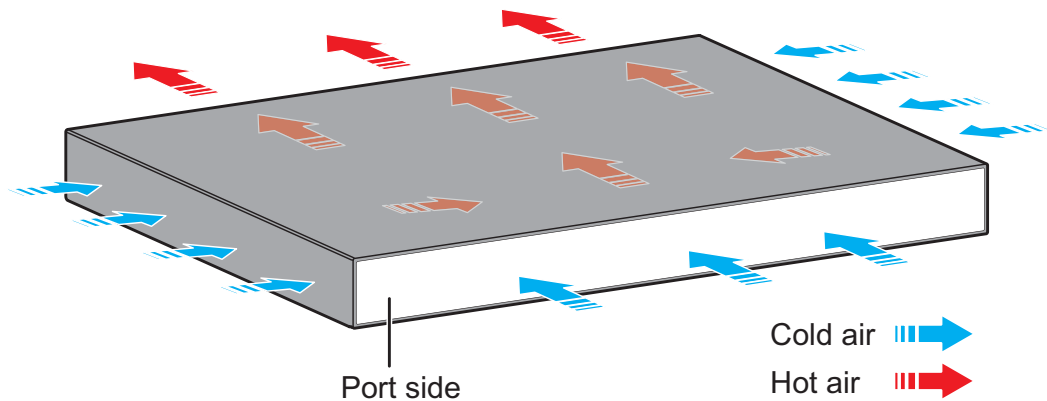
Power Module 1	Power Module 2	Available PoE Power	Maximum Number of Ports (Fully Loaded)
1000 W (220 V)	-	874 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 29
1000 W (110 V)	-	779 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 25
1000 W (220 V)	1000 W (220 V)	1600 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 48
1000 W (110 V)	1000 W (110 V)	1558 W	<ul style="list-style-type: none">802.3af (15.4 W per port): 48802.3at (30 W per port): 48

 **NOTE**

When a switch has two power modules installed, the two power modules work in redundancy mode to provide power for the chassis and in load balancing mode to provide power for PDs.

Heat Dissipation

The S5735S-S48P4X-A has two built-in fans for forced air cooling. Air flows in from the left, right, and front sides, and exhausts from the rear panel.



NOTE

This figure only shows the airflow direction and does not depict the actual device.

Technical Specifications

Table 5-1552 lists technical specifications of the S5735S-S48P4X-A.

Table 5-1552 Technical specifications

Item	Description
Memory (RAM)	1 GB
Flash	512 MB in total. To view the available flash memory size, run the display version command.
Mean time between failures (MTBF)	54.88 years
Mean time to repair (MTTR)	2 hours
Availability	> 0.99999
Service port surge protection	Common mode: ± 7 kV
Power supply surge protection	± 6 kV in differential mode, ± 6 kV in common mode
Dimensions (H x W x D)	<ul style="list-style-type: none"> Basic dimensions (excluding the parts protruding from the body): 43.6 mm x 442.0 mm x 420.0 mm (1.72 in. x 17.4 in. x 16.5 in.) Maximum dimensions (the depth is the distance from ports on the front panel to the handle on the rear panel): 43.6 mm x 442.0 mm x 444.2 mm (1.72 in. x 17.4 in. x 17.49 in.)
Weight (with packaging)	8.74 kg (19.27 lb)

Item	Description
Stack ports	Any 10/100/1000BASE-T ports or 10GE SFP+ ports (applicable in V200R019C10 and later versions)
RTC	Supported
RPS	Not supported
PoE	Supported
Rated voltage range	<ul style="list-style-type: none"> ● AC input: 100 V AC to 240 V AC, 50/60 Hz ● High-Voltage DC input: 240 V DC
Maximum voltage range	<ul style="list-style-type: none"> ● AC input: 90 V AC to 290 V AC, 45 Hz to 65 Hz ● High-Voltage DC input: 190 V DC to 290 V DC
Maximum power consumption (100% throughput, full speed of fans)	<ul style="list-style-type: none"> ● Not providing the PoE function: 77 W ● 100% PoE loads: 1661 W (PoE: 1440 W)
Typical power consumption (30% of traffic load) <ul style="list-style-type: none"> ● Tested according to ATIS standard ● EEE enabled ● No PoE power consumption 	59 W
Operating temperature	-5°C to +50°C (23°F to 122°F) at an altitude of 0-1800 m (0-5906 ft.) <p>NOTE</p> When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.). The switch cannot be started when the ambient temperature is lower than 0°C (32°F).

Item	Description
Short-term operating temperature	<p>-5°C to +55°C (23°F to 131°F) at an altitude of 0-1800 m (0-5906 ft.)</p> <p>NOTE</p> <p>When the altitude is 1800-5000 m (5906-16404 ft.), the highest operating temperature reduces by 1°C (1.8°F) every time the altitude increases by 220 m (722 ft.).</p> <p>The equipment can operate beyond the normal operating temperature range for a short-term period, but the following conditions must be met:</p> <ul style="list-style-type: none"> • The equipment operates at a temperature of over 45°C (113°F) consecutively for at most 96 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for a total of no more than 360 hours in one year. • The equipment operates at a temperature of over 45°C (113°F) for no more in 15 times in one year. <p>The equipment may be damaged or experience unexpected exceptions if any of the preceding limits is exceeded.</p> <p>The equipment cannot start when the temperature is lower than 0°C (32°F). The maximum distance of optical modules used in these conditions cannot exceed 10 km.</p>
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Noise under normal temperature (27°C, sound power)	< 58.9 dB(A)
Relative humidity	5% to 95%, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Certification	<ul style="list-style-type: none"> • EMC certification • Safety certification • Manufacturing certification
Part number	98010970

6 Power Modules

NOTICE

- All power modules (except the 870 W PoE power module) are hot swappable, but it is highly recommended that you power off a switch before removing or installing a power module in the switch to protect personal and equipment safety.
- Before replacing a power module in a switch, make sure that the switch can be powered by the other power module after the power module is removed. Otherwise, services on the switches will be interrupted by a power failure when the power module is removed.
- Before powering off a switch, shut down all of its power supply units.
- A switch can only use power modules matching its chassis model. Using unsupported power modules will cause unexpected risks.
- If a switch has two power modules for 1+1 power redundancy and one of them is powered off, the indicator of this power module will not turn off immediately. This is a normal situation.
- If the total power of powered devices (PDs) connected to a PoE switch exceeds the rated PoE power of a single power module in the switch, the switch does not support 1+1 redundancy of the PoE power modules. If you need to power off one power module, limit the total power of PDs within the PoE power that one power module can provide.

[6.1 60 W AC Power Module \(PAC-60WA-L\)](#)

[6.2 60 W AC Power Module \(PAC60S12-AR\)](#)

[6.3 150 W AC Power Module](#)

[6.4 150 W AC Power Module \(PAC150S12-R\)](#)

[6.5 150 W DC Power Module](#)

[6.6 170 W AC Power Module](#)

[6.7 170 W DC Power Module](#)

[6.8 240 W AC Power Module](#)

- [6.9 260 W AC Power Module](#)
- [6.10 350 W AC Power Module](#)
- [6.11 350 W DC power module](#)
- [6.12 600 W AC Power Module \(PAC-600WA-B\)](#)
- [6.13 600 W AC Power Module \(PAC600S12-CB\)](#)
- [6.14 250 W AC PoE Power Module](#)
- [6.15 500 W AC PoE Power Module](#)
- [6.16 580 W AC PoE Power Module](#)
- [6.17 650 W DC PoE Power Module](#)
- [6.18 1000 W AC PoE Power Module \(PAC1000D5412\)](#)
- [6.19 1000 W AC PoE Power Module \(PAC1000S56-CB\)](#)
- [6.20 1000 W DC Power Module \(PDC1000S12-DB\)](#)
- [6.21 1150 W AC PoE Power Module](#)
- [6.22 RPS1800 Power Supply](#)
- [6.23 870 W PoE Power Module \(Rectifier 15 A\)](#)

6.1 60 W AC Power Module (PAC-60WA-L)

Product Support

Table 6-1 lists the switch models supporting a 60 W AC power module.

Table 6-1 Product support for a 60 W AC power module

Power Module Name	Product Support
PAC-60WA-L	S5721-28X-SI-24S-AC, S5720-28P-SI-AC, S5720-52P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52X-SI-AC, S5720-52X-SI-DC

Appearance

Figure 6-1 Appearance of a 60 W AC power module



Function

Table 6-2 describes the functions of a 60 W AC power module.

Table 6-2 Functions of a 60 W AC power module

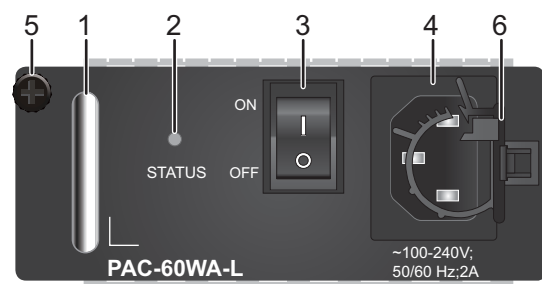
Function	Description
Input protection	Provides protection against input undervoltage condition.
Output protection	Provides protection against output undervoltage, output overvoltage, output overcurrent, and output short circuit conditions.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70°C or 158°F), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the temperature of the power module. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-2 Panel of a 60 W AC power module



1. Handle	2. Indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

Table 6-3 describes the indicator on the 60 W AC power module panel.

Table 6-3 Indicator on the 60 W AC power module panel

Indicator	Color	Description
STATUS	Green	Off: <ul style="list-style-type: none">• The power input is abnormal (no input, overvoltage, or undervoltage).• The power output is abnormal (undervoltage or overtemperature). Steady on: The AC power input is normal.

Specifications

Table 6-4 lists technical specifications of a 60 W AC power module.

Table 6-4 Technical specifications of a 60 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	2 A
Maximum output current	5 A
Rated output voltage	12 V
Maximum output power	60 W
Part number	98010653

6.2 60 W AC Power Module (PAC60S12-AR)

Product Support

Table 6-5 lists the switch models supporting a 60 W AC power module.

Table 6-5 Product support for a 60 W AC power module

Power Module Name	Product Support
PAC60S12-AR	S5735-S24T4X, S5735-S48T4X, S5735-S32ST4X, S5735S-S24T4S-A, S5735S-S32ST4X-A, S5735S-S48T4S-A, S5735-S24T4X-I, S5735S-S24T4X-A, and S5735S-S48T4X-A

Appearance

Figure 6-3 Appearance of a 60 W AC power module (PAC60S12-AR)

Function

Table 6-6 describes the functions of a 60 W AC power module.

Table 6-6 Functions of a 60 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.

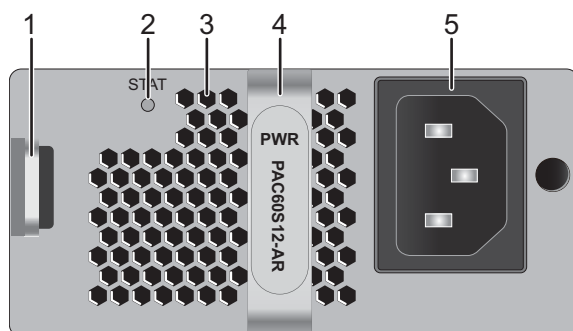
Function		Description
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-4 Panel of a 60 W AC power module (PAC60S12-AR)



1. Lock	2. Indicator	3. Air vent	4. Handle
5. AC power socket	-	-	-

Table 6-7 describes the indicator on a 60 W AC power module panel.

Table 6-7 Description of the indicator on a 60 W AC power module panel

Indicator	Color	Description
STAT: running status indicator	Green	<ul style="list-style-type: none"> Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, undervoltage or overtemperature). Steady on: The power module is working normally. Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

Specifications

Table 6-8 lists specifications of a 60 W AC power module.

Table 6-8 Specifications of a 60 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight	0.68 kg (1.5 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz 240 V DC
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz 190 V DC to 290 V DC
Maximum input current	100 V AC to 240 V AC: 2 A 240 V DC: 2 A
Maximum output current	5 A
Rated output voltage	12 V
Rated output power	60 W
Part number	02312SLE

6.3 150 W AC Power Module

Product Support

Table 6-9 lists the switch models supporting a 150 W AC power module.

Table 6-9 Product support for a 150 W AC power module

Power Module Name	Product Support
LS5M100PWA00 (purplish grey)	S5700-28C-EI, S5700-28C-EI-24S, S5700-52C-EI, S5700-28C-SI, S5700-52C-SI, S5710-28C-LI, S5710-52C-LI
ES0W2PSA0150 (black)	S5700-28P-LI-BAT, S5700-28P-LI-24S-BAT, S5710-28C-EI, S5710-52C-EI, S5720-28P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52P-SI-AC, S5720-52X-SI-AC, S5720-52X-SI-DC, S5720-36C-EI-AC, S5720-36C-EI-DC, S5720-56C-EI-AC, S5720-56C-EI-DC, S5720-36C-EI-28S-AC, S5720-36C-EI-28S-DC, S5720-56C-EI-48S-AC, S5720-56C-EI-48S-DC, S5720-36PC-EI-AC, S5720-56PC-EI-AC, S5730-48C-SI-AC, S5730-68C-SI-AC, S5730S-48C-EI-AC, S5730S-68C-EI-AC, S5730-36C-HI, S5730-44C-HI, S5730-60C-HI, S5730-68C-HI, S5730-44C-HI-24S, S5730-36C-HI-24S, S5720-52X-SI-48S

Appearance

Figure 6-5 Appearance of a 150 W AC power module (LS5M100PWA00)



Figure 6-6 Appearance of a 150 W AC power module (ES0W2PSA0150)

Function

Table 6-10 describes the functions of a 150 W AC power module.

Table 6-10 Functions of a 150 W AC power module

Function	Description
Input protection	Input undervoltage and overvoltage protection is provided.
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 6-7 Panel of a 150 W AC power module (LS5M100PWA00)

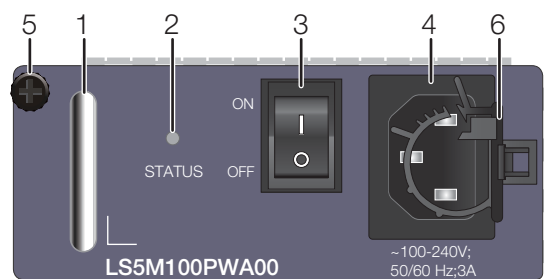
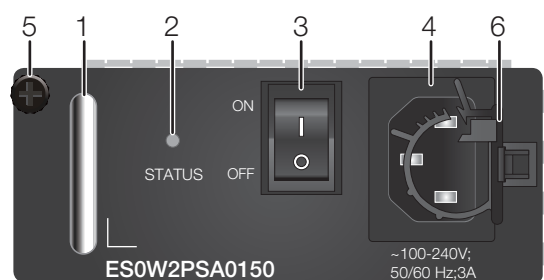


Figure 6-8 Panel of a 150 W AC power module (ES0W2PSA0150)



1. Handle	2. Power status indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

Table 6-11 describes the indicator on the 150 W AC power module panel.

Table 6-11 Description of the indicator on the 150 W AC power module panel

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> The input power is out of range, for example, no AC input power, AC input overvoltage, or AC input undervoltage. The output power is out of range, for example, undervoltage or overtemperature occurs. <p>Steady on: The AC power input is in the normal range.</p> <p>Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.</p>

Specifications

Table 6-12 describes technical specifications of a 150 W AC power module.

Table 6-12 Technical specifications of a 150 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	3 A
Maximum output current	12.5 A
Rated output voltage	12 V
Maximum output power	150 W
Part number	LS5M100PWA00: 02316783 ES0W2PSA0150: 02310JFA

6.4 150 W AC Power Module (PAC150S12-R)

Product Support

Table 6-13 lists the switch models supporting a 150 W AC power module.

Table 6-13 Product support for a 150 W AC power module

Power Module Name	Product Support
PAC150S12-R	S5731-H24T4XC, S5731-H48T4XC, S5731-S24T4X, S5731-S48T4X, S5731S-S24T4X-A, S5731S-S48T4X-A, S5731S-H24T4XC-A, S5731S-H48T4XC-A, S5731S-H24T4S-A, S5731S-H48T4S-A, S5731S-H24T4X-A, S5731S-H48T4X-A, and S5735-S48S4X

Appearance

Figure 6-9 Appearance of a 150 W AC power module (PAC150S12-R)



Function

Table 6-14 describes the functions of a 150 W AC power module.

Table 6-14 Functions of a 150 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.

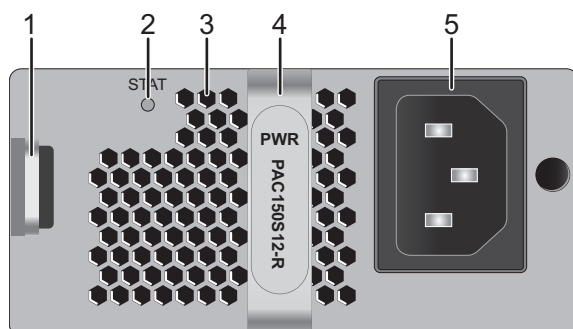
Function	Description
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-10 Panel of a 150 W AC power module (PAC150S12-R)



1. Lock	2. Indicator	3. Air vent	4. Handle
5. AC power socket	-	-	-

Table 6-15 describes the indicator on a 150 W AC power module panel.

Table 6-15 Description of the indicator on a 150 W AC power module panel

Indicator	Color	Description
STAT: running status indicator	Green	<ul style="list-style-type: none">• Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, undervoltage or overtemperature).• Steady on: The power module is working normally.• Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

Specifications

Table 6-16 lists specifications of a 150 W AC power module.

Table 6-16 Specifications of a 150 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	3 A
Maximum output current	12.5 A
Rated output voltage	12 V
Rated output power	150 W
Part number	02312DUY

6.5 150 W DC Power Module

Product Support

Table 6-17 lists switch models supporting a 150 W DC power module.

Table 6-17 Product support for a 150 W DC power module

Power Module Name	Product Support
LS5M100PWD00 (purplish grey)	S5700-28C-EI, S5700-28C-EI-24S, S5700-52C-EI, S5700-28C-SI, S5700-52C-SI, S5710-28C-LI, S5710-52C-LI
ES0W2PSD0150 (black)	S5700-28P-LI-BAT, S5700-28P-LI-24S-BAT, S5710-28C-EI, S5710-52C-EI, S5720-28P-SI-AC, S5720-28X-SI-AC, S5720-28X-SI-DC, S5720-52P-SI-AC, S5720-52X-SI-AC, S5720-52X-SI-DC, S5721-28X-SI-24S-AC, S5720-36C-EI-AC, S5720-36C-EI-DC, S5720-56C-EI-AC, S5720-56C-EI-DC, S5720-36C-EI-28S-AC, S5720-36C-EI-28S-DC, S5720-56C-EI-48S-AC, S5720-56C-EI-48S-DC, S5720-36PC-EI-AC, S5720-56PC-EI-AC, S5730-48C-SI-AC, S5730-68C-SI-AC, S5730S-48C-EI-AC, S5730S-68C-EI-AC, S5730-36C-HI, S5730-44C-HI, S5730-60C-HI, S5730-68C-HI, S5730-44C-HI-24S, S5730-36C-HI-24S, S5720-52X-SI-48S

Appearance

Figure 6-11 Appearance of a 150 W DC power module (LS5M100PWD00)



Figure 6-12 Appearance of a 150 W DC power module (ES0W2PSD0150)



Function

Table 6-18 describes the functions of a 150 W DC power module.

Table 6-18 Functions of a 150 W DC power module

Function	Description
Alarm function	Alarms for various power supply events, such as no power input, air breaker status, ineffective surge protection, and input undervoltage are supported.
Short circuit	-
Surge protection	-
Hot swapping	Supported

Panel Description

Figure 6-13 Panel of a 150 W DC power module (LS5M100PWD00)

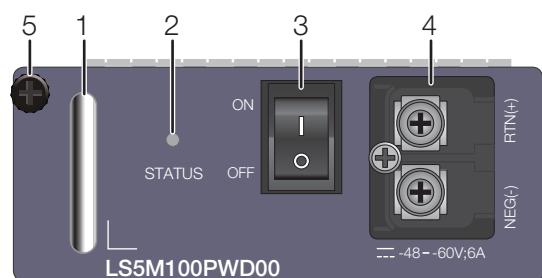
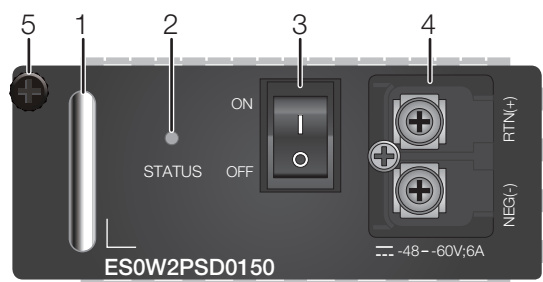


Figure 6-14 Panel of a 150 W DC power module (ES0W2PSD0150)



1. Handle	2. Power status indicator	3. Power switch	4. DC power terminal	5. Captive screw
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Table 6-19 describes indicators on a 150 W DC power module panel.

Table 6-19 Description of indicators on a 150 W DC power module panel

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> The input power is out of range, for example, no DC input power, DC input overvoltage, or DC input undervoltage. The output power is out of range, for example, undervoltage or overtemperature occurs. <p>Steady on: The DC power input is in the normal range.</p> <p>Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.</p>

Specifications

Table 6-20 describes technical specifications of a 150 W DC power module.

Table 6-20 Technical specifications of a 150 W DC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	-48 V DC to -60 V DC

Item	Description
Maximum input voltage range	-36 V DC to -72 V DC
Maximum input current	6 A
Maximum output current	12.5 A
Rated output voltage	12 V
Maximum output power	150 W
Part number	LS5M100PWD00: 02316784 ES0W2PSD0150: 02310JFD

6.6 170 W AC Power Module

Product Support

[Table 6-21](#) lists the switch models supporting a 170 W AC power module.

Table 6-21 Product support for a 170 W AC power module

Power Module Name	Product Support
WOPSA1701	S5700-28C-HI, S5700-28C-HI-24S

Appearance

Figure 6-15 Appearance of the 170 W AC power module



Function

Table 6-22 describes the functions of a 170 W AC power module.

Table 6-22 Functions of a 170 W AC power module

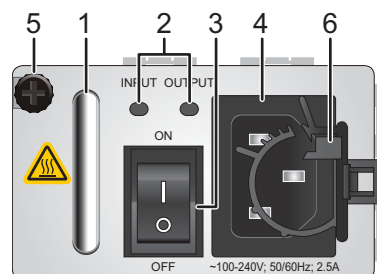
Function	Description
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output overvoltage and short-circuit protection is provided.
Alarm function	Various alarms such as the alarm triggered when there is no power input and the alarm triggered when there is no power output are supported.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 6-16 Panel of a 170 W AC power module



1. Handle	2. Power status indicator	3. Power switch	4. AC power socket
5. Captive screw	6. AC power cable locking strap	-	-

Table 6-23 describes indicators on a 170 W AC power module panel.

Table 6-23 Description of indicators on a 170 W AC power module panel

Indicator	Color	Description
INPUT	Green	<ul style="list-style-type: none"> Off: The AC input power is out of range. Steady on: The AC power input is in the normal range.
OUTPUT	Green	<ul style="list-style-type: none"> Off: The AC output power is out of range. Steady on: The AC output power is in the normal range. Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

Specifications

Table 6-24 describes technical specifications of a 170 W AC power module.

Table 6-24 Technical specifications of a 170 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 70 mm x 205 mm (1.6 in. x 2.8 in. x 8.1 in.)
Weight	< 1.0 kg (2.20 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	2.5 A
Maximum output current	14.2 A
Rated output voltage	12 V

Item	Description
Maximum output power	170 W
Part number	02130966

6.7 170 W DC Power Module

Product Support

[Table 6-25](#) lists the switch models supporting a 170 W DC power module.

Table 6-25 Product support for a 170 W DC power module

Power Module Name	Product Support
ES5M0PSD1700	S5700-28C-HI, S5700-28C-HI-24S

Appearance

Figure 6-17 Appearance of the 170 W DC power module



Function

[Table 6-26](#) describes the functions of a 170 W DC power module.

Table 6-26 Functions of a 170 W DC power module

Function	Description
Input protection	Input overcurrent and undervoltage protection is provided.

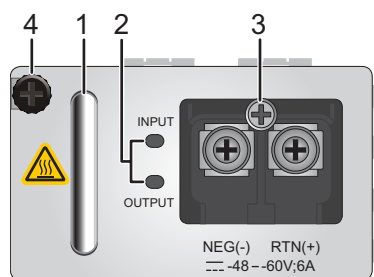
Function	Description
Output protection	Output overvoltage and short-circuit protection is provided.
Alarm function	Various alarms such as the alarm triggered when there is no power input and the alarm triggered when there is no power output are supported.
Reversed connection protection	-
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 6-18 Panel of a 170 W DC power module



1. Handle	2. Power status indicator	3. DC power terminal	4. Captive screw
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Table 6-27 describes indicators on a 170 W DC power module panel.

Table 6-27 Description of indicators on a 170 W DC power module panel

Indicator	Color	Description
INPUT	Green	<ul style="list-style-type: none">Off: The DC input power is out of range.Steady on: The DC power input is in the normal range.
OUTPUT	Green	<ul style="list-style-type: none">Off: The DC output power is out of range.Steady on: The DC output power is in the normal range.Blinking: The output power is out of range, for example, overvoltage, overcurrent, or short circuit occurs.

Specifications

Table 6-28 describes technical specifications of a 170 W DC power module.

Table 6-28 Technical specifications of a 170 W DC power module

Item	Description
Dimensions (H x W x D)	40 mm x 70 mm x 205 mm (1.6 in. x 2.8 in. x 8.1 in.)
Weight	< 1.0 kg (2.20 lb)
Rated input voltage range	-48 V DC to -60 V DC
Maximum input voltage range	-36 V DC to -72 V DC
Input current	6 A
Maximum output current	14.2 A
Rated output voltage	12 V
Maximum output power	170 W
Part number	02310GBM

6.8 240 W AC Power Module

Product Support

Table 6-29 lists the switch models supporting a 240 W AC power module.

Table 6-29 Product support for a 240 W AC power module

Power Module Name	Product Support
PAC240S56-CN	S5720I-12X-PWH-SI-DC

Appearance

Figure 6-19 Appearance of a 240 W AC power module



Function

Table 6-30 describes the functions of a 240 W AC power module.

Table 6-30 Functions of a 240 W AC power module

Function	Description
System power supply and PoE power supply	The power module supports a maximum of 20 W system power and 220 W PoE power.
Input protection	The power module provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	The power module provides protection against output overvoltage, overcurrent, and short-circuit.

Function	Description
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

Panel

Figure 6-20 Panel of a 240 W AC power module

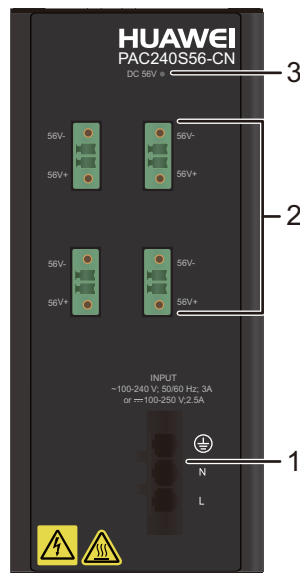


Table 6-31 Description of the panel of a 240 W AC power module

No.	Name	Description
1	3-pin AC/DC input power socket	Connects the power module to an external power supply system using a power cable with a 3-pin plug. NOTE The customer needs to prepare the power cable. The recommended conductor diameter of the power cable is 1.0 mm ² .
2	Four 2-pin DC output power sockets	Connects the power module to a switch using a power cable with a 2-pin plug. NOTE The customer needs to prepare the power cable. The recommended conductor diameter of the power cable is 1.0 mm ² .

No.	Name	Description
3	Output indicator (DC 56 V)	<ul style="list-style-type: none"> Steady on: The power output is normal. Blinking green: The power module is in the output overvoltage or overcurrent protection state. Off: The power output is abnormal or the power module is faulty.

Specifications

Table 6-32 lists the specifications of a 240 W AC power module.

Table 6-32 Specifications of a 240 W AC power module

Item	Description
Dimensions (H x W x D)	150 mm x 60 mm x 133 mm (6.14 in. x 2.36 in. x 5.24 in.)
Weight	1.47 kg
Input voltage range	AC: 100 V AC to 240 V AC, 50/60 Hz DC: 100 V DC to 250 V DC
Input current	AC: 3 A DC: <ul style="list-style-type: none"> 100 V DC to 138 V DC: 2.5 A 138 V DC to 250 V DC: 2 A
Output voltage range	54 V DC to 57 V DC
Rated output voltage	56 V DC
Maximum output power	<ul style="list-style-type: none"> PoE power: 220 W Total power: 240 W
Part number	02131265

6.9 260 W AC Power Module

Product Support

Table 6-33 lists the switch models supporting a 260 W AC power module.

Table 6-33 Product support for a 260 W AC power module

Power Module Name	Product Support
PAC-260WA-E	S5720I-12X-PWH-SI-DC

Appearance

Figure 6-21 Appearance of a 260 W AC power module



Function

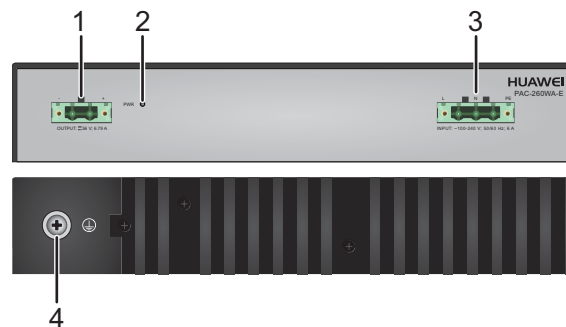
Table 6-34 describes the functions of a 260 W AC power module.

Table 6-34 Functions of a 260 W AC power module

Function	Description
System power supply and PoE power supply	The power module supports a maximum of 20 W system power and 240 W PoE power.
Input protection	The power module provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	The power module provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module is high, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.

Panel

Figure 6-22 Panel of a 260 W AC power module



<p>1. DC output power socket</p> <p>NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	<p>2. PWR power supply indicator</p>	<p>3. AC input power socket</p> <p>NOTE It must be used with the Phoenix connector, which is included in the installation accessory package.</p>	<p>4. Ground screw</p> <p>NOTE It is used with a ground cable.</p>
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Table 6-35 describes the indicator on the 260 W AC power module panel.

Table 6-35 Description of the indicator on the 260 W AC power module panel

Indicator	Color	Description
PWR	-	Off: The power module has no output power or the output power is out of range.
	Green	Steady on: The output power of the power module is in the normal range.

Technical Specifications

Table 6-36 lists technical specifications of a 260 W AC power module.

Table 6-36 Technical specifications of a 260 W AC power module

Item	Description
Dimensions (H x W x D)	43.6 mm x 250.0 mm x 180.0 mm (1.72 in. x 9.84 in. x 7.09 in.)
Weight	2.5 kg (5.51 lb)

Item	Description
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Input current	6 A
Maximum output current	6.79 A
Maximum output power	<ul style="list-style-type: none">PoE power: 240 WTotal power: 260 W
Part number	98010808

6.10 350 W AC Power Module

Version Mapping

[Table 6-37](#) lists the switch models supporting a 350 W AC power module.

Table 6-37 Product support for a 350 W AC power module

Power Module Name	Product Support
PAC-350WA-B	S5710-108C-PWR-HI

Appearance

Figure 6-23 Appearance of a 350 W AC power module



Function

Table 6-38 describes the functions of a 350 W AC power module.

Table 6-38 Functions of a 350 W AC power module

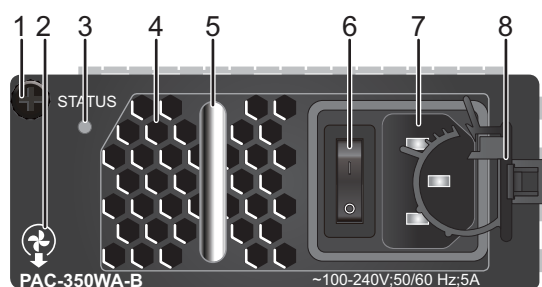
Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-24 Panel of a 350 W AC power module



1. Captive screw	2: Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. Power switch	7. AC power socket	8. AC power cable locking strap

Table 6-39 describes the indicator on the 350 W AC power module panel.

Table 6-39 Description of the indicator on the 350 W AC power module panel

Indicator	Color	Description
STATUS	Green	Off: The AC power input is abnormal (for example, no input, overvoltage, or undervoltage) or AC power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature). Steady on: The power module is working properly.

Specifications

Table 6-40 lists specifications of a 350 W AC power module.

Table 6-40 Specifications of a 350 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.918 kg (2.02 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum input voltage	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current	5 A
Maximum output current	29.17 A
Rated output voltage	12 V
Maximum output power	350 W
Part number	02130971

6.11 350 W DC power module

Product Support

[Table 6-41](#) lists the switch models supporting a 350 W DC power module.

Table 6-41 Product for a 350 W DC power module

Power Module Name	Product Support
PDC-350WA-B	S5720-56C-HI-AC, S5720-32C-HI-24S-AC, S5730-60C-HI-48S, S5730-68C-HI-48S

Appearance

Figure 6-25 Appearance of a 350 W DC power module



Function

Table 6-42 describes the functions of a 350 W DC power module.

Table 6-42 Functions of a 350 W DC power module

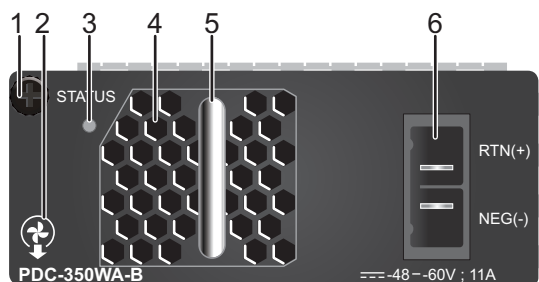
Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-26 Panel of a 350 W DC power module



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. DC power socket	-	-

Table 6-43 describes the indicator on the 350 W DC power module panel.

Table 6-43 Description of the indicator on the 350 W DC power module panel

Indicator	Color	Description
STATUS: running status indicator	Green	<ul style="list-style-type: none"> Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature). Steady on: The power module is working normally.

Specifications

Table 6-44 describes technical specifications of a 350 W DC power module.

Table 6-44 Specifications of a 350 W DC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.72 kg (1.59 lb)
Rated input voltage range	-48 V DC to -60 V DC

Item	Description
Maximum input voltage	-38.4 V DC to -72 V DC
Maximum input current	11 A
Maximum output current	29.17 A
Rated output voltage	12 V
Rated output power	350 W
Part number	02310PQN

6.12 600 W AC Power Module (PAC-600WA-B)

Product Support

[Table 6-45](#) lists the switch models supporting a 600 W AC power module.

Table 6-45 Product support for a 600 W AC power module

Power Module Name	Product Support
PAC-600WA-B	S5720-56C-HI-AC, S5720-32C-HI-24S-AC, S5730-60C-HI-48S, S5730-68C-HI-48S

Appearance

Figure 6-27 Appearance of a 600 W AC power module



Function

Table 6-46 describes the functions of a 600 W AC power module.

Table 6-46 Functions of a 600 W AC power module

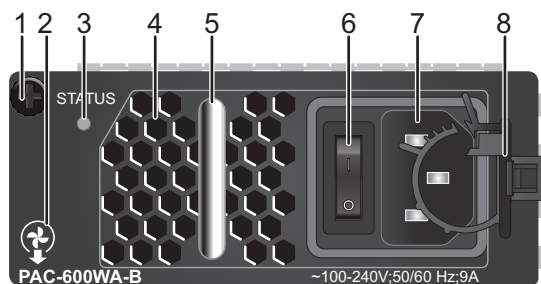
Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-28 Panel of a 600 W AC power module



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. Power switch	7. AC power socket	8. AC power cable locking strap

Table 6-47 describes the indicator on the 600 W AC power module panel.

Table 6-47 Description of the indicator on the 600 W AC power module panel

Indicator	Color	Description
STATUS: running status indicator	Green	<ul style="list-style-type: none"> Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature). Steady on: The power module is working normally.

Specifications

Table 6-48 lists specifications of a 600 W AC power module.

Table 6-48 Specifications of a 600 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	1 kg (2.20 lb)

Item	Description
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage	90 V AC to 290 V AC, 45 Hz to 65 Hz
Maximum input current	9 A
Maximum output current	50 A
Rated output voltage	12 V
Rated output power	600 W
Part number	02310PMH

6.13 600 W AC Power Module (PAC600S12-CB)

Product Support

[Table 6-49](#) lists the switch models supporting a 600 W AC power module.

Table 6-49 Product support for a 600 W AC power module

Power Module Name	Product Support
PAC600S12-CB	S5731-H24T4XC, S5731-H48T4XC, S5731-S24T4X, S5731-S48T4X, S5731S-S24T4X-A, S5731S-S48T4X-A, S5731S-H24T4XC-A, S5731S-H48T4XC-A, S5732-H24S6Q, S5732-H48S6Q, S5731S-H24T4S-A, S5731S-H48T4S-A, S5731S-H24T4X-A, and S5731S-H48T4X-A

Appearance

Figure 6-29 Appearance of a 600 W AC power module (PAC600S12-CB)



Function

Table 6-50 describes the functions of a 600 W AC power module.

Table 6-50 Functions of a 600 W AC power module

Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically resume power supply when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the output voltage restores to the normal range, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.

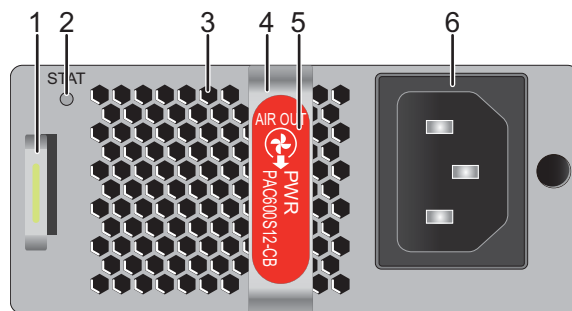
Function	Description
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-30 Panel of a 600 W AC power module (PAC600S12-CB)



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

Table 6-51 describes the indicator on a 600 W AC power module panel.

Table 6-51 Description of the indicator on a 600 W AC power module panel

Indicator	Color	Description
STAT: running status indicator	Green	<ul style="list-style-type: none">• Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or undervoltage).• Steady on: The power module is working normally.• Blinking: The output power is out of range, for example, overcurrent or short circuit occurs.

Specifications

Table 6-52 lists specifications of a 600 W AC power module.

Table 6-52 Specifications of a 600 W AC power module

Item	Description
Dimensions (H x W x D)	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight	0.95 kg (2.09 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz 240 V DC
Maximum input voltage range	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Maximum input current	100 V AC to 240 V AC: 8 A 240 V DC: 4 A
Maximum output current	50 A
Rated output voltage	12 V
Rated output power	600 W
Part number	02312FFU

6.14 250 W AC PoE Power Module

Product Support

Table 6-53 lists the switch models supporting a 250 W AC PoE power module.

Table 6-53 Product support for a 250 W AC PoE power module

Power Module Name	Product Support
W0PSA2500	S5700-28C-PWR-EI, S5700-52C-PWR-EI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5710-28C-PWR-LI, S5710-52C-PWR-LI

Appearance

Figure 6-31 Appearance of the 250 W AC PoE power module



Function

Table 6-54 describes the functions of a 250 W AC PoE power module.

Table 6-54 Functions of a 250 W AC PoE power module

Function	Description
PoE power supply	Complying with IEEE 802.3af and IEEE 802.3at, the PoE power module is able to remotely provide power for the devices of different vendors. IEEE 802.3af supports a maximum of 15.4 W power and IEEE 802.3at supports a maximum of 30 W power.
Input protection	Input overcurrent and undervoltage protection is provided.

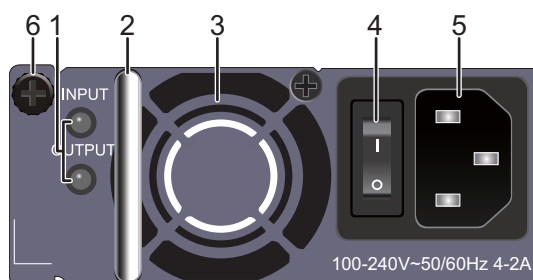
Function	Description
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	-
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 6-32 Panel of a 250 W AC PoE power module



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	-	-

Table 6-55 describes indicators on a 250 W AC PoE power module panel.

Table 6-55 Description of indicators on a 250 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.

Indicator	Color	Description
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none">• Abnormal power fan operation• Output overvoltage• Output overcurrent• Short circuit• Overtemperature

Specifications

Table 6-56 describes technical specifications of a 250 W AC PoE power module.

Table 6-56 Technical specifications of a 250 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Input current	4 A to 2 A
Maximum output current	<ul style="list-style-type: none">• +12 V: 10 A• -53.5 V: 2.5 A
Maximum output power	<ul style="list-style-type: none">• PoE: 130 W• Total: 250 W
Part number	02130878

6.15 500 W AC PoE Power Module

Product Support

Table 6-57 lists the switch models supporting a 500 W AC PoE power modules.

Table 6-57 Product support for a 500 W AC PoE power module

Power Module Name	Product Support
W0PSA5000 (purplish grey)	S5700-28C-PWR-EI, S5700-52C-PWR-EI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5710-28C-PWR-LI, S5710-52C-PWR-LI
PAC-500WA-BE (black)	S5720-28X-PWR-SI-AC, S5720-28X-PWR-SI-DC, S5720-52X- PWR-SI-AC, S5720-52X-PWR-SI-DC, S5720-36C-PWR-EI-AC, S5720-36C-PWR-EI-DC, S5720-56C-PWR-EI-DC, S5720-56C- PWR-EI-AC, S5730-48C-PWR-SI-AC, S5730S-48C-PWR-EI, S5730-68C-PWR-SI-AC, S5730-68C-PWR-SI, S5730S-68C- PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C- PWH-HI, S5730-68C-PWH-HI

Appearance

Figure 6-33 Appearance of a 500 W AC PoE power module (W0PSA5000)**Figure 6-34** Appearance of a 500 W AC PoE power module (PAC-500WA-BE)

Function

Table 6-58 describes the functions of a 500 W AC PoE power module.

Table 6-58 Functions of a 500 W AC PoE power module

Function	Description
PoE power supply	Complying with IEEE 802.3af and IEEE 802.3at, the PoE power module is able to remotely provide power for the devices of different vendors. IEEE 802.3af supports a maximum of 15.4 W power and IEEE 802.3at supports a maximum of 30 W power.
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output undervoltage, overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	-
Surge protection	-
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 6-35 Panel of a 500 W AC PoE power module (W0PSA5000)

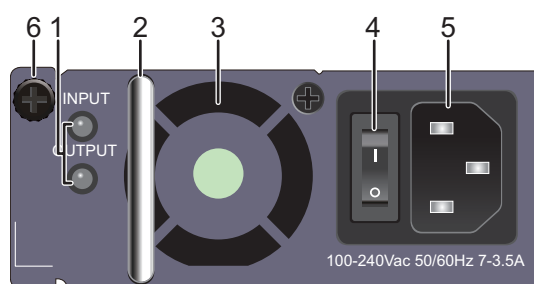
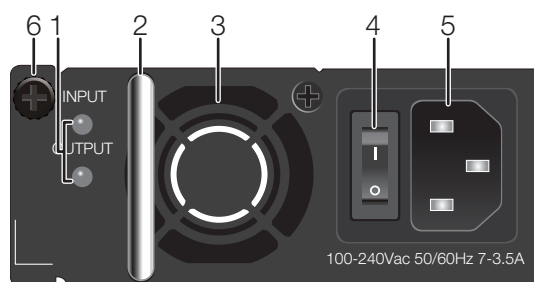


Figure 6-36 Panel of a 500 W AC PoE power module (PAC-500WA-BE)



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	-	-

Table 6-59 describes indicators on a 500 W AC PoE power module panel.

Table 6-59 Description of indicators on a 500 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none"> Abnormal power fan operation Output overvoltage Output overcurrent Short circuit Overtemperature

Specifications

Table 6-60 describes technical specifications of a 500 W AC PoE power module.

Table 6-60 Technical specifications of a 500 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	1.06 kg (2.34 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz

Item	Description
Maximum input voltage range	90 V AC to 264 V AC, 47 Hz to 63 Hz
Maximum input current	7 A to 3.5 A
Maximum output current	<ul style="list-style-type: none"> +12 V: 10 A -53.5 V: 7.11 A
Maximum output power	<ul style="list-style-type: none"> +12 V: 120 W -53.5 V: 380 W (PoE: 369.6 W)
Part number	W0PSA5000: 02130879 PAC-500WA-BE: 02311BXV

6.16 580 W AC PoE Power Module

Product Support

[Table 6-61](#) lists the switch models supporting a 580 W AC PoE power module.

Table 6-61 Product support for a 580 W AC PoE power module

Power Module Name	Product Support
W2PSA0580	S5710-52C-PWR-EI, S5710-28C-PWR-EI-AC, S5710-52C-PWR-EI-AC, S5720-56C-PWR-HI-AC1

Appearance

Figure 6-37 Appearance of the 580 W AC PoE power module



Function

Table 6-62 describes the functions of a 580 W AC PoE power module.

Table 6-62 Functions of a 580 W AC PoE power module

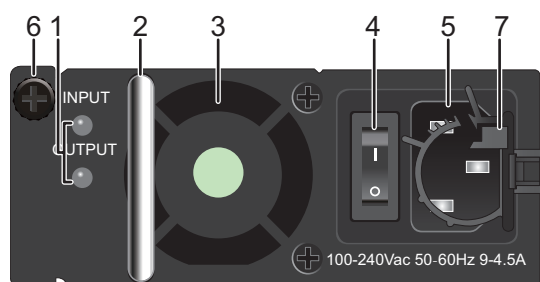
Function	Description
PoE power supply	Provides a maximum of 369.6 W PoE power.
Input protection	Input overcurrent and undervoltage protection is provided.
Output protection	Output overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (75°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel Description

Figure 6-38 Panel of a 580 W AC PoE power module



1. Power status indicator	2. Handle	3. Fan	4. Switch
5. AC power socket	6. Captive screw	7. AC power cable locking strap	-

Table 6-63 describes indicators on a 580 W AC PoE power module panel.

Table 6-63 Description of indicators on a 580 W AC PoE power module panel

Indicator	Color	Description
INPUT	-	Off: The power module receives no input power.
	Green	Steady on: The AC input power is in the normal range.
	Red	Steady on: The AC input power is out of range, for example, undervoltage or overvoltage.
OUTPUT	-	Off: The power module has no output power.
	Green	Steady on: The AC output power is in the normal range.
	Red	Steady on: The power output is out of range. <ul style="list-style-type: none"> ● Abnormal power fan operation ● Output overvoltage ● Output overcurrent ● Short circuit ● Overtemperature

Specifications

Table 6-64 describes technical specifications of a 580 W AC PoE power module.

Table 6-64 Technical specifications of a 580 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	< 1.6 kg (3.53 lb)
Rated input voltage range	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage range	90 V AC to 290 V AC, 47 Hz to 63 Hz
Input current	9 A to 4.5 A
Maximum output current	<ul style="list-style-type: none"> ● +12 V: 16.66 A ● -53.5 V: 7.11 A

Item	Description
Maximum output power	<ul style="list-style-type: none">PoE: 369.6 WTotal: 580 W
Part number	02130953

6.17 650 W DC PoE Power Module

Product Support

[Table 6-65](#) lists the switch models supporting a 650 W DC PoE power module.

Table 6-65 Product support for a 650 W DC PoE power module

Power Module Name	Product Support
PDC-650WA-BE	S5720-28X-PWR-SI-AC, S5720-28X-PWR-SI-DC, S5720-52X-PWR-SI-AC, S5720-52X-PWR-SI-DC, S5720-36C-PWR-EI-AC, S5720-36C-PWR-EI-DC, S5720-56C-PWR-EI-AC, S5720-56C-PWR-EI-DC, S5730-48C-PWR-SI-AC, S5730S-48C-PWR-EI, S5730-68C-PWR-SI-AC, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

Appearance

Figure 6-39 Appearance of a 650 W DC PoE power module (PDC-650WA-BE)



Function

[Table 6-66](#) describes the functions of a 650 W DC PoE power module.

Table 6-66 Functions of a 650 W DC PoE power module

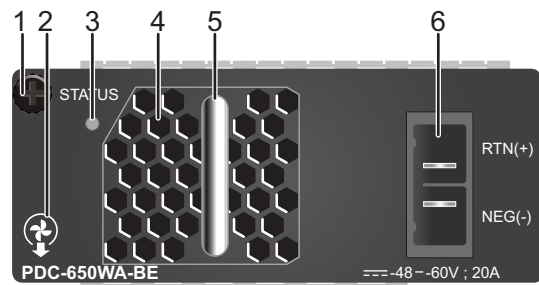
Function		Description
Input protection	Input undervoltage protection	In this protection state, the power module stops supplying power. When the input voltage restores to the normal range, the power module automatically resumes power supply.
	Input overcurrent protection	In this protection state, the power module stops supplying power and cannot automatically start supplying power again when the input current restores to the normal range.
Output protection	Output overvoltage protection	In this protection state, the power module stops supplying power intermittently. When the system recovers from output overvoltage, the power module automatically resumes power supply.
	Output overcurrent protection	In this protection state, the power module supplies power intermittently. When the output current is within a range, the power module automatically resumes power supply.
	Output short-circuit protection	In this protection state, the power module supplies power intermittently. When the short circuit is removed, the power module automatically resumes power supply.
Overtemperature protection		When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping		Supported

 NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-40 Panel of a 650 W DC PoE power module (PDC-650WA-BE)



1. Captive screw	2: Airflow flag (air out)	3. Indicator	4. Fan air vent
5. Handle	6. DC power socket	-	-

Table 6-67 describes the indicator on the 650 W DC PoE power module panel.

Table 6-67 Description of indicator on the 650 W DC PoE power module panel

Indicator	Color	Description
STATUS: running status indicator	Green	<ul style="list-style-type: none"> Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage, overcurrent, short-circuit, or overtemperature). Steady on: The power module is working normally.

Specifications

Table 6-68 describes technical specifications of a 650 W DC PoE power module.

Table 6-68 Technical specifications of a 650 W DC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.83 kg (1.83 lb)
Rated input voltage range	-48 V DC to -60 V DC

Item	Description
Maximum input voltage	-38.4 V DC to -72 V DC
Maximum input current	20 A
Maximum output current	<ul style="list-style-type: none">• +12 V: 22.5 A• -53.5 V: 7.11 A
Rated output power	<ul style="list-style-type: none">• PoE power: 369.6 W• Total power: 650 W
Part number	02270152

6.18 1000 W AC PoE Power Module (PAC1000D5412)

Product Support

[Table 6-69](#) lists the switch models supporting a 1000 W AC PoE power module.

Table 6-69 Product support for a 1000 W AC PoE power module

Power Module Name	Product Support
PAC1000D5412	S5720-52X-PWR-SI-ACF, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5720-56C-PWR-EI-AC1, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

Appearance

Figure 6-41 Appearance of a 1000 W AC PoE power module



Functions

Table 6-70 describes the functions of a 1000 W AC PoE power module.

Table 6-70 Functions of a 1000 W AC PoE power module

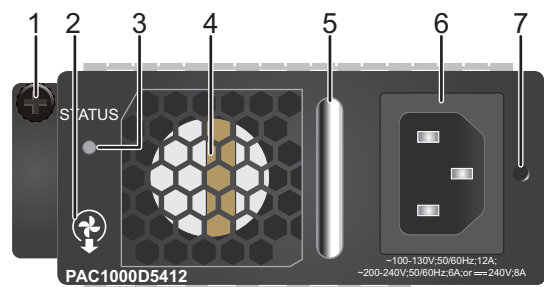
Function	Description
PoE power supply	Provides a maximum of 754.6 W PoE power.
Input protection	Provides protection against input overvoltage and input undervoltage.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (80°C or 176°F), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-42 Panel of a 1000 W AC PoE power module



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Fan
5. Handle	6. AC power socket	7. AC power cable locking strap	-

Table 6-71 describes indicators on a 1000 W AC PoE power module.

Table 6-71 Description of indicator on a 1000 W AC PoE power module

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> The AC power input is abnormal, for example, no AC input power, AC input overvoltage, or AC input undervoltage occurs. The AC power output is abnormal, for example, output undervoltage or overtemperature occurs. <p>Steady on: The AC power input is in normal range.</p>

Specifications

Table 6-72 lists the specifications of a 1000 W AC PoE power module.

Table 6-72 Specifications of a 1000 W AC PoE power module

Item	Description
Dimensions (H x W x D)	42 mm x 99 mm x 204 mm (1.7 in. x 3.9 in. x 8.0 in.)
Weight	1.1 kg (2.43 lb)
Rated input voltage range	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Maximum input voltage range	90 V AC to 290 V AC, 47 Hz to 63 Hz 190 V DC to 290 V DC
Input current	100 V AC to 130 V AC: 12 A 200 V AC to 240 V AC: 6 A 240 V DC: 8 A
Maximum output current	<ul style="list-style-type: none"> 12 V: 20.84 A 53.5 V: 14.58 A 56 V: 13.93 A

Item	Description
Maximum output power	100 V AC to 130 V AC input: <ul style="list-style-type: none">PoE: 754.6 WTotal: 900 W 200 V AC to 240 V AC input and 240 V DC input: <ul style="list-style-type: none">PoE: 754.6 WTotal: 1000 W
Operating altitude	100 V AC to 130 V AC: 0-3000 m 200 V AC to 240 V AC: 0-5000 m 240 V DC: 0-5000 m
Part number	02312EJK

6.19 1000 W AC PoE Power Module (PAC1000S56-CB)

Product Support

Table 6-73 lists the switch models supporting a 1000 W AC PoE power module.

Table 6-73 Product support for a 1000 W AC PoE power module

Power Module Name	Product Support
PAC1000S56-CB	S5731-H24P4XC, S5731-H48P4XC, S5731-S24P4X, S5731-S48P4X, S5731S-S24P4X-A, S5731S-S48P4X-A, S5732-H24UM2CC, S5732-H48UM2CC, S5735-L48P4X-A, S5735S-L48P4S-A, S5735S-L48P4X-A, S5735-S24P4X, S5735-S48P4X, S5735S-S24P4X-A, and S5735S-S48P4X-A

Appearance

Figure 6-43 Appearance of a 1000 W AC PoE power module (PAC1000S56-CB)



Function

Table 6-74 describes the functions of a 1000 W AC PoE power module.

Table 6-74 Functions of a 1000 W AC PoE power module

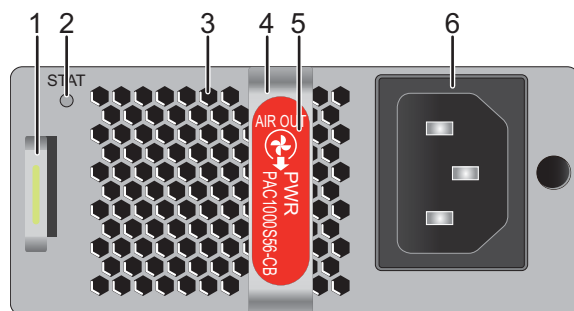
Function	Description
PoE power supply	Provides PoE power.
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-44 Panel of a 1000 W AC PoE power module (PAC1000S56-CB)



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. AC power socket	-	-

Table 6-75 describes the indicator on a 1000 W AC PoE power module.

Table 6-75 Description of the indicator on a 1000 W AC PoE power module

Indicator	Color	Description
STAT: running status indicator	Green	<ul style="list-style-type: none">• Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature).• Steady on: The power module is working normally.

Specifications

Table 6-76 lists specifications of a 1000 W AC PoE power module.

Table 6-76 Specifications of a 1000 W AC PoE power module

Item	Description
Dimensions (H x W x D)	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight	1.1 kg (2.43 lb)
Rated input voltage range	100 V AC to 130 V AC, 50/60 Hz 200 V AC to 240 V AC, 50/60 Hz 240 V DC
Maximum input voltage range	90 V AC to 290 V AC, 45 Hz to 65 Hz 190 V DC to 290 V DC
Input current	100 V AC to 130 V AC: 12 A 200 V AC to 240 V AC: 8 A 240 V DC: 8 A
Maximum output current	100 V AC to 130 V AC input: 16.08 A 200 V AC to 240 V AC input and 240 V DC input: 17.86 A
Output voltage	56 V DC

Item	Description
Maximum output power	100 V AC to 130 V AC input: <ul style="list-style-type: none"> PoE: Depending on the switch model, query the Power Supply Configuration in the chassis based on the actual model. Total: 900 W 200 V AC to 240 V AC input and 240 V DC input: <ul style="list-style-type: none"> PoE: Depending on the switch model, query the Power Supply Configuration in the chassis based on the actual model. Total: 1000 W
Operating altitude	100 V AC to 130 V AC: 0-3000 m (0-9483 ft.) 200 V AC to 240 V AC: 0-5000 m (0-16404 ft.) 240 V DC: 0-5000 m (0-16404 ft.)
Part number	02312KND

6.20 1000 W DC Power Module (PDC1000S12-DB)

Product Support

[Table 6-77](#) lists the switch models supporting a 1000 W DC power module.

Table 6-77 Product support for a 1000 W DC power module

Power Module Name	Product Support
PDC1000S12-DB	S5731-H24T4XC, S5731-H48T4XC, S5731-S24T4X, S5731-S48T4X, S5731S-S24T4X-A, S5731S-S48T4X-A, S5731S-H24T4XC-A, S5731S-H48T4XC-A, S5732-H24S6Q, S5732-H48S6Q, S5731S-H24T4S-A, S5731S-H48T4S-A, S5731S-H24T4X-A, S5731S-H48T4X-A, S5735-S24T4X, S5735-S32ST4X, S5735-S48T4X, S5735-S48S4X, S5735S-S24T4S-A, S5735S-S32ST4X-A, S5735S-S48T4S-A, S5735S-S24T4X-A, and S5735S-S48T4X-A

Appearance

Figure 6-45 Appearance of a 1000 W DC power module (PDC1000S12-DB)



Function

Table 6-78 describes the functions of a 1000 W DC power module.

Table 6-78 Functions of a 1000 W DC power module

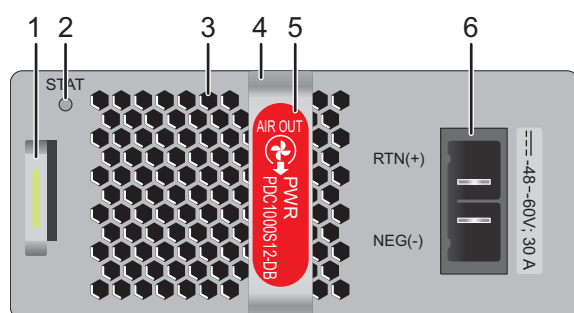
Function	Description
Input protection	Provides protection against input overvoltage, input undervoltage, and input overcurrent.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short circuits.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold, the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-46 Panel of a 1000 W DC power module (PDC1000S12-DB)



1. Lock	2. Indicator	3. Fan air vent	4. Handle
5. Airflow flag (air out)	6. DC power socket	-	-

Table 6-79 describes the indicator on a 1000 W DC power module.

Table 6-79 Description of the indicator on a 1000 W DC power module

Indicator	Color	Description
STAT: running status indicator	Green	<ul style="list-style-type: none"> Off: The power input is abnormal (for example, no input, overvoltage, or undervoltage) or the power output is abnormal (for example, overvoltage or overtemperature). Steady on: The power module is working normally.

Specifications

Table 6-80 lists specifications of a 1000 W DC power module.

Table 6-80 Specifications of a 1000 W DC power module

Item	Description
Dimensions (H x W x D)	40 mm x 90 mm x 215 mm (1.6 in. x 3.5 in. x 8.5 in.)
Weight	1.02 kg (2.25 lb)
Rated input voltage range	-48 V DC to -60 V DC

Item	Description
Maximum input voltage range	-38.4 V DC to -72 V DC
Maximum input current	30 A
Maximum output current	83.3 A
Output voltage	12 V DC
Maximum output power	1000 W
Operating altitude	0-5000 m (0-16404 ft.)
Part number	02312QJK

6.21 1150 W AC PoE Power Module

Product Support

Table 6-81 lists the switch models supporting a 1150 W AC PoE power module.

Table 6-81 Product support for a 1150 W AC PoE power module

Power Module Name	Product Support
W2PSA1150	S5710-52C-PWR-EI, S5720-52X-PWR-SI-ACF, S5720-56C-PWR-HI-AC, S5710-108C-PWR-HI, S5720-56C-PWR-EI-AC1, S5730-68C-PWR-SI, S5730S-68C-PWR-EI, S5730-36C-PWH-HI, S5730-44C-PWH-HI, S5730-60C-PWH-HI, S5730-68C-PWH-HI

Appearance

Figure 6-47 Appearance of a 1150 W AC PoE power module (W2PSA1150)



Figure 6-48 shows a 1150 W AC PoE power module installed on a switch.

Figure 6-48 1150 W AC PoE power module on a switch



NOTE

If a switch uses 1150 W power modules, it is recommended that the switch be installed in an 800 mm or deeper standard cabinet. If the switch is installed in a 600 mm deep cabinet, the rear door of the cabinet cannot be closed.

Functions

Table 6-82 describes the functions of a 1150 W AC PoE power module.

Table 6-82 Functions of a 1150 W AC PoE power module

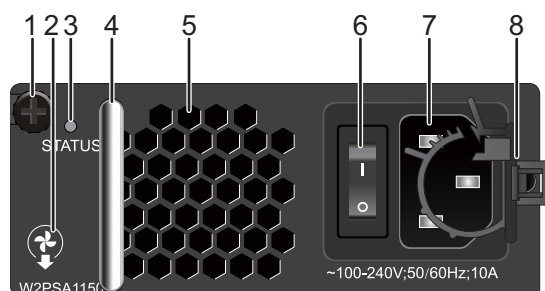
Function	Description
PoE power supply	Provides a maximum of 785.4 W PoE power.
Input protection	Provides protection against input overcurrent and input undervoltage.
Output protection	Provides protection against output overvoltage, output overcurrent, and output short-circuit.
Overtemperature protection	When the temperature of the power module exceeds a specified threshold (70°C), the power module stops supplying power. When the temperature falls into the normal range, the power module automatically resumes power supply.
Hot swapping	Supported

NOTE

When a power module enters overtemperature protection state, take measures to lower the ambient temperature. The power module can automatically start supplying power again when the temperature falls within the normal range.

Panel

Figure 6-49 Panel of a 1150 W AC PoE power module (W2PSA1150)



1. Captive screw	2. Airflow flag (air out)	3. Indicator	4. Handle
5. Fan	6. Power switch	7. AC power socket	8. AC power cable locking strap

Table 6-83 describes indicators on a 1150 W AC PoE power module panel.

Table 6-83 Description of indicators on a 1150 W AC PoE power module panel

Indicator	Color	Description
STATUS	Green	<p>Off:</p> <ul style="list-style-type: none"> The AC power input is abnormal, for example, no AC input power, AC input overvoltage, or AC input undervoltage occurs. The AC power output is abnormal, for example, output undervoltage or overtemperature occurs. <p>Steady on: The AC power input is in the normal range.</p> <p>Blinking: The AC power output is abnormal, for example, overvoltage, overcurrent, or short circuit occurs.</p>

Specifications

Table 6-84 lists the specifications of a 1150 W AC PoE power module.

Table 6-84 Technical specifications of a 1150 W AC PoE power module

Item	Description
Dimensions (H x W x D)	41.4 mm x 100.0 mm x 281.0 mm (1.63 in. x 3.9 in. x 11.1 in.)
Weight	< 1.6 kg (3.53 lb)
Rated input voltage	100 V AC to 240 V AC, 50/60 Hz
Maximum input voltage	90 V AC to 290 V AC, 45 Hz to 65 Hz
Input current	10 A
Maximum output current	<ul style="list-style-type: none"> • +12 V: 29.17 A • -53.5 V: 14.95 A
Maximum output power	<ul style="list-style-type: none"> • PoE: 785.4 W (220 V)/446.6 W (110 V) • Total: 1150 W (220 V)/800 W (110 V)
Part number	02130984

6.22 RPS1800 Power Supply

Product Support

Table 6-85 lists the mapping between switch models and the RPS1800 power supply.

Table 6-85 Mapping between switch models and the RPS1800 power supply

Power Module Name	Product Support
RPS1800 power supply	<p>S5700-LI, S5700S-LI, S5710-X-LI, S5720-X-LI, S5720-P-LI, S5720S-SI, S5720-X-EI, S5720-P-EI, S5720S-28X-LI-24S-AC, S5720-28X-SI-24S-AC, S5720-28X-SI-24S-DC, and S5700-26X-SI-12S-AC</p> <p>NOTE The S5720-16X-PWH-LI-AC, S5700-10P-PWR-LI-AC, and S5700-10P-LI-AC do not support the RPS.</p>

Appearance

Figure 6-50 shows the appearance of an RPS1800 power supply.

Figure 6-50 Appearance of an RPS1800 power supply



Function

The RPS1800 is a redundant power supply that ensures seamless failover if the internal power module of a switch fails. The RPS1800 can detect the failure of the internal power module on a connected switch and immediately supply power to this switch. The switch can continue operating without a restart.

The RPS1800 has the following features:

- For non-PoE switches, the RPS1800 can provide 6:1 power redundancy without an 870 W PoE power module:
 - The RPS1800 can connect to a maximum of six switches and ensure seamless failover for at most one switch if the internal power module of the switch fails.
 - When the internal power module of the switch powered by the RPS1800 recovers, the RPS1800 immediately returns to the backup state.
 - Among the six DC output ports, port 1 has the highest priority, and the other ports have the same priority. When the RPS1800 connects to six switches, the switch connected to port 1 preferentially receives power from the RPS1800.
- For S5700-LI and S5700S-LI PoE switches, the RPS1800 supports the forcible PoE power supply mode (default) and the 6:1 power cold redundancy mode.

Forcible PoE power supply mode:

- The RPS1800 must be configured with one or two 870 W PoE power modules.
- The forcible PoE power supply mode is the default mode for the PoE switches connected to the RPS1800. In this mode, the RPS1800 provides PoE power supply to the PoE switches. When configured with one 870 W PoE power module, the RPS1800 can provide PoE power supply for only one PoE switch. When configured with two 870 W PoE power modules, the RPS1800 can provide PoE power supply for two PoE switches, 800 W PoE power for each switch.
- The PoE power provided by the RPS1800 and the PoE power of a switch's internal power modules do not accumulate. That is, when a PoE switch is connected to the RPS1800, its maximum PoE power is 800 W.
- When using 110 V power input, each 870 W PoE power module can provide only 400 W of PoE power. In this case, an RPS1800 must be configured with two 870 W PoE power modules if it is used to provide PoE power supply. Additionally, only one port of the RPS1800 can provide PoE power supply for a switch.

- The RPS1800 provides power redundancy for system and PoE power modules of the connected PoE switches. However, it can provide power redundancy for only two PoE switches at the same time.
- The six DC output ports have the same priority.
- You can use the **rps cold-backup** command to switch to the 6:1 power cold redundancy mode. The S5700-28P-PWR-LI-AC and S5700-52P-PWR-LI-AC do not support the 6:1 power cold redundancy mode.

6:1 power cold redundancy mode:

- If the RPS1800 has no 870 W PoE power module, it provides the same functions for PoE switches as it does for non-PoE switches.
 - If the RPS1800 has 870 W PoE power modules installed, it provides power redundancy for the system and PoE power modules of PoE switches but does not provide forcible PoE power supply for the switches.
 - The RPS1800 can provide PoE power redundancy for only one switch at a time. It requires only one 870 W PoE power module when using 220 V power input and requires two 870 W PoE power module when using 110 V power input.
- For S5720-LI PoE switches, the RPS1800 supports the 6:1 power cold redundancy mode.

6:1 power cold redundancy mode:

- If the RPS1800 has no 870 W PoE power module, it provides the same functions for PoE switches as it does for non-PoE switches.
- If the RPS1800 has 870 W PoE power modules installed, it provides power redundancy for the system and PoE power modules of PoE switches but does not provide forcible PoE power supply for the switches.
- The RPS1800 can provide PoE power redundancy for only one switch at a time. It requires only one 870 W PoE power module when using 220 V power input and requires two 870 W PoE power module when using 110 V power input.

NOTE

The 870 W PoE power modules and RPS cables are not hot swappable.

The RPS1800 only provides power redundancy for switches and cannot power on a switch directly.

Application

The RPS1800 can be deployed on various networks to ensure non-stop operation of the networks. [Figure 6-51](#) and [Figure 6-52](#) show different deployments of the RPS1800.

When an RPS1800 uses the same external power supply system as the connected switches, it can prevent service interruption caused by failures of the switches' internal power modules. When an RPS1800 uses a different external power supply system than the connected switches, it can prevent service interruption caused by failures of switches' internal power modules and external power supply system. Therefore, this deployment is more reliable.

Figure 6-51 Same external power supply system for RPS1800 and connected switches

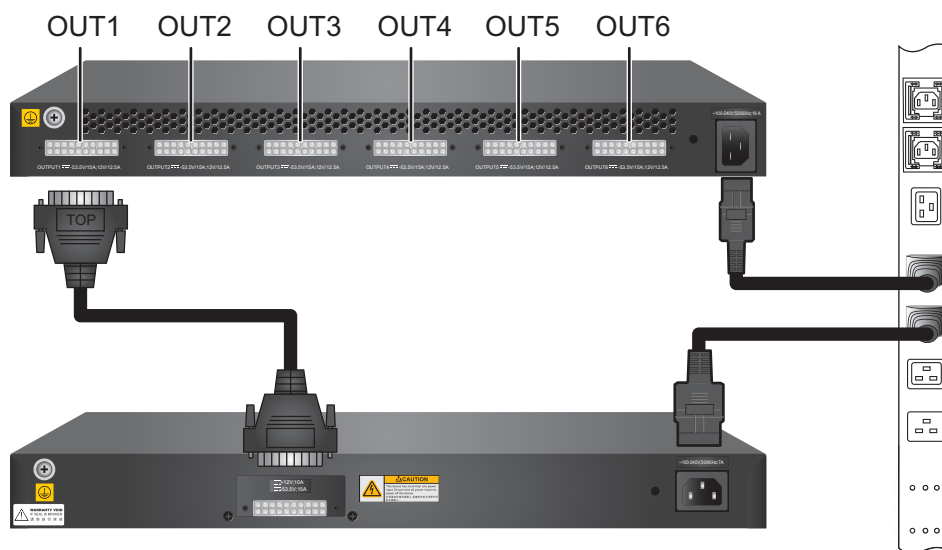
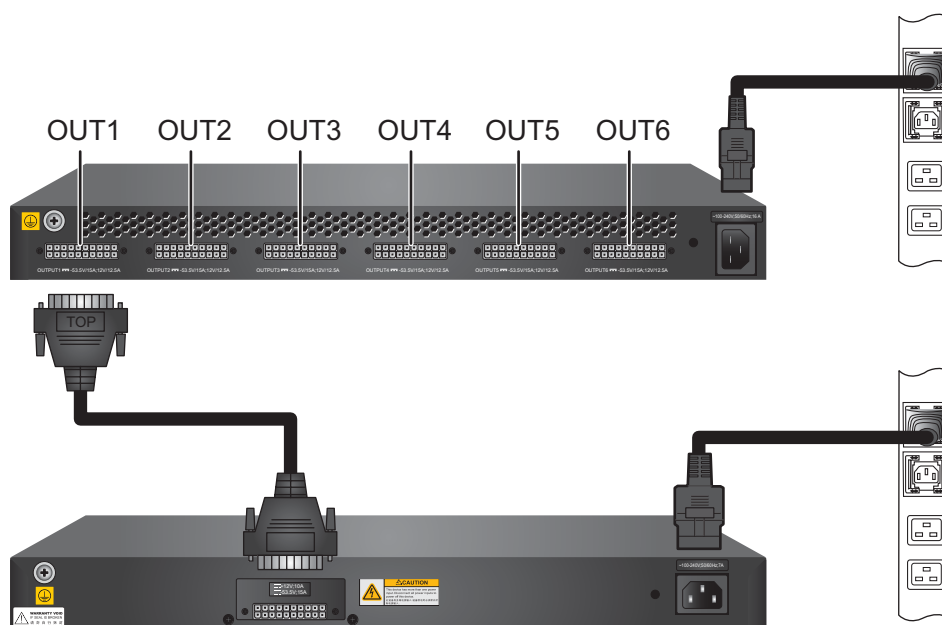


Figure 6-52 Different external power supply systems for RPS1800 and connected switches

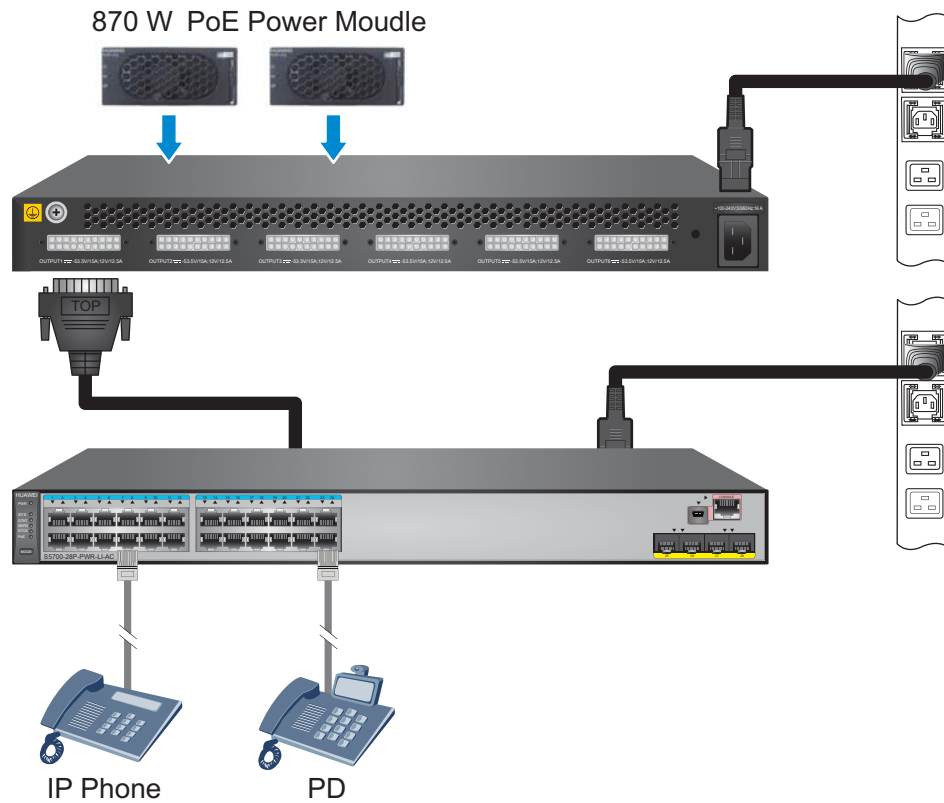


If one of switches connected to the RPS1800 encounters an internal power module failure, the RPS1800 provides seamless failover for the switch. Then the RPS1800 does not provide power backup for the other switches connected until the internal power module of the faulty switch is recovered or replaced.

If more than one connected switch has an internal power module failure, the RPS1800 preferentially provides power for the switch connected to port 1. If the switch connected to port 1 has an internal power module failure when the RPS1800 is providing power for a switch connected to another port, the RPS1800 immediately stops supplying power for this switch and starts providing power to the switch connected to port 1.

If the RPS1800 has 870 W PoE power modules installed, it can provide PoE power for PoE switches, as shown in **Figure 6-53**.

Figure 6-53 PoE power supply for connected switches



Panel Description

Figure 6-54 and **Figure 6-55** show the appearance of an RPS1800 power supply.

Figure 6-54 Front view of an RPS1800 power supply

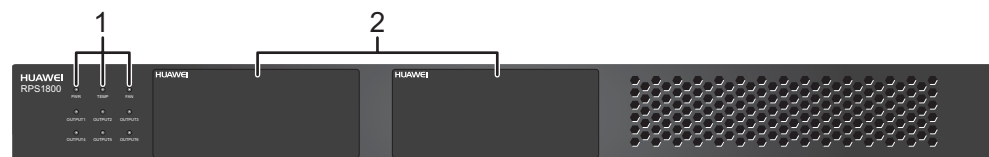
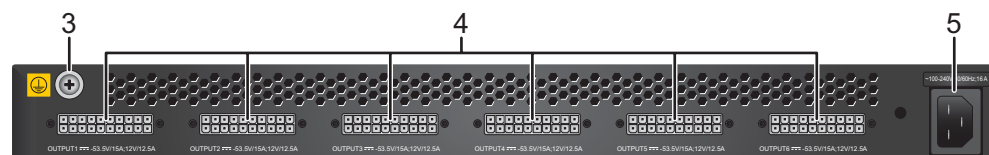


Figure 6-55 Rear view of an RPS1800 power supply



1. RPS power indicators	2. Two swappable power module slots NOTE 870 W PoE power modules can be installed in the slots.	3. Ground screw	4. Six DC output ports NOTE The DC output ports connect to switches through RPS cables.	5. AC power socket NOTE The AC power socket connects to an AC power source through an RPS1800 power cable.
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Table 6-86 describes the indicators on the panel of an RPS1800 power supply.

Table 6-86 Indicators on the panel of an RPS1800 power supply

Indicator	Color	Description
PWR	Green	Steady on: The power input is in normal range.
	-	Off: The switch is powered off.
TEMP	Green	Steady on: The temperature is in normal range.
	Red	Steady on: The temperature is out of range.
	-	Off: The switch is powered off.
FAN	Green	Steady on: The fan module runs properly.
	-	Off: The switch is powered off.
OUTPUT	Green	Steady on: The RPS power supply is in cold backup state. Blinking: The RPS power supply is providing power.
	Orange	Steady on: The RPS power supply is providing power for one or more switches and is therefore unavailable to supply power for more switches.
	-	Off: The switch is powered off.

Specifications

Table 6-87 describes technical specifications of an RPS1800 power supply.

Table 6-87 Technical specifications of an RPS1800 power supply

Item	Description (Without Power Modules Installed)	Description (with One Power Module Installed)	Description (with Two Power Modules Installed)
Dimensions (H x W x D)	43.6 mm x 442.0 mm x 310.0 mm (1.72 in. x 17.4 in. x 12.2 in.)		
Weight	4.0 kg	5.5 kg	7.0 kg
Operating temperature	0°C to 50°C (at 0-2000 m altitude)		
Storage temperature	-40°C to +70°C		
Relative humidity	5% RH to 95% RH, noncondensing		
Airflow direction	Air flows in through the DC output ports side and flows out through the power module side.		
Rated input voltage	220/110 V AC, 50/60 Hz		
Input voltage range	200 V AC to 240 V AC (220 V rated voltage input)/100 V AC to 120 V AC (110 V rated voltage input), 50/60 Hz		
Input current	12 A		
Maximum output current	12 V: 11.5 A	<ul style="list-style-type: none"> 12 V: 11.5 A -53.5 V: 15 A (input voltage range: 200 V AC to 240 V AC) 	<ul style="list-style-type: none"> 12 V: 11.5 A -53.5 V: 15 A output per port (input voltage range: 200 V AC to 240 V AC) -53.5 V: 15 A output per port (input voltage range: 100 V AC to 120 V AC, two 870 W PoE power modules required)

Item	Description (Without Power Modules Installed)	Description (with One Power Module Installed)	Description (with Two Power Modules Installed)
Maximum output power	12 V: 140 W	<ul style="list-style-type: none"> 12 V: 140 W -53.5 V: 800 W (input voltage range: 200 V AC to 240 V AC) 	<ul style="list-style-type: none"> 12 V: 140 W -53.5 V: 1600 W (input voltage range: 200 V AC to 240 V AC) -53.5 V: 800 W (input voltage range: 100 V AC to 120 V AC, two 870 W PoE power modules required)
Part number	02353857		

 **NOTE**

Each interface of the RPS provides a maximum of 140 W power for the device and 800 W PoE power for PDs.

6.23 870 W PoE Power Module (Rectifier 15 A)

Product Support

[Table 6-88](#) lists the RPS1800 matching an 870 W PoE power module.

Table 6-88 RPS1800 matching an 870 W PoE power module

Power Module Name	Product Support
LS5W2PSA0870	Supported only in the RPS1800

Appearance

[Figure 6-56](#) shows the appearance of an 870 W PoE power module.

Figure 6-56 Appearance of an 870 W PoE power module

Function

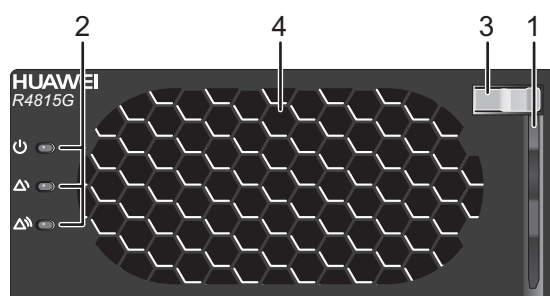
An 870 W PoE power module can be configured on the RPS1800 to convert 100 V AC to 240 V AC power input into -53.5 V DC default power output. The functions of the power module are described in [Table 6-89](#). When the RPS1800 is configured with one 870 W PoE power module, it provides 800 W of PoE power for connected devices. It can be configured with a maximum of two 870 W PoE power modules to provide 1600 W of PoE power for connected devices.

Table 6-89 Functions of an 870 W PoE power module

Function	Description
Input protection	Input undervoltage and overvoltage protection is provided.
Output protection	Output overvoltage, overcurrent, and short-circuit protection is provided.
Overtemperature protection	-
Hot swapping	Not supported

Panel Description




[Figure 6-57](#) shows the panel of an 870 W PoE power module.

Figure 6-57 Panel of an 870 W PoE power module

1. Extensible handle	2. Power status indicator	3. Slide pinch	4. Fan
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Table 6-90 describes indicators on an 870 W PoE power module panel.

Table 6-90 Description of indicators on an 870 W PoE power module panel

Indicator	Color	Description
Power indicator 	Green	Off: No AC input power is provided or the power module is faulty. Steady on: AC input power is provided. Slow blinking: The power module is in manual query state. Fast blinking: Applications are being loaded on the power module.
Alarm indicator 	Yellow	Off: No alarm has been triggered on the power module. Steady on: <ul style="list-style-type: none"> • A power alarm has been generated due to ambient overtemperature. • A power-off alarm has been triggered by high or low ambient temperature. • Input undervoltage and overvoltage occur. • The power module is in dormant state. Blinking: The power module disconnects from the RPS1800.
Fault indicator 	Red	Off: No fault exists on the power module. Steady on: The power output is locked because of output overvoltage or no power output is provided because the power module is faulty.

Specifications

Table 6-91 describes technical specifications of an 870 W PoE power module.

Table 6-91 Technical specifications of an 870 W PoE power module

Item	Description
Dimensions (H x W x D)	40.8 mm x 95.5 mm x 208.0 mm (1.61 in. x 3.76 in. x 8.19 in.)
Weight	< 1.5 kg

Item	Description
Rated input voltage	220/110 V AC, 50/60 Hz
Maximum input voltage range	200 V AC to 240 V AC (220 V rated voltage input)/100 V AC to 120 V AC (110 V rated voltage input), 47 Hz to 63 Hz
Input current	4.7 A
Maximum output power	<ul style="list-style-type: none">● 870 W (voltage range: 200 V to 240 V)● 435 W (voltage range: 100 V to 120 V)
Part number	02310LGV

7 Battery Modules

- [7.1 BAT-4AHA \(Chargeable Lithium Battery\)](#)
- [7.2 BAT-8AHA \(Chargeable Lithium Battery\)](#)
- [7.3 PBB-12AHA \(12AH Lead-Acid Battery Charger Module\)](#)

7.1 BAT-4AHA (Chargeable Lithium Battery)

Product Support

[Table 7-1](#) provides the product support for the BAT-4AHA battery.

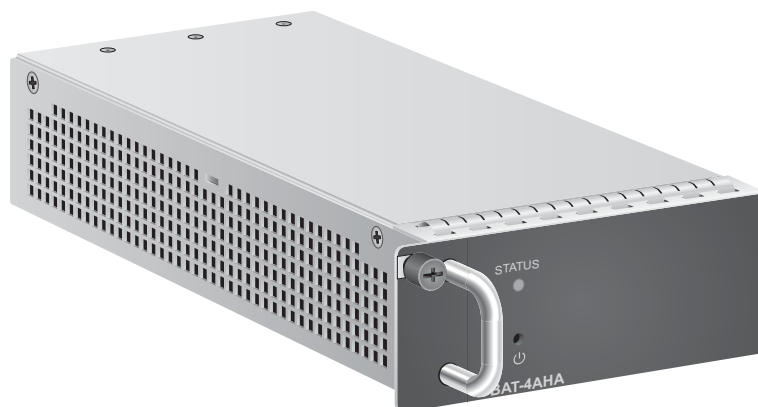
Table 7-1 Product support for the BAT-4AHA battery

Battery Name	Product Support
BAT-4AHA	S5700-LI-BAT Series

Appearance

[Figure 7-1](#) shows a BAT-4AHA battery.

Figure 7-1 BAT-4AHA battery



Function

[Table 7-2](#) describes the functions of a BAT-4AHA battery.

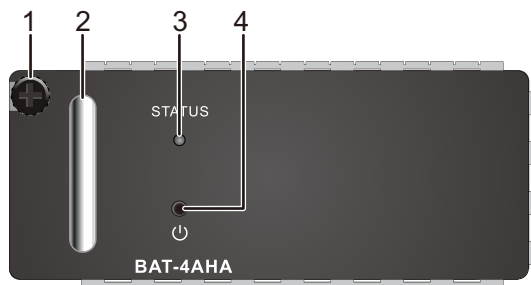
Table 7-2 Functions of a BAT-4AHA battery

Function	Description
Power redundancy	The BAT-4AHA battery can be installed in the battery slot at the rear of an S5700-LI-BAT switch to provide power redundancy. When the external power supply system fails, the battery powers the switch to ensure uninterrupted services.
Protection	The BAT-4AHA battery provides various protection functions, including charge overvoltage protection, charge overcurrent protection, discharge overcurrent protection, undervoltage protection, and short-circuit protection.
Alarm reporting	The BAT-4AHA battery can report alarms on low-power state, low/high temperature, battery failures, and power supply time.
Command line configuration	You can configure the power supply time alarm threshold for the BAT-4AHA battery and turn off the battery using commands.
Overtemperature protection	The battery enters the overtemperature protection state when the charge temperature is out of the range of -5°C to +55°C or when the discharge temperature is out of the range of -10°C to +65°C. The battery restores to the operation state when the charge temperature restores to the range of 0°C to 50°C or the discharge temperature restores to the range of -5°C to +60°C.
Visualized management	You can use the web-based management system to check the battery status and manage the battery.
In-service software upgrade	In V200R005C00 to V200R010C00 versions, the lithium battery software can be upgraded using the upgrade battery-app command.
Hot swapping	The battery is hot swappable.

Panel

Figure 7-2 shows the panel of a BAT-4AHA battery.

Figure 7-2 BAT-4AHA battery panel



1. Captive screw	2. Handle	3. Battery indicator	4: Battery switch button NOTE <ul style="list-style-type: none"> • The switch button is invalid when the battery is not installed in the switch. • If the switch is powered by an AC power supply system, you do not need to turn on the lithium battery by holding down this button after installing the battery in the switch. The lithium battery works in backup mode automatically after it is installed. • If the switch is not connected to an AC power supply system, install the lithium battery, and then hold down this button for 1s to turn on the battery so that the battery starts to power the switch. • You can hold down this button for 1s to turn off the lithium battery only when the switch has no AC power input.
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Table 7-3 describes the indicator on the BAT-4AHA battery panel.

Table 7-3 Description of the BAT-4AHA battery indicator

Indicator	Color	Description
STATUS	Off	<ul style="list-style-type: none"> • The lithium battery is not connected to the switch. • The lithium battery is faulty or its temperature is abnormal.

Indicator	Color	Description
	Green	<ul style="list-style-type: none"> • Steady on: The lithium battery has been fully charged and is working in backup state. • Fast blinking: The lithium battery is supplying power to the switch. • Slow blinking: The switch is charging the lithium battery.

Specifications

Table 7-4 lists specifications of a BAT-4AHA battery.

Table 7-4 Specifications of a BAT-4AHA battery

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.8 kg (1.76 lb)
Charge voltage range	10.8 V DC to 14 V DC
Discharge voltage range	9 V DC to 12.45 V DC
Maximum charge current	1.25 A
Maximum discharge power	50 W; typical: 40 W
Charge environment temperature	0°C to 45°C (32°F to 113°F)
Discharge environment temperature	-5°C to +50°C (23°F to 122°F)
Storage temperature	-20°C to +60°C (-4°F to 140°F)
Relative humidity	5% RH to 95% RH, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)

Item	Description
Maximum storage time (fully charged, no charging)	6 months: < 40°C (104°F); recommended temperature: 20°C to 30°C (68°F to 86°F)
Storage requirements	<p>NOTICE A lithium battery must be charged after the maximum storage time; otherwise, the battery service life decreases or the battery is damaged.</p> <ul style="list-style-type: none"> • The storage environment must comply with ETS 300 029-1-1 and CLASS 1.2. • The storage environment must be free from acidic, alkaline, or other corrosive gases. • Keep a lithium battery away from direct sunlight and more than 2 m from heat sources. • Do not place a battery upside down and avoid collision or stress on the battery.
Rated capacity	4 AH
Life time	<p>> 4 years</p> <p>NOTE The battery life time is obtained under the following condition: The temperature is 20°C to 30°C, and the discharge capacity of the battery exceeds 50% for no more than once a day.</p>
EMC	<ul style="list-style-type: none"> • EN55022 • EN55024
Environmental standards	RoHS
Safety	<ul style="list-style-type: none"> • EN 60950-1: 2006 • EN 62133: 2003
Transportation	UN38.3
Part number	24021354

7.2 BAT-8AHA (Chargeable Lithium Battery)

Product Support

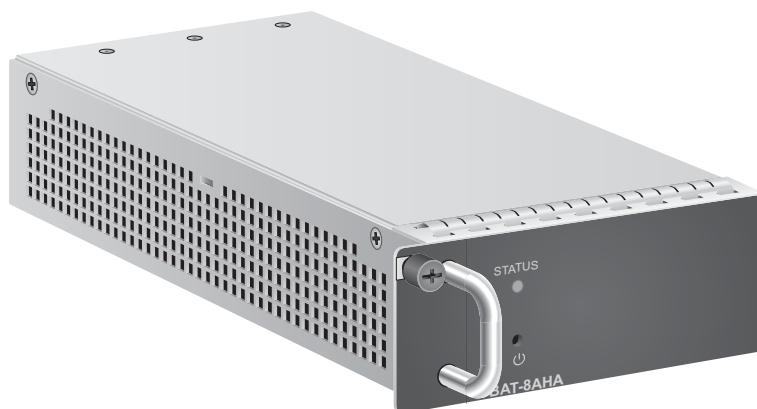
[Table 7-5](#) provides the product support for the BAT-8AHA battery.

Table 7-5 Product support for the BAT-8AHA battery

Battery Name	Product Support
BAT-8AHA	S5700-LI-BAT Series

Appearance

Figure 7-3 shows a BAT-8AHA battery.

Figure 7-3 BAT-8AHA battery

Function

Table 7-6 describes the functions of a BAT-8AHA battery.

Table 7-6 Functions of a BAT-8AHA battery

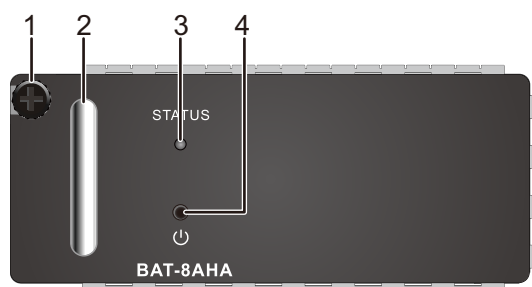
Function	Description
Power redundancy	The BAT-8AHA battery can be installed in the battery slot at the rear of an S5700-LI-BAT switch to provide power redundancy. When the external power supply system fails, the battery powers the switch to ensure uninterrupted services.
Protection	The BAT-8AHA battery provides various protection functions, including charge overvoltage protection, charge overcurrent protection, discharge overcurrent protection, undervoltage protection, and short-circuit protection.
Alarm reporting	The BAT-8AHA battery can report alarms on low-power state, low/high temperature, battery failures, and power supply time.

Function	Description
Command line configuration	You can configure the power supply time alarm threshold for the BAT-8AHA battery and turn off the battery using commands.
Overtemperature protection	The battery enters the overtemperature protection state when the charge temperature is out of the range of -5°C to +55°C or when the discharge temperature is out of the range of -10°C to +65°C. The battery restores to the operation state when the charge temperature restores to the range of 0°C to 50°C or the discharge temperature restores to the range of -5°C to +60°C.
Visualized management	You can use the web-based management system to check the battery status and manage the battery.
In-service software upgrade	In V200R005C00 to V200R010C00 versions, the lithium battery software can be upgraded using the upgrade battery-app command.
Hot swapping	The battery is hot swappable.

Panel

Figure 7-4 shows the panel of a BAT-8AHA battery.

Figure 7-4 BAT-8AHA battery panel



1. Captive screw	2. Handle	3. Battery indicator	4: Battery switch button NOTE <ul style="list-style-type: none"> • The switch button is invalid when the battery is not installed in the switch. • If the switch is powered by an AC power supply system, you do not need to turn on the lithium battery by holding down this button after installing the battery in the switch. The lithium battery works in backup mode automatically after it is installed. • If the switch is not connected to an AC power supply system, install the lithium battery, and then hold down this button for 1s to turn on the battery so that the battery starts to power the switch. • You can hold down this button for 1s to turn off the lithium battery only when the switch has no AC power input.
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Table 7-7 describes the indicator on the BAT-8AHA battery panel.

Table 7-7 Description of the BAT-8AHA battery indicator

Indicator	Color	Description
STATUS	Off	<ul style="list-style-type: none"> • The lithium battery is not connected to the switch. • The lithium battery is faulty or its temperature is abnormal.
	Green	<ul style="list-style-type: none"> • Steady on: The lithium battery has been fully charged and is working in backup state. • Fast blinking: The lithium battery is supplying power to the switch. • Slow blinking: The switch is charging the lithium battery.

Specifications

Table 7-8 lists specifications of a BAT-8AHA battery.

Table 7-8 Specifications of a BAT-8AHA battery

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	1.1 kg (2.43 lb)

Item	Description
Charge voltage range	10.8 V DC to 14 V DC
Discharge voltage range	9 V DC to 12.45 V DC
Maximum charge current	1.25 A
Maximum discharge power	80 W; typical: 45 W
Charge environment temperature	0°C to 45°C (32°F to 113°F)
Discharge environment temperature	-5°C to +50°C (23°F to 122°F)
Storage temperature	-20°C to +60°C (-4°F to 140°F)
Relative humidity	5% RH to 95% RH, noncondensing
Operating altitude	0-5000 m (0-16404 ft.)
Maximum storage time (full power, no charging)	6 months < 40°C (104°F); recommended temperature: 20°C to 30°C (68°F to 86°F)
Storage requirements	NOTICE A lithium battery must be charged after the maximum storage time; otherwise, the battery service life decreases or the battery is damaged. <ul style="list-style-type: none">• The storage environment must comply with ETS 300 029-1-1 and CLASS 1.2.• The storage environment must be free from acidic, alkaline, or other corrosive gases.• Keep a lithium battery away from direct sunlight and more than 2 m from heat sources.• Do not place a battery upside down and avoid collision or stress on the battery.
Rated capacity	8 AH
Life time	> 4 years NOTE The battery life time is obtained under the following condition: The temperature is 20°C to 30°C, and the discharge capacity of the battery exceeds 50% for no more than once a day.
EMC	<ul style="list-style-type: none">• EN55022• EN55024

Item	Description
Environmental standards	RoHS
Safety	<ul style="list-style-type: none"> • EN 60950-1: 2006 • EN 62133: 2003
Transportation	UN38.3
Part number	24021356

7.3 PBB-12AHA (12AH Lead-Acid Battery Charger Module)

Product Support

Table 7-9 provides the product support for the PBB-12AHA lead-acid battery charger module.

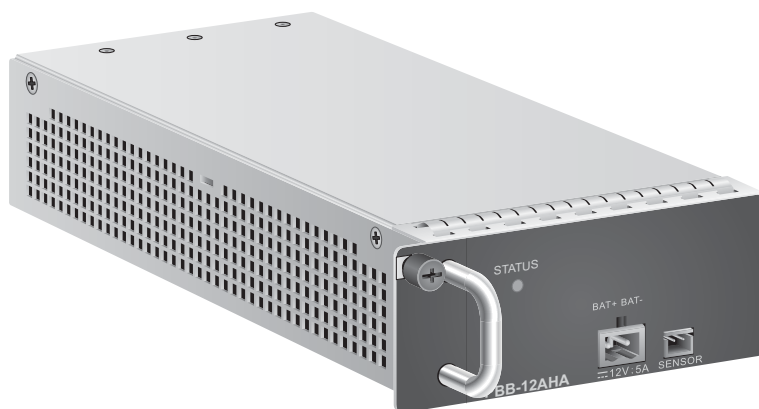
Table 7-9 Product support for the PBB-12AHA lead-acid battery charger module

Module Name	Product Support
PBB-12AHA	S5700-LI-BAT Series

Appearance

Figure 7-5 shows a PBB-12AHA lead-acid battery charger module.

Figure 7-5 PBB-12AHA lead-acid battery charger module



Function

Table 7-10 describes the functions of a PBB-12AHA lead-acid battery charger module.

Table 7-10 Functions of a PBB-12AHA lead-acid battery charger module

Function	Description
Connecting to an external lead-acid battery	The PBB-12AHA can be installed in the battery slot at the rear of an S5700-LI-BAT switch. It connects to a lead-acid battery to provide power redundancy. The PBB-12AHA has a BAT port on the panel, which can connect to a lead-acid battery to supply power to the switch. A switch can be powered on using a lead-acid battery charger module and a lead-acid battery. Install the lead-acid battery charger module in the switch, and then connect the lead-acid battery to the charger module.
Alarm reporting	The PBB-12AHA module supports alarms about the lead-acid-battery, including low-power alarm, low-power clear alarm, and full-power alarm.
Protection	The BAT port can prevent the power cable connector from being reversely inserted.
Temperature compensation	The PBB-12AHA has a sensor port on the panel, which can connect to a sensor for temperature compensation during charging of a lead-acid battery.
Charging	The PBB-12AHA can charge the lead-acid battery connected to it.
Hot swapping	The PBB-12AHA is hot swappable.

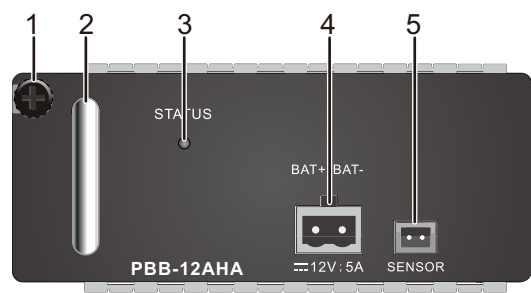
The lead-acid battery (separately purchased) connected to the PBB-12AHA lead-acid battery charger module must meet the following requirements:

- The input voltage is 12 V.
- The rated capacity of the lead-acid battery is 12 ampere-hour.

Panel

Figure 7-6 shows the panel of a PBB-12AHA lead-acid battery charger module.

Figure 7-6 PBB-12AHA lead-acid battery charger module panel



1. Captive screw	2. Handle	3. Indicator
4. Lead-acid battery input port NOTE Power cables of the lead-acid battery are connected to this port through a connector (delivered with the PBB-12AHA). You need to purchase power cables with a diameter of 14 AWG to 12 AWG.	5. Temperature sensor port NOTE A lead-acid battery temperature sensor can connect to this port to monitor temperature of the lead-acid battery. The lead-acid battery temperature sensor can be purchased from Huawei if needed.	-

Table 7-11 describes the indicator on a PBB-12AHA lead-acid battery charger module.

Table 7-11 Description of the indicator on a PBB-12AHA lead-acid battery charger module

Indicator	Color	Description
STATUS	Green	<ul style="list-style-type: none"> Off: No lead-acid battery is connected to the PBB-12AHA module. Steady on: A lead-acid battery is connected to the PBB-12AHA module.

Specifications

Table 7-12 lists specifications of a PBB-12AHA lead-acid battery charger module.

Table 7-12 Specifications of a PBB-12AHA lead-acid battery charger module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 205 mm (1.6 in. x 3.9 in. x 8.1 in.)
Weight	0.48 kg (1.06 lb)
Charge voltage range	10.8 V DC to 13.8 V DC

Item	Description
Discharge voltage range	10.8 V DC to 13.6 V DC
Charge current	<ul style="list-style-type: none">● S5700-28P-LI-BAT: maximum value 1.25 A; typical value 1.0 A● S5700-28P-LI-24S-BAT: maximum value 2.0 A; typical value 1.8 A
Maximum discharge power	80 W; typical: 60 W
Part number	98010517

8 Fan Modules

- [8.1 CX7E1FANA Fan Module](#)
- [8.2 FAN-40EA-B Fan Module](#)
- [8.3 FAN-028A-B Fan Module](#)
- [8.4 FAN-060B-B Fan Module](#)
- [8.5 FAN-023A-B Fan Module](#)
- [8.6 FAN-031A-B Fan Module](#)

8.1 CX7E1FANA Fan Module

Product Support

Table 8-1 lists the switch chassis matching a CX7E1FANA fan module.

Table 8-1 Switch chassis matching a CX7E1FANA fan module

Fan Module Name	Product Support
CX7E1FANA fan module	S5700-28C-SI, S5700-52C-SI, S5700-28C-PWR-SI, S5700-52C-PWR-SI, S5700-24TP-PWR-SI, S5700-48TP-PWR-SI, S5700-EI, and S5710-C-LI

Appearance

Figure 8-1 shows the appearance of a CX7E1FANA fan module.

Figure 8-1 Appearance of a CX7E1FANA fan module



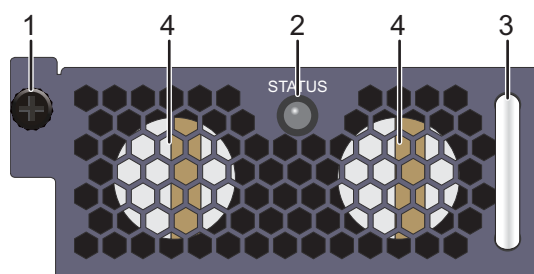
Function

A CX7E1FANA fan module has two fans to cool the chassis. A CX7E1FANA fan module is hot swappable.

Panel Description

Figure 8-2 shows the panel of a CX7E1FANA fan module.

Figure 8-2 Panel of a CX7E1FANA fan module



1. Captive screw	2. Fan module indicator	3. Handle	4. Two fans NOTE Air is exhausted from air vents on the panel.
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Table 8-2 shows indicators on the CX7E1FANA fan module panel.

Table 8-2 Description of indicators on the CX7E1FANA fan module panel

Indicator	Color	Description
STATUS	Off	The fan module is not running.

Indicator	Color	Description
	Green	<ul style="list-style-type: none"> • Slow blinking: The fan module is working properly and its communication is normal. • Fast blinking: The fan module is working properly but its communication is abnormal.
	Red	<ul style="list-style-type: none"> • Steady on: The fan module has a hardware fault and needs to be replaced. • Slow blinking: An alarm has been generated and needs to be handled. Common causes of this alarm include errors of dual in-line package (DIP) switches, short-circuit, fan blades blocked, and other fan module faults.

Specifications

Table 8-3 describes technical specifications of a CX7E1FANA fan module.

Table 8-3 Technical specifications of a CX7E1FANA fan module

Item	Description
Dimensions (H x W x D)	39.6 mm x 103 mm x 99.2 mm
Weight	250±20 g
Maximum power consumption	12 W
Maximum wind pressure	375 Pa
Maximum airflow	40 CFM
Operating voltage range	12 V DC
Part number	02351651

8.2 FAN-40EA-B Fan Module

Product Support

Table 8-4 lists the switch chassis matching a FAN-40EA-B fan module.

Table 8-4 Mapping between device models and the FAN-40EA-B module

Fan Module Name	Product Support
FAN-40EA-B	S5710-108C-PWR-HI

Appearance

Figure 8-3 shows the appearance of a FAN-40EA-B fan module.

Figure 8-3 Appearance of a FAN-40EA-B fan module



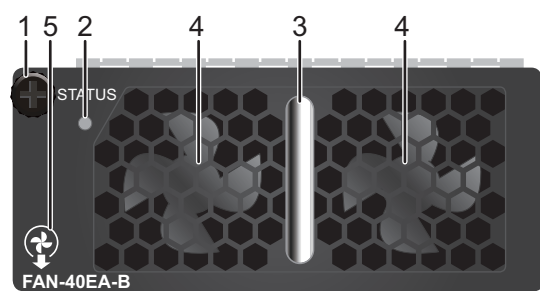
Function

A FAN-40EA-B fan module has two fans to cool the chassis. A FAN-40EA-B fan module is hot swappable.

Panel

Figure 8-4 shows the panel of a FAN-40EA-B fan module.

Figure 8-4 Panel of a FAN-40EA-B fan module



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5: Airflow flag (air out)
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Table 8-5 describes the indicators on the FAN-40EA-B fan module panel.

Table 8-5 Description of indicators on the FAN-40EA-B fan module panel

Indicator	Color	Description
STATUS	Off	The fan module is not running.
	Green	<ul style="list-style-type: none"> • Slow blinking: The fan module is working and communicating normally with the system. • Fast blinking: The fan module is working but is not communicating normally with the system.
	Red	<ul style="list-style-type: none"> • Steady on: The fan module has a hardware fault and needs to be replaced. • Slow blinking: An alarm has been generated and needs to be handled. Common causes of this alarm include errors of dual in-line package (DIP) switches, short-circuit, fan blades blocked, and other fan module faults.

Specifications

Table 8-6 lists technical specifications of a FAN-40EA-B fan module.

Table 8-6 Technical specifications of a FAN-40EA-B fan module

Item	Description
Dimensions (H x W x D)	40.0 mm x 94.5 mm x 183.1 mm
Number of fans	2
Weight	0.325 kg
Maximum power consumption	12.71 W
Maximum speed	18500±10% revolutions per minute (RPM)
Maximum airflow	46 cubic feet per minute (CFM)
Part number	02355338

8.3 FAN-028A-B Fan Module

Product Support

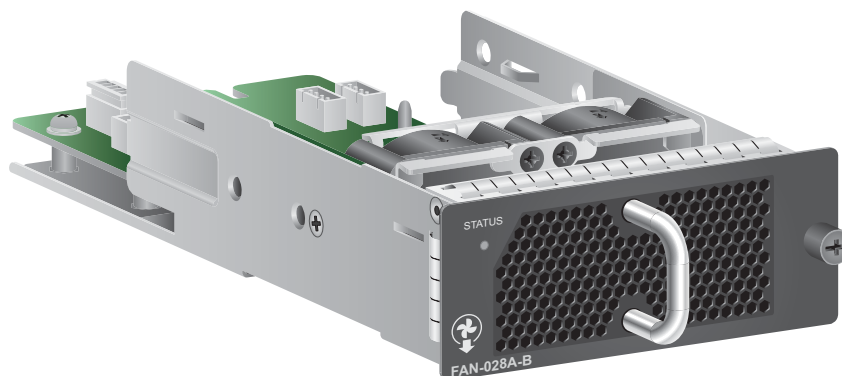
Table 8-7 lists the switch chassis matching a FAN-028A-B fan module.

Table 8-7 Switch chassis matching a FAN-028A-B fan module

Fan Module Name	Product Support
FAN-028A-B	S5720-C-EI, S5720-PC-EI, S5730-SI, S5730S-EI series, and S5730-36C-HI, S5730-36C-PWH-HI, S5730-60C-HI, S5730-60C-PWH-HI, S5730-36C-HI-24S

Appearance

Figure 8-5 Appearance of a FAN-028A-B fan module

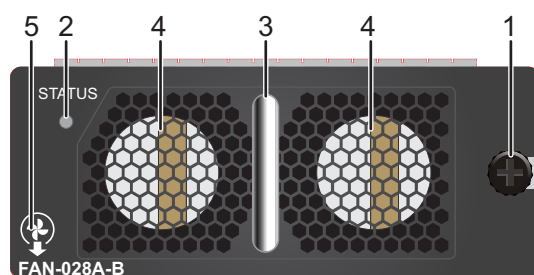


Function

A FAN-028A-B fan module has two fans to cool the chassis. It is hot swappable.

Panel

Figure 8-6 Panel of a FAN-028A-B fan module



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5: Airflow flag (air out)
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Table 8-8 describes the indicator on a FAN-028A-B fan module panel.

Table 8-8 Description of the indicator on a FAN-028A-B fan module panel

Indicator	Color	Description
STATUS: running status indicator	Off	The fan module is not running.
	Green	Slow blinking: Fans are working properly.
	Red	Steady on: The fan module has a hardware fault and needs to be replaced.

Specifications

Table 8-9 describes technical specifications of a FAN-028A-B fan module.

Table 8-9 Technical specifications of a FAN-028A-B fan module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 220 mm (1.57 in. x 3.94 in. x 8.66 in.)
Number of fans	2
Weight	0.34 kg
Maximum power consumption	12 W
Rated fan speed	16000±10% revolutions per minute (RPM)
Maximum airflow	28 cubic feet per minute (CFM)
Part number	02359595

8.4 FAN-060B-B Fan Module

Version Mapping

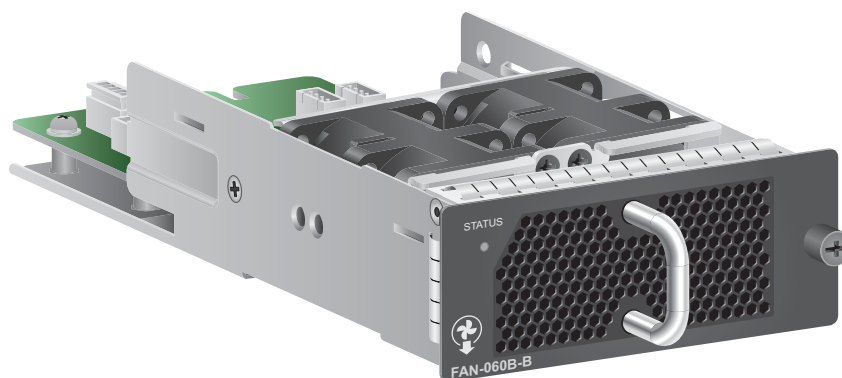
Table 8-10 lists the switch chassis matching a fan module.

Table 8-10 Switch chassis matching a fan module

Fan Module Name	Product Support
FAN-060B-B	S5730-60C-HI-48S

Appearance

Figure 8-7 Appearance of a FAN-060B-B fan module

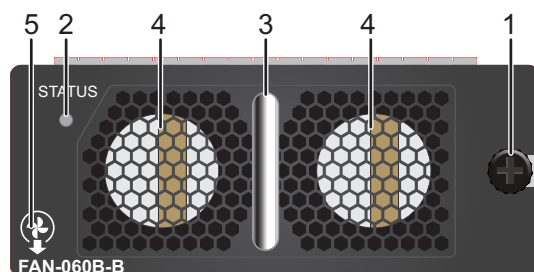


Function

A fan module has two fans to cool the chassis. It is hot swappable.

Panel

Figure 8-8 Panel of a FAN-060B-B fan module



1. Captive screw	2. Indicator	3. Handle	4. Two fans	5. Airflow flag (air out)
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Table 8-11 describes the indicator on the fan module panel.

Table 8-11 Description of the indicator on the fan module panel

Indicator	Color	Meaning
STATUS: running status indicator	Off	The fan module is not running.
	Green	Slow blinking: Fans are working properly.
	Red	Steady on: The fan module has a hardware fault and must be replaced.

Specifications

Table 8-12 describes technical specifications of a fan module.

Table 8-12 Technical specifications of a fan module

Item	Description
Dimensions (H x W x D)	40 mm x 100 mm x 220 mm (1.57 in. x 3.94 in. x 8.66 in.)
Number of fans	2
Weight	0.4 kg
Maximum power consumption	32.6 W
Rated fan speed	19000±10% revolutions per minute (RPM)
Maximum airflow	64 cubic feet per minute (CFM)
Part number	02350DNQ

8.5 FAN-023A-B Fan Module

Product Support

Table 8-13 lists the switch chassis supporting a FAN-023A-B fan module.

Table 8-13 Switch chassis supporting a FAN-023A-B fan module

Fan Module Name	Product Support
FAN-023A-B	S5731-H24T4XC, S5731-H24P4XC, S5731-H48T4XC, S5731-H48P4XC, S5731-S24T4X, S5731-S48T4X, S5731S-S24T4X-A, S5731S-S48T4X-A, S5731S-H24T4XC-A, S5731S-H48T4XC-A, S5731-S24P4X, S5731-S48P4X, S5731S-S24P4X-A, S5731S-S48P4X-A, S5731S-H24T4S-A, S5731S-H48T4S-A, S5731S-H24T4X-A, and S5731S-H48T4X-A

Appearance

Figure 8-9 Appearance of a FAN-023A-B fan module

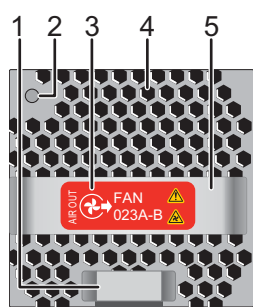


Function

A FAN-023A-B fan module has one only fan and is hot swappable.

Panel

Figure 8-10 Panel of a FAN-023A-B fan module



1. Lock	2. Indicator	3: Airflow flag (air out)	4. Fan air vent	5. Handle
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Table 8-14 describes the indicator on a FAN-023A-B fan module panel.

Table 8-14 Description of the indicator on a FAN-023A-B fan module panel

Indicator	Color	Description
Fan module indicator	Off	The fan module is not running.
	Green	Steady on: The fan module is starting. Slow blinking: The fan module is working properly.
	Red	Steady on: The fan module has a hardware fault and must be replaced. Common causes include short circuits, fan blades blocked, and fault of the fan module.

Specifications

Table 8-15 lists specifications of a FAN-023A-B fan module.

Table 8-15 Specifications of a FAN-023A-B fan module

Item	Description
Dimensions (H x W x D)	40 mm x 40 mm x 100.3 mm (1.57 in. x 1.57 in. x 3.95 in.)
Number of fans	1
Weight	0.1 kg (0.22 lb)
Maximum power consumption	7.2 W
Rated rotational speed	18500±10% revolutions per minute (RPM)
Maximum airflow	23 cubic feet per minute (CFM)
Part number	02312DKW

8.6 FAN-031A-B Fan Module

Product Support

Table 8-16 lists the switch chassis supporting a FAN-031A-B fan module.

Table 8-16 Switch chassis supporting a FAN-031A-B fan module

Fan Module Name	Product Support
FAN-031A-B	S5732-H24S6Q, S5732-H24UM2CC, S5732-H48UM2CC, and S5732-H48S6Q

Appearance

Figure 8-11 Appearance of a FAN-031A-B fan module

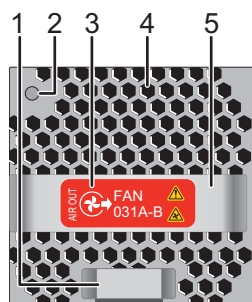


Function

A FAN-031A-B fan module has one only fan and is hot swappable.

Panel

Figure 8-12 Panel of a FAN-031A-B fan module



1. Lock	2. Indicator	3: Airflow flag (air out)	4. Fan air vent	5. Handle
---------	--------------	---------------------------	-----------------	-----------

Table 8-17 describes the indicator on a FAN-031A-B fan module panel.

Table 8-17 Description of the indicator on a FAN-031A-B fan module panel

Indicator	Color	Description
Fan module indicator	Off	The fan module is not running.
	Green	Steady on: The fan module is starting. Slow blinking: The fan module is working properly.
	Red	Steady on: The fan module has a hardware fault and must be replaced. Common causes include short circuits, fan blades blocked, and fault of the fan module.

Specifications

Table 8-18 lists specifications of a FAN-031A-B fan module.

Table 8-18 Specifications of a FAN-031A-B fan module

Item	Description
Dimensions (H x W x D)	40 mm x 40 mm x 100.3 mm (1.57 in. x 1.57 in. x 3.95 in.)
Number of fans	1
Weight	0.1 kg (0.22 lb)
Maximum power consumption	21.6 W
Rated rotational speed	24500±10% revolutions per minute (RPM)
Maximum airflow	31 cubic feet per minute (CFM)
Part number	02352CAB

9 Cards

9.1 Card Classification

9.2 Card Structure and Dimensions

9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)

9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)

9.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)

9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)

9.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card)

9.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card)

9.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)

9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)

9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)

9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)

9.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)

9.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)

9.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card)

9.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card)

9.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card)

9.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card)

9.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)

9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)

9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)

9.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)

- [9.23 ES5D21X08T00 \(8-Port 10GBASE-T RJ45 Rear Interface Card\)](#)
- [9.24 S7X08000 \(8-Port 10GE SFP+ Optical Interface Card\)](#)
- [9.25 S7Y08000 \(8-Port 25GE SFP28 Optical Interface Card\)](#)
- [9.26 ES5D21VST000 \(Dedicated Stack Card with 2*QSFP+ Interface\)](#)
- [9.27 ES5D00ETPC00 \(Stack Rear Card\)](#)
- [9.28 ES5D00ETPB00 \(Extended Rear Card\)](#)

9.1 Card Classification

Table 9-1 lists the cards supported by the S5700.

Table 9-1 Cards supported by the S5700

Card Type	Card Name	Card Description	Hot swapping
Front card	ES5D000X2S00	2-port 10GE SFP+ optical interface card	Not supported
Front card	ES5D000X4S01	4-port 10GE SFP+ optical interface card	Not supported
Front card	ES5D000G4S01	4-port GE optical interface card	Not supported
Front card	ES5D00G4SA01	4-port GE optical interface card	Not supported
Front card	ES5D00X2SA00	2-port GE SFP or 10GE SFP+ optical interface card	Supported
Front card	ES5D00X4SA00	4-port GE SFP or 10GE SFP+ optical interface card	Supported
Front card	ES5D00G4SC00	4-port GE SFP optical interface card	Supported
Front card	ES5D21G16S00	16-port GE SFP optical interface card	Supported
Front card	ES5D21G16T00	16-port GE RJ45 interface card	Supported
Rear card	ES5D21G08S00	8-port GE SFP optical interface card	Supported
Rear card	ES5D21G08T00	8-port GE RJ45 interface card	Supported
Rear card	ES5D21X02S00	2-port GE SFP or 10GE SFP+ optical interface card	Supported

Card Type	Card Name	Card Description	Hot swapping
Rear card	ES5D00ETPC00	Stack card	Not supported
Rear card	ES5D00ETPB00	Extended channel card	Not supported
Rear card	ES5D21L04Q00	4-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21Q02Q00	2-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21Q04Q01	4-port 40GE QSFP+ optical interface card	Supported
Rear card	ES5D21X04S00	4-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X04S01	4-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X02S01	2-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21X02T01	2-port 10GBASE-T RJ45 interface card	Supported
Rear card	ES5D21X08T00	8-port 10GBASE-T RJ45 interface card	Supported
Rear card	ES5D21X08S00	8-port 10GE SFP+ optical interface card	Supported
Rear card	ES5D21VST00	Dedicated stack card with 2*QSFP+ interface	Supported
Rear card	S7X08000	8-Port 10GE SFP+ optical interface card	Supported
Rear card	S7Y08000	8-Port 25GE SFP28 optical interface card	Supported

NOTE

Some cards are sold with other cards, for example, front card ES5D000X4S01 is sold with rear card ES5D00ETPB00. When a card is faulty, provide the bar code of the card for technical support personnel to fix the problem.

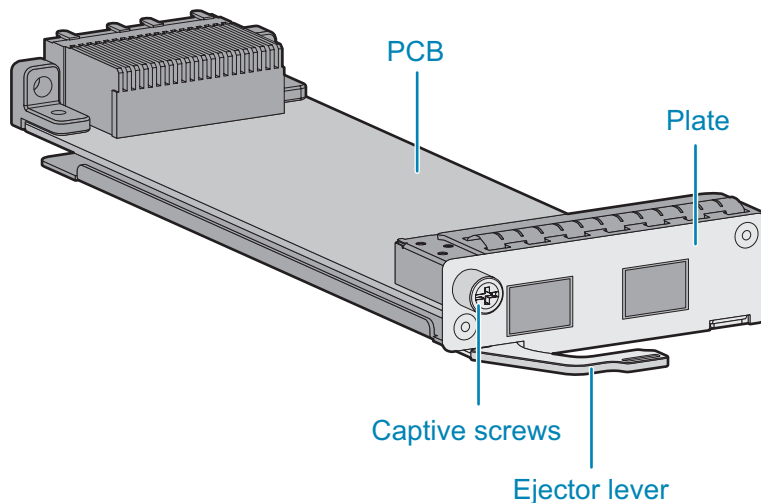
The cards supported by a switch depend on the software version. For details, see [Hardware Query](#).

9.2 Card Structure and Dimensions

Card Structure

Figure 9-1 shows card appearance.

Figure 9-1 Card appearance



A card consists of the following components:

- Printed circuit board (PCB)
The PCB contains all the functional chips of the card and is the core of the card. The PCB provides indicators and ports on the front panel.

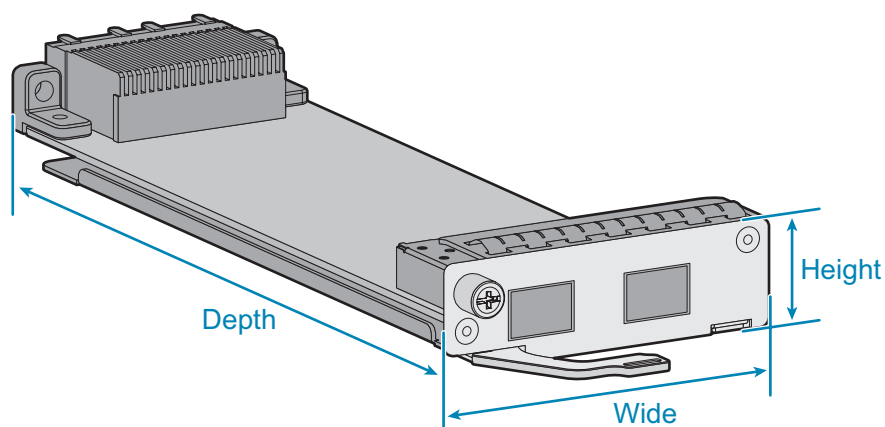
NOTE

Different cards provide different indicators and ports. For details, see the description of specific cards.

- Front panel, consisting of the captive screws, ejector levers, and plate
 - Captive screws: fix the card into the chassis.
 - Ejector lever: allows you to insert and remove the card.
 - Plate: joins the ejector levers and the PCB.

Card Dimension

Figure 9-2 shows the definitions of width, height, and depth of a card.

Figure 9-2 Card dimensions**NOTE**

The card dimensions are defined as follows:

- Width: the longest distance between the tops of two ejector levers
- Depth: the distance between a plate and the end of PCB
- Height: the height of the front panel

9.3 ES5D000X2S00 (2-Port 10GE SFP+ Front Optical Interface Card)

Version Mapping

Table 9-2 lists the mapping between the ES5D000X2S00 card and software versions.

Table 9-2 Version mapping

Card Model	Software Version
ES5D000X2S00 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510X2S.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

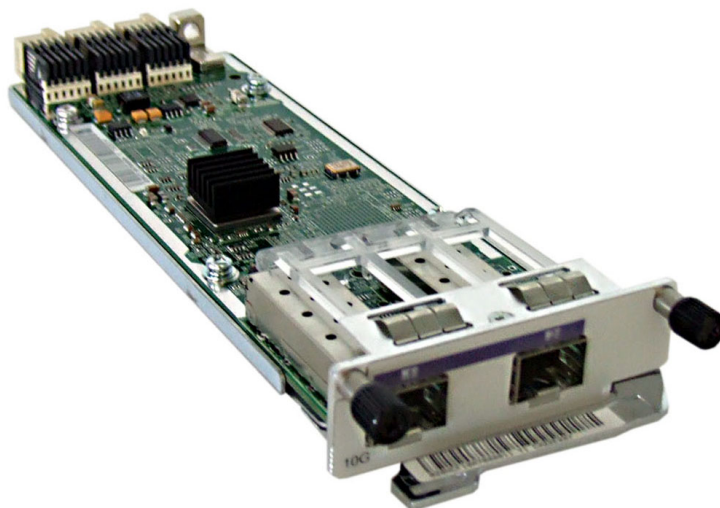
The ES5D000X2S00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in **Table 9-3**.

Table 9-3 Applicable switch models

Card	Switch Model
ES5D000X2S00	<ul style="list-style-type: none"> ● S5700-28C-SI ● S5700-52C-SI ● S5700-28C-PWR-SI ● S5700-52C-PWR-SI ● S5700-28C-EI ● S5700-52C-EI ● S5700-28C-EI-24S ● S5700-28C-PWR-EI ● S5700-52C-PWR-EI ● S5710-28C-LI ● S5710-52C-LI ● S5710-28C-PWR-LI ● S5710-52C-PWR-LI

Figure 9-3 shows the appearance of the ES5D000X2S00.

Figure 9-3 ES5D000X2S00



Functions

Table 9-4 describes functions of the ES5D000X2S00.

Table 9-4 Functions

Function	Description
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
10GE port	A 10GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000X2S00 to provide access ports for downlink devices or networks. Different transmission distances can be supported by using SFP+ optical modules.

Usage Constraints

NOTICE

The ES5D000X2S00 is not hot swappable.

Indicators and Ports

Figure 9-4 shows indicators on the ES5D000X2S00.

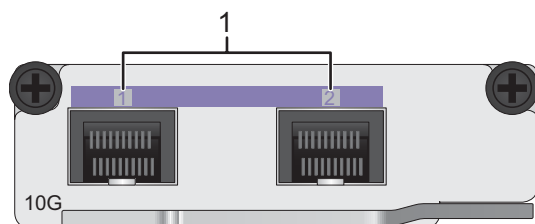
Figure 9-4 Indicators on the ES5D000X2S00

Table 9-5 shows indicators on the ES5D000X2S00.

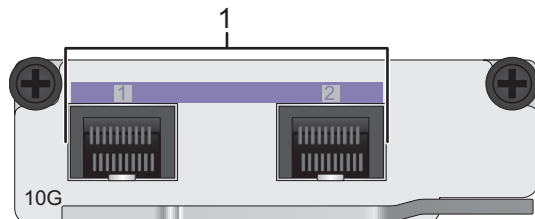
Table 9-5 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none">Steady on: A link is established on the port.Blinking: The port is sending or receiving data.

Number	Indicator	Color	Description
		Off	No link is established on the port.

shows the ports on the ES5D000X2S00.

Figure 9-5 Ports on the ES5D000X2S00



- | |
|------------------------|
| 1. Two 10GE SFP+ ports |
|------------------------|

10GE SFP+ port

The ES5D000X2S00 provides two 10GE optical ports to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. [Table 9-6](#) describes attributes of a 10GE SFP+ optical port.

NOTE

When used on the S5710-C-LI, the 10GE SFP+ ports support the 10GE SFP+ and GE SFP optical modules. When used on the S5700-SI, the 10GE SFP+ ports support 10GE SFP+ optical modules, GE optical modules, and GE copper modules (applicable in V200R002C00 and later versions and used with shielded Ethernet cables), SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions). When used on the S5700-EI, the 10GE SFP+ ports support 10GE SFP+ optical modules, SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions).

Table 9-6 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules , 11.12 10GE SFP+ Optical Modules , and 11.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 9-7 describes the technical specifications of the ES5D000X2S00.

Table 9-7 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)• Weight: 0.2 kg (0.44 lb)• Maximum power consumption: 6.5 W
Environment specifications	<ul style="list-style-type: none">• Operating temperature: 0°C to 50°C (32°F to 122°F)• Relative humidity: 5% to 95%• Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-8 provides the ES5D000X2S00 ordering information.

Table 9-8 Ordering information

Card Description	Card Name	Part Number
2-port 10GE SFP+ optical interface card (front card)	ES5D000X2S00	03020XEV

9.4 ES5D000X4S01 (4-Port 10GE SFP+ Front Optical Interface Card)

Version Mapping

Table 9-9 lists the mapping between the ES5D000X4S01 card and software versions.

Table 9-9 Version mapping

Card Model	Software Version
ES5D000X4S01 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510X4S.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

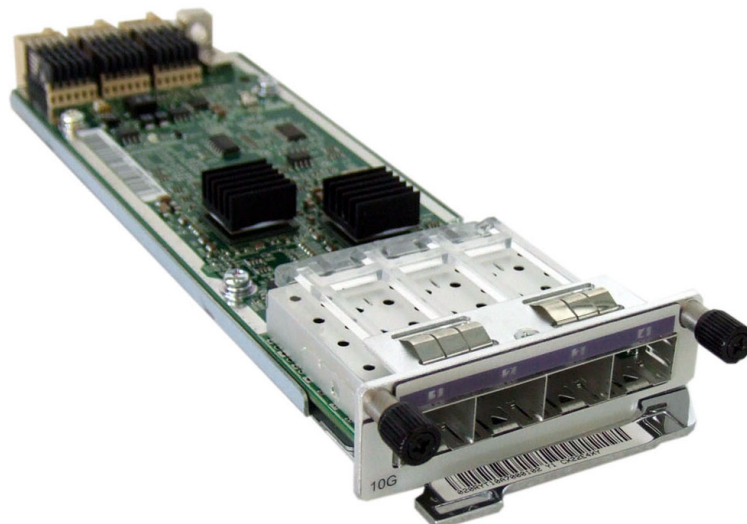
Card Overview

The ES5D000X4S01 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in [Table 9-10](#).

Table 9-10 Applicable switch models

Card	Switch Model
ES5D000X4S01	<ul style="list-style-type: none">● S5700-28C-SI● S5700-52C-SI● S5700-28C-PWR-SI● S5700-52C-PWR-SI● S5700-28C-EI● S5700-52C-EI● S5700-28C-EI-24S● S5700-28C-PWR-EI (PCB version: VB)● S5700-52C-PWR-EI (PCB version: VB)● S5710-28C-LI● S5710-52C-LI● S5710-28C-PWR-LI● S5710-52C-PWR-LI

[Figure 9-6](#) shows the appearance of the ES5D000X4S01.

Figure 9-6 ES5D000X4S01

Functions

Table 9-11 describes functions of the ES5D000X4S01.

Table 9-11 Functions

Function	Description
Basic function	Provides two/four 10GE SFP+ optical ports for data access and line-rate switching.
10GE port	A 10GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000X4S01 to provide access ports for downlink devices or networks. Different transmission distances can be supported by using SFP+ optical modules.

Usage Constraints

NOTICE

- The ES5D000X4S01 front card can provide four ports only if it is used with an ES5D00ETPB00 extended rear card. If no ES5D00ETPB00 extended rear card is used, only ports 1 and 3 on the ES5D000X4S01 front card are available. The names of ports 1 and 3 are respectively XGigabitEthernet */1/1 and XGigabitEthernet */1/2, where * indicates the slot ID.
- The ES5D000X4S01 front card must be used with an ES5D00ETPB00 card whose PCB version is VC.
- The ES5D000X4S01 front card must be used with PCB of VB or later versions on S5700-EI switches (VC on S5700-52C-EI). Use the **display version** command to check the PCB version of a switch.
- The ES5D000X4S01 is not hot swappable.

Indicators and Ports

Figure 9-7 shows indicators on the ES5D000X4S01/

Figure 9-7 Indicators on the ES5D000X4S01

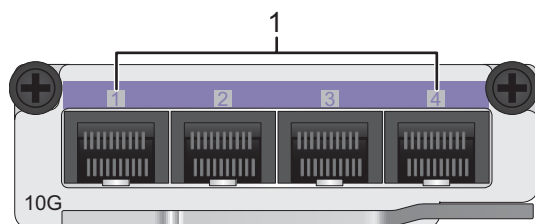
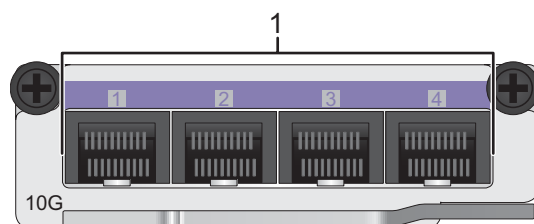


Table 9-12 describes indicators on the ES5D000X4S01.

Table 9-12 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> • Steady on: A link is established on the port. • Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-8 shows the ports on the ES5D000X4S01.

Figure 9-8 Ports on the ES5D000X4S01

1. Four 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D000X4S01 provides four 10GE optical ports to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. [Table 9-13](#) describes attributes of a 10GE SFP+ optical port.

NOTE

When used on the S5710-C-LI, the 10GE SFP+ ports support the 10GE SFP+ and GE SFP optical modules. When used on the S5700-SI, the 10GE SFP+ ports support 10GE SFP+ optical modules, GE optical modules, and GE copper modules (applicable in V200R002C00 and later versions and used with shielded Ethernet cables), SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions). When used on the S5700-EI, the 10GE SFP+ ports support 10GE SFP+ optical modules, SFP+ copper cables (applicable in V200R002C00 and later versions), and AOC cables (applicable in V200R003C00 and later versions).

Table 9-13 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules , 11.12 10GE SFP+ Optical Modules , and 11.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

[Table 9-14](#) lists technical specifications of the ES5D000X4S01.

Table 9-14 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.)• Weight: 0.3 kg (0.66 lb)• Maximum power consumption: 13 W
Environment specifications	<ul style="list-style-type: none">• Operating temperature: 0°C to 50°C (32°F to 122°F)• Relative humidity: 5% to 95%• Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-15 provides the ES5D000X4S01 ordering information.

Table 9-15 Ordering information

Card Description	Card Name	Part Number
4-port 10GE SFP+ optical interface card (consisting of an ES5D000X4S01 4-port 10GE front card and an ES5D00ETPB00 extended channel rear card)	ES5D000X4S00 NOTE The ES5D000X4S01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D000X4S00 is the name of the combination of the two cards.	02319956

9.5 ES5D000G4S01 (4-Port GE SFP Front Optical Interface Card)

Version Mapping

Table 9-16 lists the mapping between the ES5D000G4S01 card and software versions.

Table 9-16 Version mapping

Card Model	Software Version
ES5D000G4S01 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510G4S.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

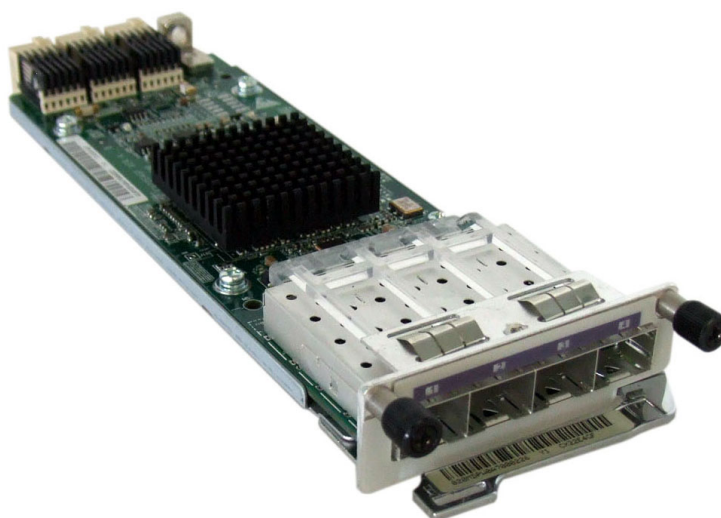
The ES5D000G4S01 provides four GE SFP optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in [Table 9-17](#).

Table 9-17 Applicable switch models

Card	Switch Model
ES5D000G4S01	<ul style="list-style-type: none"> • S5700-28C-EI • S5700-52C-EI • S5700-28C-EI-24S • S5700-28C-PWR-EI • S5700-52C-PWR-EI

[Figure 9-9](#) shows the appearance of the ES5D000G4S01.

Figure 9-9 ES5D000G4S01



Functions

Table 9-18 describes functions of the ES5D000G4S01.

Table 9-18 Functions

Function	Description
Basic function	Provides four GE SFP optical ports for data access and line-rate switching.
GE port	A GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D000G4S01 to provide access ports for downlink devices or networks.

Usage Constraints

NOTICE

- If the ES5D000G4S01 is installed on the S5700-SI or S5710-C-LI, the front card cannot register.
- The ES5D000G4S01 front card can provide four ports only if it is used with an ES5D00ETPB00 extended rear card. If no ES5D00ETPB00 extended rear card is used, only the first two ports on the ES5D000G4S01 front card are available.
- When an S5700-EI is equipped with the ES5D00ETPC00 stack rear card, only ports 1 and 2 are available if the ES5D000G4S01 front card is used.
- The ES5D000G4S01 is not hot swappable.

Indicators and Ports

Figure 9-10 shows indicators on the ES5D000G4S01.

Figure 9-10 Indicators on the ES5D000G4S01

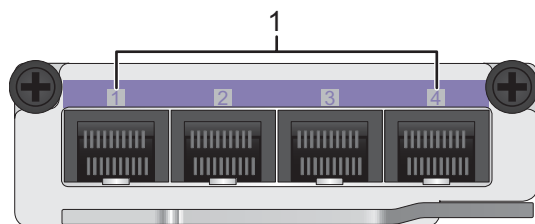
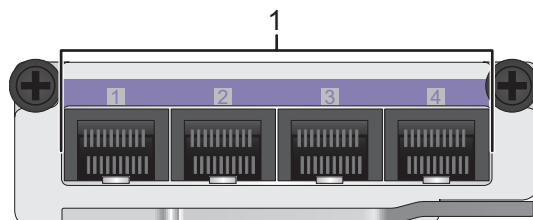


Table 9-19 describes indicator status on the ES5D000G4S01.

Table 9-19 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-11 shows the ports on the ES5D000G4S01.

Figure 9-11 Ports on the ES5D000G4S01

1. Four GE SFP optical ports

GE SFP port

The ES5D000G4S01 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. **Table 9-20** describes attributes of an SFP optical port.

NOTE

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

Table 9-20 Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , and 11.10 GE SFP Copper Modules)

Attribute	Description
Standards compliance	IEEE 802.3z

Technical Specifications

Table 9-21 lists technical specifications of the ES5D000G4S01.

Table 9-21 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.) • Weight: 0.2 kg (0.44 lb) • Maximum power consumption: 6 W
Environment specifications	<ul style="list-style-type: none"> • Operating temperature: 0°C to 50°C (32°F to 122°F) • Relative humidity: 5% to 95% • Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-22 provides the ES5D000G4S01 ordering information.

Table 9-22 Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (consisting of an ES5D000G4S01 4-port GE front card and an ES5D00ETPB00 extended channel rear card) This card is applicable to the EI series.	ES5D000G4S00 NOTE The ES5D000G4S01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D000G4S00 is the name of the combination of the two cards.	02319957

9.6 ES5D00G4SA01 (4-Port GE SFP Front Optical Interface Card)

Version Mapping

Table 9-23 lists the mapping between the ES5D00G4SA01 card and software versions.

Table 9-23 Version mapping

Card Model	Software Version
ES5D00G4SA01 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510G4SA.	V100R005C01 to V200R005C02 NOTE This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Card Overview

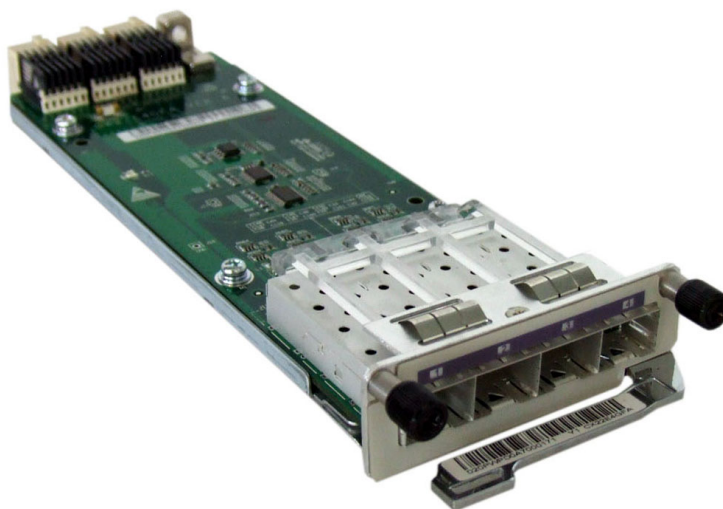
The ES5D00G4SA01 provides four GE SFP optical ports for data access and line-rate switching. It can be installed in a front card slot of the switch models listed in **Table 9-24**.

Table 9-24 Applicable switch models

Card	Switch Model
ES5D00G4SA01	<ul style="list-style-type: none"> • S5700-28C-SI • S5700-52C-SI • S5700-28C-PWR-SI • S5700-52C-PWR-SI • S5710-28C-LI • S5710-52C-LI • S5710-28C-PWR-LI • S5710-52C-PWR-LI

Figure 9-12 shows the appearance of the ES5D00G4SA01.

Figure 9-12 ES5D00G4SA01



Functions

Table 9-25 describes functions of the ES5D00G4SA01.

Table 9-25 Functions

Function	Description
Basic function	Provides four GE SFP optical ports for data access and line-rate switching.
GE port	A GE port is often used as an uplink aggregation port on high-bandwidth and high-speed MANs or backbone networks. When an enterprise needs high-quality triple-play service, use the ES5D00G4SA01 to provide access ports for downlink devices or networks.

Usage Constraints

NOTICE

- If the ES5D00G4SA01 is installed on the S5700-EI, the front card cannot register.
- The ES5D00G4SA01 front card can provide four ports only if it is used with an ES5D00ETPB00 extended rear card. If no ES5D00ETPB00 extended rear card is used, only the first two ports on the ES5D00G4SA01 front card are available.
- When an S5700-SI/S5710-C-LI is equipped with the ES5D00ETPC00 stack rear card, only ports 1 and 2 are available if the ES5D00G4SA01 front card is used.
- The ES5D00G4SA01 is not hot swappable.

Indicators and Ports

Figure 9-13 shows indicators on the ES5D00G4SA01.

Figure 9-13 Indicators on the ES5D00G4SA01

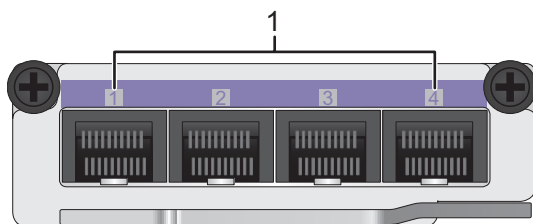


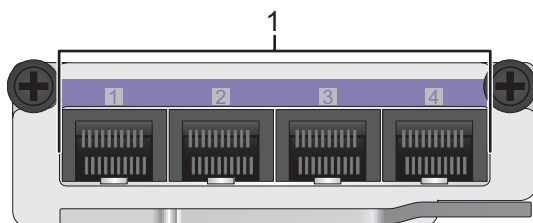
Table 9-26 describes indicator status on the ES5D00G4SA01.

Table 9-26 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> • Steady on: A link is established on the port. • Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-14 shows the ports on the ES5D00G4SA01.

Figure 9-14 Ports on the ES5D00G4SA01



1. Four GE SFP optical ports

GE SFP optical port

The ES5D00G4SA01 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. [Table 9-27](#) describes attributes of an SFP optical port.

NOTE

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

Table 9-27 Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , and 11.10 GE SFP Copper Modules)
Standards compliance	IEEE 802.3z

Technical Specifications

[Table 9-28](#) lists technical specifications of the ES5D00G4SA01.

Table 9-28 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 22 mm x 70 mm x 197 mm (0.87 in. x 2.8 in. x 7.8 in.) Weight: 0.2 kg (0.44 lb) Maximum power consumption: 4.5 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0°C to 50°C (32°F to 122°F) Relative humidity: 5% to 95% Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-29 provides the ES5D00G4SA01 ordering information.

Table 9-29 Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (consisting of an ES5D00G4SA01 4-port GE front card and an ES5D00ETPB00 extended channel rear card) This card is applicable to the SI series.	ES5D00G4SA00 NOTE The ES5D00G4SA01 front card must work with the ES5D00ETPB00 rear card, so the two cards are sold together. ES5D00G4SA00 is the name of the combination of the two cards.	02319958

9.7 ES5D00X2SA00 (2-Port GE SFP/10GE SFP+ Front Optical Interface Card)

Version Mapping

Table 9-30 lists the mapping between the ES5D00X2SA00 card and software versions.

Table 9-30 Version mapping

Card Model	Software Version
ES5D00X2SA00 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510X2SA.	V100R006C01 to V200R005C02 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D00X2SA00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in **Table 9-31**.

Table 9-31 Applicable switch models

Card	Switch Model
ES5D00X2SA00	<ul style="list-style-type: none"> • S5700-28C-HI • S5700-28C-HI-24S

Figure 9-15 shows the appearance of the ES5D00X2SA00.

Figure 9-15 ES5D00X2SA00



Functions

Table 9-32 describes functions of the ES5D00X2SA00.

Table 9-32 Functions

Function	Description
Basic function	Provides two 10GE SFP+ optical ports respectively for data access and line-rate switching.
Enhanced service	The S5700-HI powers on or off the ES5D00X2SA00, detects whether the ES5D00X2SA00 is installed or not, and manages PHY chips and optical ports on the ES5D00X2SA00. They provide hardware-based OAM and BFD for the switch.
Hot swapping	Supported

Function	Description
Service ports for stacking	The service ports on the ES5D00X2SA00 can be used as stack ports on an S5700-HI switch. NOTE The S5700-HI has supported service port-based stacking since V200R003C00.

Indicators and Ports

Figure 9-16 shows indicators on the ES5D00X2SA00.

Figure 9-16 Indicators on the ES5D00X2SA00

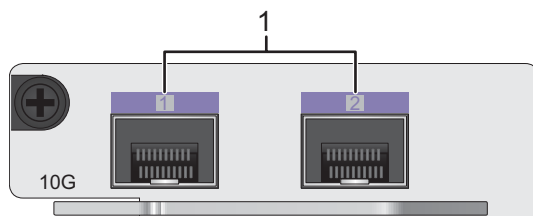


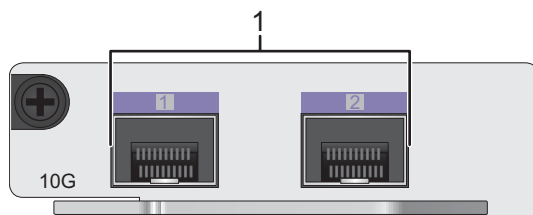
Table 9-33 shows indicators on the ES5D00X2SA00.

Table 9-33 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-17 shows ports on the ES5D00X2SA00.

Figure 9-17 Ports on the ES5D00X2SA00



1. Two/Four 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D00X2SA00 provides two 10GE optical ports (GE/10GE auto-sensing) respectively to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. [Table 9-34](#) describes attributes of an SFP+ optical port.

NOTE

The 10GE SFP+ optical ports support 10GE SFP+ optical modules, GE optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

Table 9-34 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules , 11.12 10GE SFP+ Optical Modules , and 11.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

[Table 9-35](#) lists technical specifications of the ES5D00X2SA00.

Table 9-35 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.) Weight: 0.5 kg (1.10 lb) Maximum power consumption: 7 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: -5°C to +55°C (23°F to 131°F) Relative humidity: 5% to 95% Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-36 provides the ES5D00X2SA00 ordering information.

Table 9-36 Ordering information

Card Description	Card Name	Part Number
2-port GE SFP or 10GE SFP+ optical interface card (front card)	ES5D00X2SA00	03021JYN

9.8 ES5D00X4SA00 (4-Port GE SFP/10GE SFP+ Front Optical Interface Card)

Version Mapping

Table 9-37 lists the mapping between the ES5D00X4SA00 card and software versions.

Table 9-37 Version mapping

Card Model	Software Version
ES5D00X4SA00 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510X4SA.	V100R006C01 to V200R005C02 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

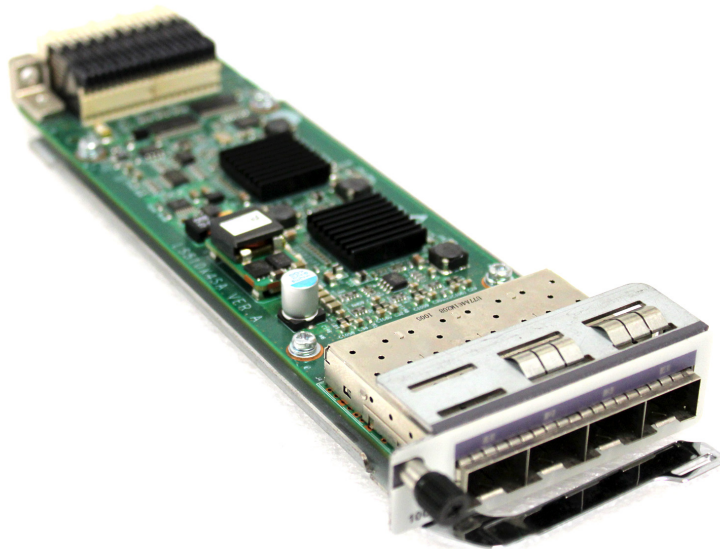
The ES5D00X4SA00 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in **Table 9-38**.

Table 9-38 Applicable switch models

Card	Switch Model
ES5D00X4SA00	<ul style="list-style-type: none"> • S5700-28C-HI • S5700-28C-HI-24S

Figure 9-18 shows the appearance of the ES5D00X4SA00.

Figure 9-18 ES5D00X4SA00



Functions

Table 9-39 describes of the ES5D00X4SA00.

Table 9-39 Functions

Function	Description
Basic function	Provides four 10GE SFP+ optical ports respectively for data access and line-rate switching.
Enhanced service	The S5700-HI powers on or off the ES5D00X4SA00, detects whether the ES5D00X4SA00 is installed or not, and manages PHY chips and optical ports on the ES5D00X4SA00. They provide hardware-based OAM and BFD for the switch.
Hot swapping	Supported

Function	Description
Service ports for stacking	<p>The service ports on the ES5D00X4SA00 can be used as stack ports on an S5700-HI switch.</p> <p>NOTE The S5700-HI has supported service port-based stacking since V200R003C00.</p>

Indicators and Ports

Figure 9-19 shows indicators on the ES5D00X4SA00.

Figure 9-19 Indicators on the ES5D00X4SA00

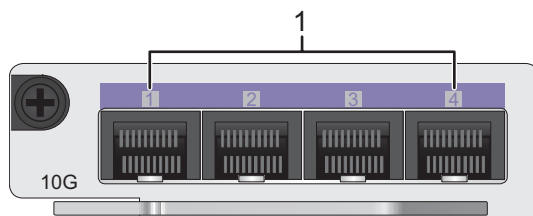


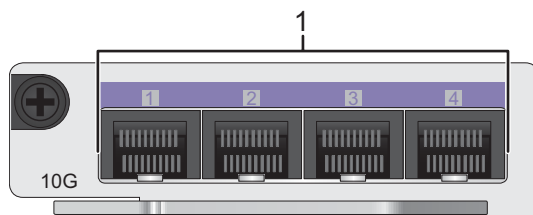
Table 9-40 shows indicators on the ES5D00X4SA00.

Table 9-40 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-20 shows ports on the ES5D00X4SA00.

Figure 9-20 Ports on the ES5D00X4SA00



1. Four 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D00X4SA00 provides four 10GE optical ports (GE/10GE auto-sensing) respectively to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. [Table 9-41](#) describes attributes of an SFP+ optical port.

NOTE

The 10GE SFP+ optical ports support 10GE SFP+ optical modules, GE optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

Table 9-41 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules , 11.12 10GE SFP+ Optical Modules , and 11.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

[Table 9-42](#) lists technical specifications of the ES5D00X4SA00.

Table 9-42 Specifications of the ES5D00X4SA00

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.) Weight: 0.5 kg (1.10 lb) Maximum power consumption: 10 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: -5°C to +55°C (23°F to 131°F) Relative humidity: 5% to 95% Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-43 provides the ES5D00X4SA00 ordering information.

Table 9-43 Ordering information

Card Description	Card Name	Part Number
4-port GE SFP or 10GE SFP+ optical interface card (front card)	ES5D00X4SA00	03021JYM

9.9 ES5D00G4SC00 (4-Port GE SFP Front Optical Interface Card)

Version Mapping

Table 9-44 lists the mapping between the ES5D00G4SC00 card and software versions.

Table 9-44 Version mapping

Card Model	Software Version
ES5D00G4SC00 NOTE After the display device command is executed, the PCB model of the card is displayed as ES510G4SC.	V100R006C01 to V200R005C02 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D00G4SC00 provides four 1000M SFP optical ports for data access and line-rate switching for upstream services. It can be installed in a front card slot of the switch models listed in **Table 9-45**.

Table 9-45 Applicable switch models

Card	Switch Model
ES5D00G4SC00	<ul style="list-style-type: none"> • S5700-28C-HI • S5700-28C-HI-24S

Figure 9-21 shows the appearance of the ES5D00G4SC00.

Figure 9-21 ES5D00G4SC00



Functions

Table 9-46 describes functions of the ES5D00G4SC00.

Table 9-46 Functions

Function	Description
Basic function	Provides four 1000M SFP optical ports for data access and line-rate switching for upstream services.
Enhanced service	The S5700-HI powers on or off the ES5D00G4SC00, detects whether the ES5D00G4SC00 is installed or not, and manages PHY chips and optical ports on the ES5D00G4SC00. The ES5D00G4SC00 provides hardware-based OAM and BFD for the switch.
Hot swapping	Supported

Indicators and Ports

Figure 9-22 shows indicators on the ES5D00G4SC00.

Figure 9-22 Indicators on the ES5D00G4SC00

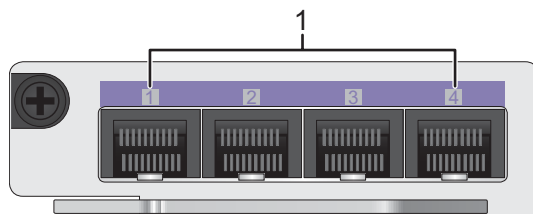


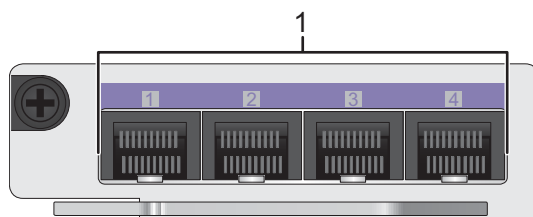
Table 9-47 describes indicator status on the ES5D00G4SC00.

Table 9-47 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-23 shows ports on the ES5D00G4SC00.

Figure 9-23 Ports on the ES5D00G4SC00



1. Four GE SFP optical ports

GE SFP optical port

The ES5D00G4SC00 provides four GE optical ports to transmit and receive Ethernet service data at 1000 Mbit/s. **Table 9-48** describes attributes of an SFP optical port.

 **NOTE**

The GE SFP ports support GE optical and copper modules (used with shielded Ethernet cables).

A GE SFP port can go Up after a GE copper module is installed. However, electrical attributes, such as the rate, duplex mode, auto-negotiation, MDI, flow control, and virtual cable test, are not configurable in this case.

Table 9-48 Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules)
Standards compliance	IEEE 802.3z

Technical Specifications

[Table 9-49](#) lists technical specifications of the ES5D00G4SC00.

Table 9-49 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.) • Weight: 0.3 kg (0.66 lb) • Maximum power consumption: 4 W
Environment specifications	<ul style="list-style-type: none"> • Operating temperature: -5°C to +55°C (23°F to 131°F) • Relative humidity: 5% to 95% • Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 9-50](#) provides the ES5D00G4SC00 ordering information.

Table 9-50 Ordering information

Card Description	Card Name	Part Number
4-port GE SFP optical interface card (front card)	ES5D00G4SC00	03021JYP

9.10 ES5D21G08S00 (8-Port GE SFP Rear Optical Interface Card)

Version Mapping

Table 9-51 lists the mapping between the ES5D21G08S00 card and software versions.

Table 9-51 Version mapping

Card Model	Software Version
ES5D21G08S00	V200R001C00 to V200R005C02 NOTE This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21G08S00 provides eight GE SFP optical ports for data access and line-rate switching.

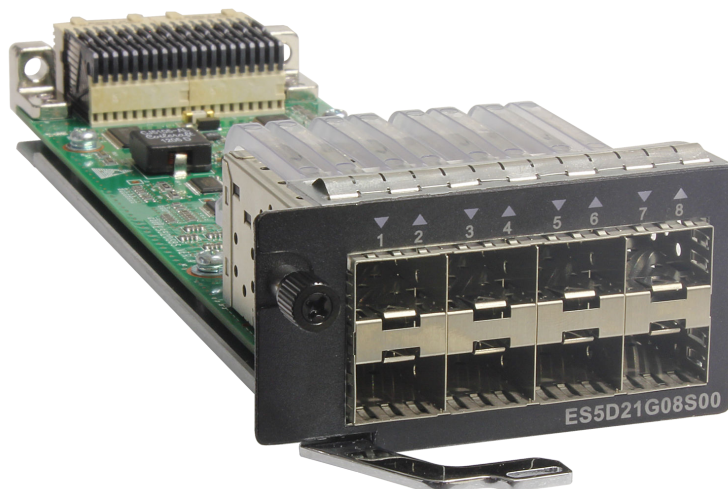
The ES5D21G08S00 can be installed in a rear card slot of the switch models listed in **Table 9-52**.

Table 9-52 Applicable switch models

Card	Switch Model
ES5D21G08S00	<ul style="list-style-type: none"> • S5710-52C-PWR-EI • S5710-52C-PWR-EI-AC • S5710-28C-PWR-EI-AC • S5710-52C-EI • S5710-28C-EI

Figure 9-24 shows the appearance of the ES5D21G08S00.

Figure 9-24 ES5D21G08S00



Functions

Table 9-53 describes functions of the ES5D21G08S00.

Table 9-53 Functions

Function	Description
Basic function	Provides eight 1000M SFP optical ports for data access and line-rate switching for GE services.
Hot swapping	Supported

Indicators and Ports

Figure 9-25 shows indicators on the ES5D21G08S00.

Figure 9-25 Indicators on the ES5D21G08S00

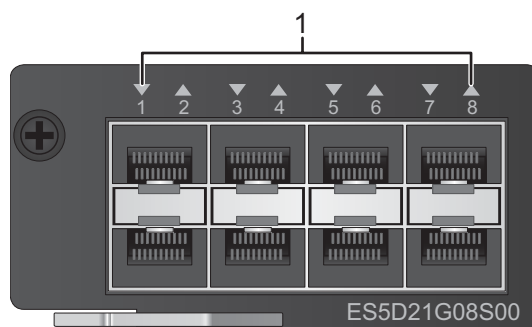


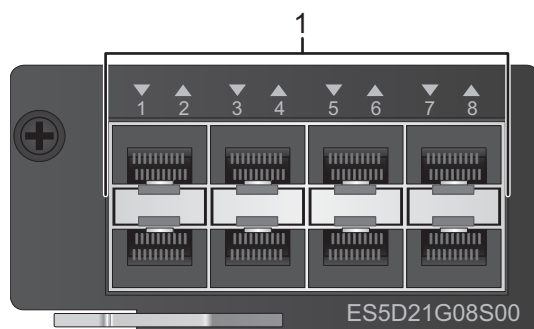
Table 9-54 describes indicator status on the ES5D21G08S00.

Table 9-54 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-26 shows ports on the ES5D21G08S00.

Figure 9-26 Ports on the ES5D21G08S00



1. Eight GE SFP optical ports

GE SFP optical port

The ES5D21G08S00 provides eight GE optical ports to transmit and receive services at 1000 Mbit/s. **Table 9-55** describes attributes of an SFP optical port.

NOTE

The optical ports on the ES5D21G08S00 support GE optical modules.

Table 9-55 Attributes of an SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , and 11.9 GE-DWDM eSFP Optical Modules)

Attribute	Description
Standards compliance	IEEE 802.3z

Technical Specifications

Table 9-56 lists technical specifications of the ES5D21G08S00.

Table 9-56 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 42 mm x 77 mm x 207 mm (1.7 in. x 3.0 in. x 8.1 in.) Weight: 0.3 kg (0.66 lb) Maximum power consumption: 12.4 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0°C to 50°C (32°F to 122°F) Relative humidity: 5% to 95% Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-57 provides the ES5D21G08S00 ordering information.

Table 9-57 Ordering information

Card Description	Card Name	Part Number
8-port GE SFP optical interface card (rear card)	ES5D21G08S00	03021ESM

9.11 ES5D21G08T00 (8-Port GE Rear Electrical Interface Card)

Version Mapping

Table 9-58 lists the mapping between the ES5D21G08T00 card and software versions.

Table 9-58 Version mapping

Card Model	Software Version
ES5D21G08T00	V200R001C00 to V200R005C02 NOTE This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21G08T00 provides eight 10M/100M/1000M electrical ports for data access and line-rate switching.

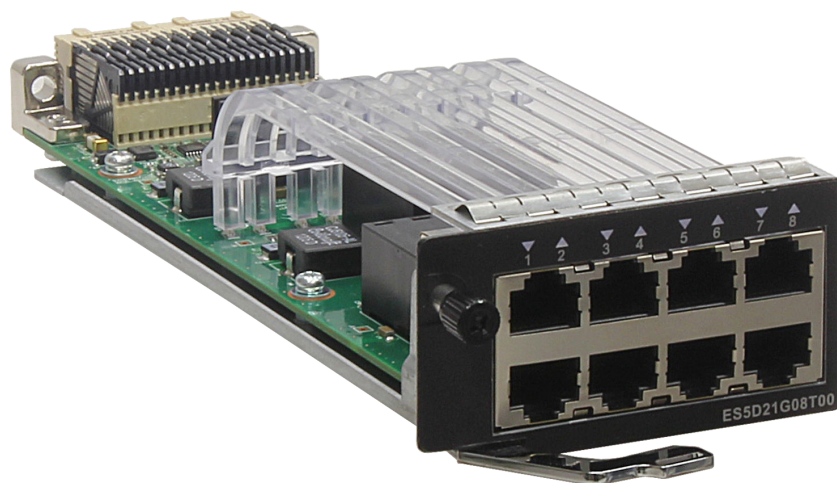
The ES5D21G08T00 can be installed in a rear card slot of the switch models listed in [Table 9-59](#).

Table 9-59 Applicable switch models

Card	Switch Model
ES5D21G08T00	<ul style="list-style-type: none"> • S5710-52C-PWR-EI • S5710-52C-PWR-EI-AC • S5710-28C-PWR-EI-AC • S5710-52C-EI • S5710-28C-EI

[Figure 9-27](#) shows the appearance of the ES5D21G08T00.

Figure 9-27 ES5D21G08T00



Functions

Table 9-60 describes functions of the ES5D21G08T00.

Table 9-60 Functions

Function	Description
Basic function	Provides eight 10M/100M/1000M electrical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 9-28 shows indicators on the ES5D21G08T00.

Figure 9-28 Indicators on the ES5D21G08T00

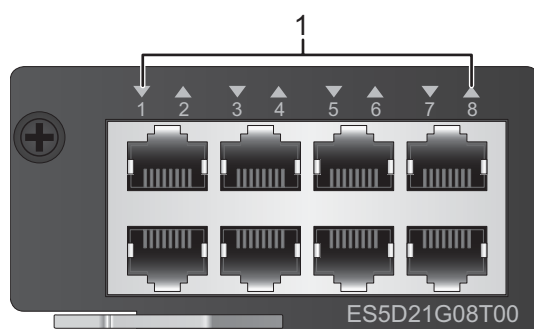


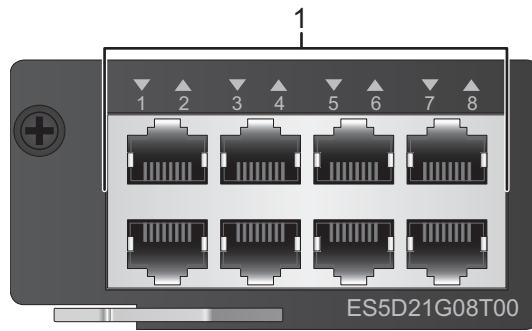
Table 9-61 describes indicator status on the ES5D21G08T00.

Table 9-61 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-29 shows ports on the ES5D21G08T00.

Figure 9-29 Ports on the ES5D21G08T00



1. Eight 10/100/1000BASE-T electrical ports

10/100/1000BASE-T electrical port

The ES5D21G08T00 provides eight 10M/100M/1000M Ethernet electrical ports to transmit and receive Ethernet service data. The eight 10/100/1000BASE-T Ethernet electrical ports must be used with [10.4 Ethernet Cable](#). [Table 9-62](#) describes attributes of the 10/100/1000BASE-T electrical port.

Table 9-62 Attributes of the 10/100/1000BASE-T electrical port

Attribute	Description
Connector type	RJ45
Standards compliance	IEEE802.3, IEEE802.3u, and IEEE802.3ab

Technical Specifications

[Table 9-63](#) lists technical specifications of the ES5D21G08T00.

Table 9-63 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 42 mm x 77 mm x 207 mm (1.7 in. x 3.0 in. x 8.1 in.) Weight: 0.3 kg (0.66 lb) Maximum power consumption: 8.3 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0°C to 50°C (32°F to 122°F) Relative humidity: 5% to 95% Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 9-64](#) provides the ES5D21G08T00 ordering information.

Table 9-64 Ordering information

Card Description	Card Name	Part Number
8-port GE electrical interface card (rear card)	ES5D21G08T00	03021ESN

9.12 ES5D21X02S00 (2-Port GE SFP/10GE SFP+ Rear Optical Interface Card)

Version Mapping

[Table 9-65](#) lists the mapping between the ES5D21X02S00 card and software versions.

Table 9-65 Version mapping

Card Model	Software Version
ES5D21X02S00	V200R001C00 to V200R005C02 NOTE This module is not supported in V200R001C01, V200R003C02, V200R003C10, or V200R005C01.

Card Overview

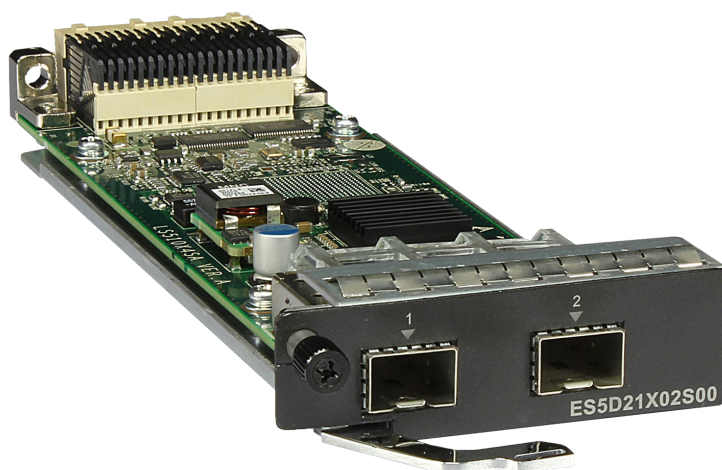
The ES5D21X02S00 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a card slot of the switch models listed in [Table 9-66](#).

Table 9-66 Applicable switch models

Card	Switch Model
ES5D21X02S00	<ul style="list-style-type: none"> • S5710-52C-PWR-EI • S5710-52C-PWR-EI-AC • S5710-28C-PWR-EI-AC • S5710-52C-EI • S5710-28C-EI

Figure 9-30 shows the appearance of the ES5D21X02S00.

Figure 9-30 ES5D21X02S00



Functions

Table 9-67 describes functions of the ES5D21X02S00.

Table 9-67 Functions

Function	Description
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service port supporting the stack function	The ES5D21X02S00 can be used on the stack port of the switch.

Indicators and Ports

Figure 9-31 shows indicators on the ES5D21X02S00.

Figure 9-31 Indicators on the ES5D21X02S00

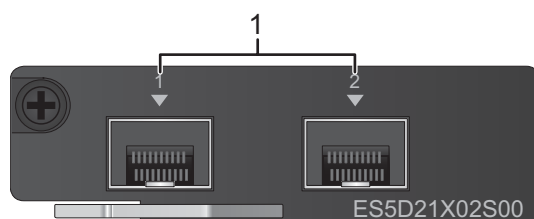


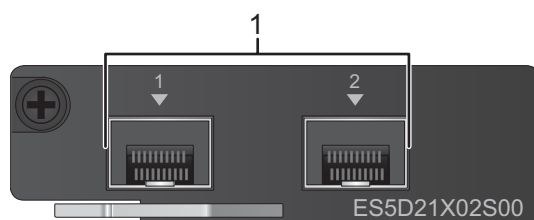
Table 9-68 describes indicators on the ES5D21X02S00.

Table 9-68 Indicator description

Number	Indicator	Color	Description
1	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-32 shows ports on the ES5D21X02S00.

Figure 9-32 Ports on the ES5D21X02S00



1. Two 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D21X02S00 provides two 10GE optical ports (auto-sensing GE ports) to transmit and receive Ethernet service data at 1 Gbit/s or 10 Gbit/s. **Table 9-69** describes attributes of an SFP+ optical port.

 **NOTE**

The optical ports on the ES5D21X02S00 support 10GE SFP+ optical modules, GE SFP optical modules, GE copper modules (in V200R002C00 and later versions, used with shielded twisted pair cables), SFP+ copper cables (in V200R002C00 and later versions), and AOC cables (in V200R003C00 and later versions).

Table 9-69 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules , 11.12 10GE SFP+ Optical Modules , and 11.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

[Table 9-70](#) lists technical specifications of the ES5D21X02S00.

Table 9-70 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 23 mm x 77 mm x 207 mm (0.9 in. x 3.0 in. x 8.1 in.) Weight: 0.5 kg (1.10 lb) Maximum power consumption: 7 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0°C to 50°C (32°F to 122°F) Relative humidity: 5% RH to 95% RH Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 9-71](#) provides the ES5D21X02S00 ordering information.

Table 9-71 Ordering information

Card Description	Card Name	Part Number
2-port GE SFP or 10GE SFP+ optical interface card (rear card)	ES5D21X02S00	03021NTU

9.13 ES5D21G16S00 (16-Port GE SFP Front Optical Interface Card)

Version Mapping

Table 9-72 lists the mapping between the ES5D21G16S00 card and software versions.

Table 9-72 Version mapping

Card Model	Software Version
ES5D21G16S00	V200R003C00 to V200R005C03 NOTE This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21G16S00 provides sixteen GE SFP optical ports for data access and line-rate switching.

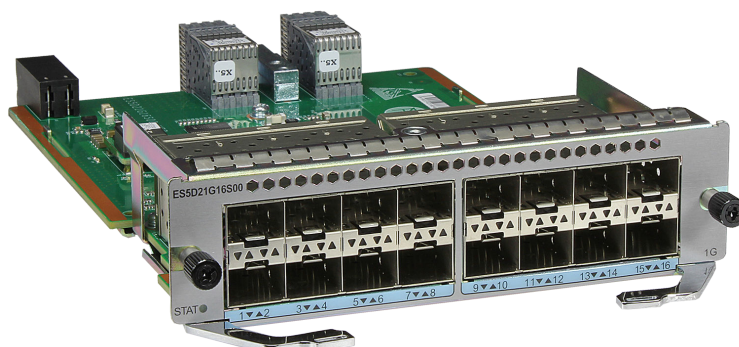
The ES5D21G16S00 can be installed in the front card slot of the switch models listed in **Table 9-73**.

Table 9-73 Applicable switch models

Card	Switch Model
ES5D21G16S00	S5710-108C-PWR-HI

Figure 9-33 shows the appearance of the ES5D21G16S00.

Figure 9-33 ES5D21G16S00



Functions

Table 9-74 describes functions of the ES5D21G16S00.

Table 9-74 Functions

Function	Description
Basic function	Provides sixteen GE SFP optical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 9-34 shows indicators on the ES5D21G16S00.

Figure 9-34 Indicators on the ES5D21G16S00

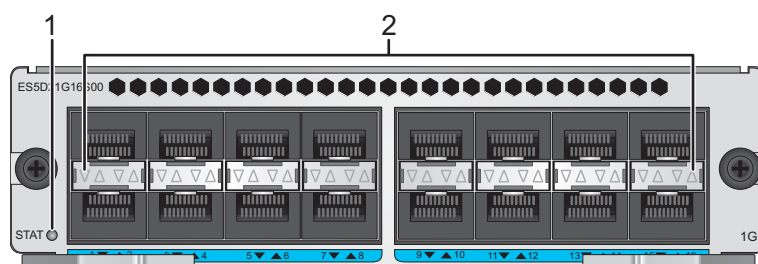
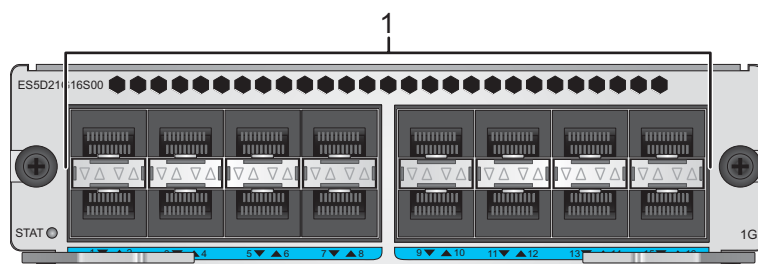


Table 9-75 describes indicator status on the ES5D21G16S00.

Table 9-75 Description of indicators on the ES5D21G16S00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none">Steady on: The system is starting.Blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	Two single-color indicators for each port <ul style="list-style-type: none">Steady green: LINK indicatorBlinking amber: ACT indicator NOTE Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.	Green	<ul style="list-style-type: none">Steady on: The link on the port is connected.Off: The link on the port is disconnected.
		Yellow	<ul style="list-style-type: none">Blinking: The port is transmitting or receiving data.Off: The port is not transmitting or receiving data.

Figure 9-35 shows the ports on the ES5D21G16S00.

Figure 9-35 Ports on the ES5D21G16S00

1. Sixteen GE SFP optical ports

GE SFP optical port

The ES5D21G16S00 provides sixteen GE SFP optical ports to transmit and receive service data at 1 Gbit/s. [Table 9-76](#) lists the attributes of a GE SFP optical port.

NOTE

The optical ports on the ES5D21G16S00 support GE optical modules.

Table 9-76 Attributes of a GE SFP optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , and 11.9 GE-DWDM eSFP Optical Modules)
Standards compliance	IEEE 802.3z

Technical Specifications

[Table 9-77](#) lists specifications of the ES5D21G16S00.

Table 9-77 Specifications of the ES5D21G16S00

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.) Weight: 0.7 kg (1.54 lb) Maximum power consumption: 11.7 W

Item	Description
Environment specifications	<ul style="list-style-type: none">• Operating temperature: 0°C to 45°C (32°F to 113°F)• Relative humidity: 5% RH to 95% RH• Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-78 provides ES5D21G16S00 ordering information.

Table 9-78 Ordering information

Card Description	Card Name	Part Number
16-port GE SFP optical interface card (front card)	ES5D21G16S00	03021PED

9.14 ES5D21G16T00 (16-Port GE Front Electrical Interface Card)

Version Mapping

Table 9-79 lists the mapping between the ES5D21G16T00 card and software versions.

Table 9-79 Version mapping

Card Model	Software Version
ES5D21G16T00	V200R003C00 to V200R005C03 NOTE This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

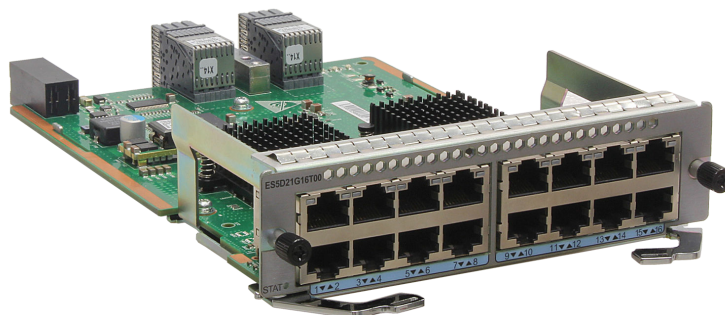
Card Overview

The ES5D21G16T00 provides sixteen GE electrical ports for data access and line-rate switching.

The ES5D21G16T00 can be installed in the front card slot of the S5710-108C-PWR-HI.

Figure 9-36 shows the appearance of the ES5D21G16T00.

Figure 9-36 ES5D21G16T00



Functions

Table 9-80 describes functions of the ES5D21G16T00.

Table 9-80 Functions

Function	Description
Basic function	Provides sixteen GE electrical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 9-37 shows indicators on the ES5D21G16T00.

Figure 9-37 Indicators on the ES5D21G16T00

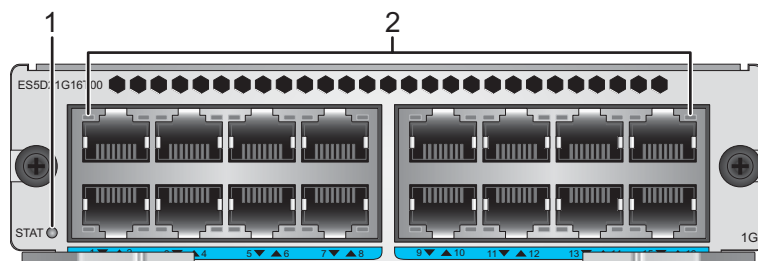


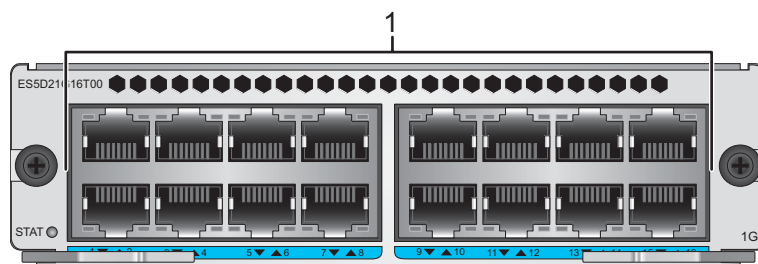
Table 9-81 describes indicator status on the ES5D21G16T00.

Table 9-81 Description of indicators on the ES5D21G16T00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is starting. Blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	One single-color indicator for each port NOTE The indicator on the left indicates the port at the top, and the indicator on the right indicates the port at the bottom.	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is transmitting or receiving data.
		Off	No link is established on the port.

Figure 9-38 shows the ports on the ES5D21G16T00.

Figure 9-38 Ports on the ES5D21G16T00



1. Sixteen 10M/100M/1000M BASE-T ports

10M/100M/1000M BASE-T port

The ES5D21G16T00 provides sixteen 10M/100M/1000M BASE-T ports to transmit and receive Ethernet service data. [Table 9-82](#) lists the attributes of a 10M/100M/1000M BASE-T port.

Table 9-82 Attributes of a 10M/100M/1000M BASE-T port

Attribute	Description
Connector type	RJ45
Electrical port attributes	MDI/MDIX
Standards compliance	IEEE802.3, IEEE802.3u, IEEE802.3ab

Technical Specifications

[Table 9-83](#) lists technical specifications of the ES5D21G16T00.

Table 9-83 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.) Weight: 0.7 kg (1.54 lb) Maximum power consumption: 9.5 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0°C to 45°C (32°F to 113°F) Relative humidity: 5% RH to 95% RH Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 9-84](#) provides ES5D21G16T00 ordering information.

Table 9-84 Ordering information

Card Description	Card Name	Part Number
16-port GE RJ45 interface card (front card)	ES5D21G16T00	03021NXB

9.15 ES5D21Q02Q00 (2-Port 40 Gig QSFP+ Rear Interface Card)

Version Mapping

[Table 9-85](#) lists the mapping between the ES5D21Q02Q00 and software versions.

Table 9-85 Version mapping

Card Model	Software Version
ES5D21Q02Q00	S5730-HI: V200R012C00 to V200R019C10 versions S5731-H and S5731S-H: V200R019C00 and later versions

Card Overview

The ES5D21Q02Q00 provides two 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21Q02Q00 can be installed in a rear card slot of the switch models listed in [Table 9-86](#).

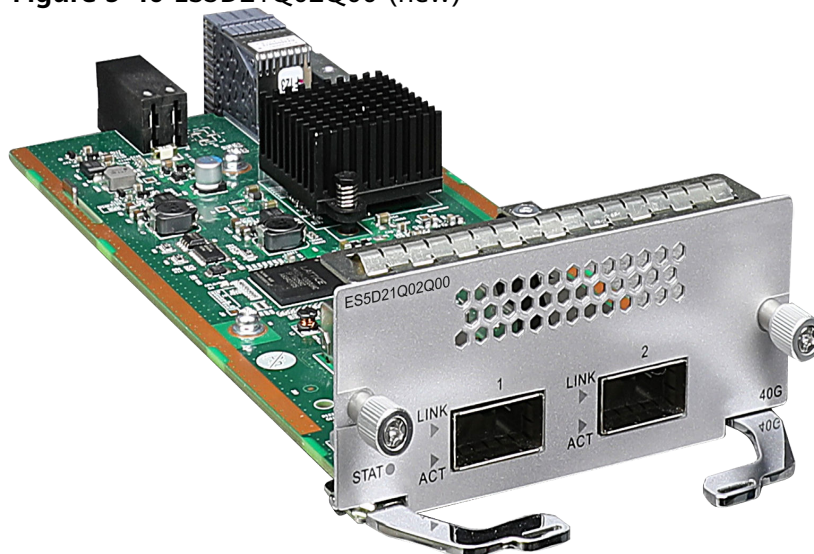
Table 9-86 Applicable switch models

Card	Switch Model
ES5D21Q02Q00	<ul style="list-style-type: none"> • S5730-36C-HI • S5730-36C-PWH-HI • S5730-44C-HI (can be installed only in slot 1) • S5730-44C-PWH-HI (can be installed only in slot 1) • S5730-60C-HI • S5730-60C-PWH-HI • S5730-68C-HI (can be installed only in slot 1) • S5730-68C-PWH-HI (can be installed only in slot 1) • S5730-44C-HI-24S (can be installed only in slot 1) • S5730-36C-HI-24S • S5730-60C-HI-48S • S5730-68C-HI-48S (can be installed only in slot 1) • S5731-H24T4XC • S5731-H24P4XC • S5731-H48T4XC • S5731-H48P4XC • S5731S-H24T4XC-A • S5731S-H48T4XC-A

Figure 9-39 ES5D21Q02Q00 (old)



Figure 9-40 ES5D21Q02Q00 (new)



Functions

Table 9-87 describes functions of the ES5D21Q02Q00.

Table 9-87 Functions

Function	Description
Basic functions	Provides two 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. NOTE A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

Indicators and Ports

Figure 9-41 Indicators on the ES5D21Q02Q00 (old)

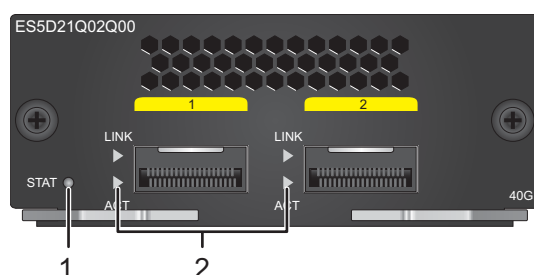


Figure 9-42 Indicators on the ES5D21Q02Q00 (new)

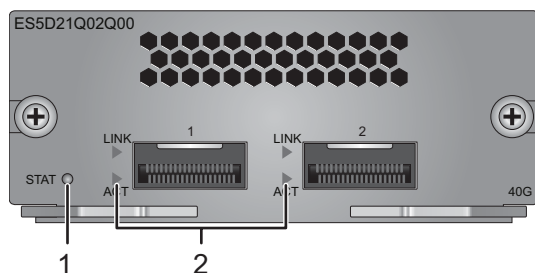


Table 9-88 describes indicators on the ES5D21Q02Q00.

Table 9-88 Indicator description

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

Figure 9-43 Ports on the ES5D21Q02Q00 (old)

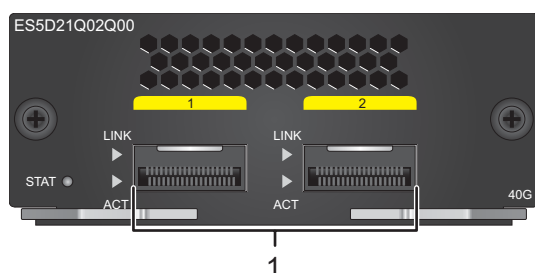
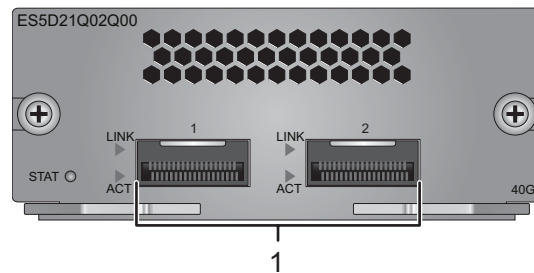


Figure 9-44 Ports on the ES5D21Q02Q00 (new)



1. Two 40GE QSFP+ optical ports

40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s and can be split into four 10GE ports. After a split, the 40GE QSFP+ optical port needs to be connected to a remote device using a 1-to-4 QSFP+ fiber (with matching optical modules), a 1-to-4 QSFP+ AOC cable, or a 1-to-4 QSFP+ copper cable.

[Table 9-89](#) lists the attributes of a 40GE QSFP+ optical port.

NOTE

Both optical ports on the ES5D21Q02Q00 support only QSFP+ optical modules, QSFP+ AOC cables (10 m; QSFP+ to QSFP+ or QSFP+ to 4*SFP+), and QSFP+ copper cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+ or QSFP+ to 4*SFP+).

Table 9-89 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical attributes	Depend on the optical module used (see 11.16 40GE QSFP+ Optical Modules)
Standards compliance	IEEE 802.3ba

Technical Specifications

[Table 9-90](#) lists technical specifications of the ES5D21Q02Q00.

Table 9-90 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.) • Weight: 0.92 kg (2.03 lb) • Maximum power consumption: 9 W
Environment specifications	<ul style="list-style-type: none"> • Operating temperature: 0°C to 45°C (32°F to 113°F) • Relative humidity: 5% to 95% • Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-91 provides the ES5D21Q02Q00 ordering information.

Table 9-91 Ordering information

Card Description	Card Model	Part Number
2-port 40 Gig QSFP+ rear interface card	ES5D21Q02Q00	03024EHT

9.16 ES5D21L04Q00 (4-Port 40GE QSFP+ Optical Interface Card)

Version Mapping

Table 9-92 lists the mapping between the ES5D21L04Q00 card and software versions.

Table 9-92 Version mapping

Card Model	Software Version
ES5D21L04Q00	V200R003C00 to V200R005C03 NOTE This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

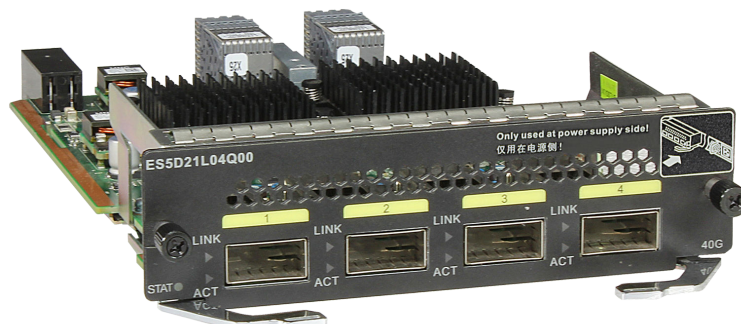
Card Overview

The ES5D21L04Q00 provides four 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21L04Q00 can be installed in the front card slot of the S5710-108C-PWR-HI.

Figure 9-45 shows the appearance of the ES5D21L04Q00.

Figure 9-45 ES5D21L04Q00



Functions

Table 9-93 describes functions of the ES5D21L04Q00.

Table 9-93 Functions

Function	Description
Basic function	Provides four 40GE QSFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 9-46 shows indicators on the ES5D21L04Q00.

Figure 9-46 Indicators on the ES5D21L04Q00

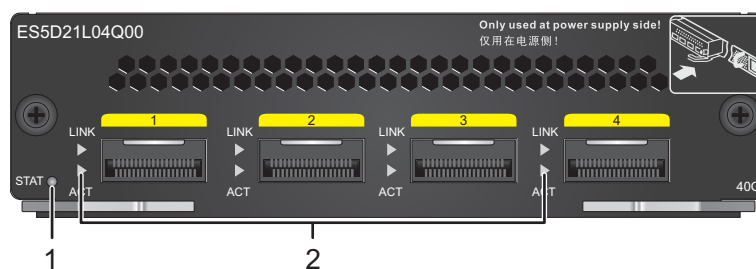


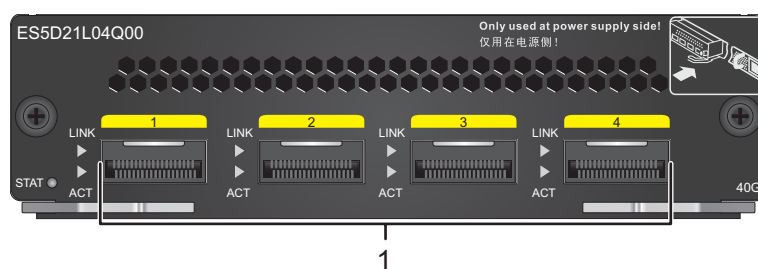
Table 9-94 describes indicator status on the ES5D21L04Q00.

Table 9-94 Description of indicators on the ES5D21L04Q00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none">Steady on: The system is starting.Blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Green	Steady on: A link is established on the port.
		Off	No link is established on the port.
	ACT	Yellow	Blinking: The port is transmitting or receiving data.
		Off	No data is transmitting or receiving on the port.

Figure 9-47 shows the ports on the ES5D21L04Q00.

Figure 9-47 Ports on the ES5D21L04Q00



1. Four 40GE QSFP+ optical ports

40GE QSFP+ optical port

The ES5D21L04Q00 provides four 40GE QSFP+ optical ports to transmit and receive service data at 40 Gbit/s. **Table 9-95** lists the attributes of a 40GE QSFP+ optical port.

 **NOTE**

All the optical ports on the ES5D21L04Q00 support only QSFP+ optical modules and QSFP+ copper cables.

Table 9-95 Attributes of a 40GE QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical port attributes	Depend on the optical module used (see 11.16 40GE QSFP+ Optical Modules)
Standards compliance	IEEE 802.3ba

Technical Specifications

[Table 9-96](#) lists technical specifications of the ES5D21L04Q00.

Table 9-96 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.) • Weight: 0.7 kg (1.54 lb) • Maximum power consumption: 25.7 W
Environment specifications	<ul style="list-style-type: none"> • Operating temperature: 0°C to 45°C (32°F to 113°F) • Relative humidity: 5% RH to 95% RH • Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 9-97](#) provides ES5D21L04Q00 ordering information.

Table 9-97 Ordering information

Card Description	Card Name	Part Number
4-port 40GE QSFP+ optical interface card (rear card)	ES5D21L04Q00	03021NKW

9.17 ES5D21Q04Q01 (4-Port 40 Gig QSFP+ Rear Interface Card)

Version Mapping

Table 9-98 lists the mapping between the ES5D21Q04Q01 card and software versions.

Table 9-98 Version mapping

Card Model	Software Version
ES5D21Q04Q01	V200R011C10 to V200R019C10 versions

Card Overview

The ES5D21Q04Q01 provides four 40GE QSFP+ optical ports for data access and line-rate switching.

The ES5D21Q04Q01 can be installed in a rear card slot of the switch models listed in **Table 9-99**.

Table 9-99 Applicable switch models

Card	Switch Model
ES5D21Q04Q01	<ul style="list-style-type: none">• S5730-48C-SI-AC• S5730-48C-PWR-SI-AC• S5730S-48C-EI-AC• S5730S-48C-PWR-EI• S5730-68C-SI-AC• S5730S-68C-EI-AC• S5730-68C-PWR-SI-AC• S5730-68C-PWR-SI• S5730S-68C-PWR-EI

Figure 9-48 ES5D21Q04Q01



Functions

Table 9-100 describes functions of the card.

Table 9-100 Functions

Function	Description
Basic functions	Provides four 40GE QSFP+ optical ports for data access and line-rate switching. Each 40GE port can be split into four 10GE ports.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports. NOTE A 40GE port cannot be used as a stack port after it is split into four 10GE ports.

Indicators and Ports

Figure 9-49 Indicators on the ES5D21Q04Q01

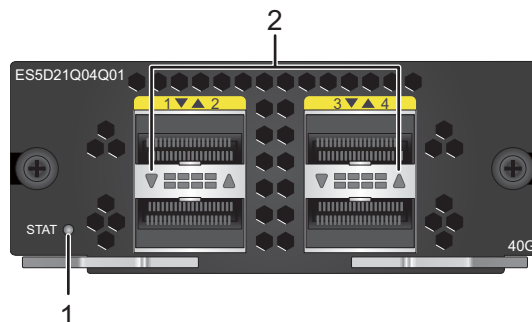
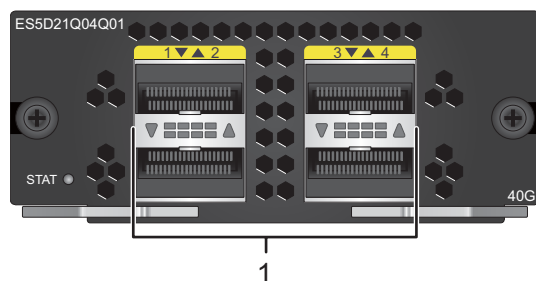


Table 9-101 Description of indicators on the card

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none">Fast blinking: The system is starting.Slow blinking: The system is running normally.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none">Steady on: A link has been established on the port.Blinking: The port is transmitting or receiving data.
		Off	No link is established on the port.

Figure 9-50 Ports on the ES5D21Q04Q01

1. Four 40GE QSFP+ optical ports

40GE QSFP+ optical port

A 40GE QSFP+ optical port sends and receives service traffic at 40 Gbit/s and can be split into four 10GE ports. After a split, the 40GE QSFP+ optical port needs to be connected to a remote device using a 1-to-4 QSFP+ fiber (with matching optical modules), a 1-to-4 QSFP+ AOC cable (applicable in V200R009C00 and later versions), or a 1-to-4 QSFP+ copper cable. [Table 9-102](#) lists the attributes of a 40GE QSFP+ optical port.

NOTE

All the optical ports on the card support only QSFP+ optical modules, QSFP+ AOC cables (applicable in V200R009C00 and later versions; 10 m; QSFP+ to QSFP+ or QSFP+ to 4*SFP+), and QSFP+ copper cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+ or QSFP+ to 4*SFP+).

Table 9-102 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	LC/MPO
Optical port attributes	Depend on the optical module used (see 11.16 40GE QSFP+ Optical Modules)
Standards compliance	IEEE 802.3ba

Technical Specifications

Table 9-103 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)• Weight: 0.5 kg (1.10 lb)• Maximum power consumption: 18.83 W
Environment specifications	<ul style="list-style-type: none">• Operating temperature: 0°C to 45°C (32°F to 113°F)• Relative humidity: 5% RH to 95% RH• Storage temperature: -40°C to +70°C (-40°F to +158°F) <p>NOTE When an ES5D21Q04Q01 card on the S5730-SI or S5730S-EI has a 40 km QSFP+ optical module installed, the operating temperature must be in the range of 0°C to 40°C.</p>

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-104 Ordering information

Card Description	Card Name	Part Number
4-port 40 Gig QSFP+ interface card	ES5D21Q04Q01	03022RRP

9.18 ES5D21X04S00 (4-Port 10GE SFP+ Rear Optical Interface Card)

Version Mapping

Table 9-105 lists the mapping between the ES5D21X04S00 card and software versions.

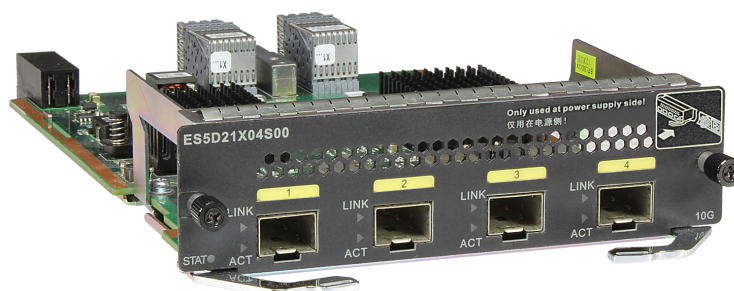
Table 9-105 Version mapping

Card Model	Software Version
ES5D21X04S00	V200R003C00 to V200R005C03 NOTE This module is not supported in V200R003C02, V200R003C10, or V200R005C01.

Card Overview

The ES5D21X04S00 provides four 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in the rear card slot of the S5710-108C-PWR-HI.

Figure 9-51 shows the appearance of the ES5D21X04S00.

Figure 9-51 ES5D21X04S00

Functions

Table 9-106 describes functions of the ES5D21X04S00.

Table 9-106 Functions

Function	Description
Basic function	Provides four 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported

Indicators and Ports

Figure 9-52 shows indicators on the ES5D21X04S00.

Figure 9-52 Indicators on the ES5D21X04S00

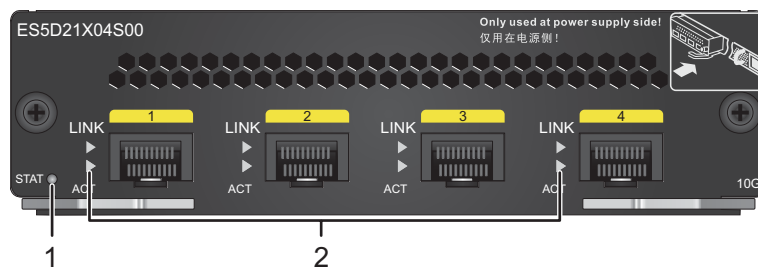


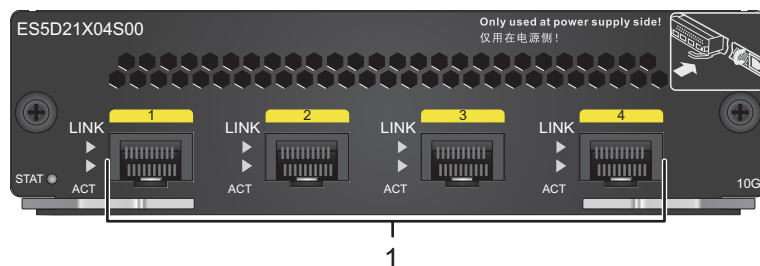
Table 9-107 describes indicator status on the ES5D21X04S00.

Table 9-107 Description of indicators on the ES5D21X04S00

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Steady on: The system is starting. Blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Green	Steady on: A link is established on the port.
		Off	No link is established on the port.
	ACT	Yellow	Blinking: The port is transmitting or receiving data.
		Off	No data is transmitting or receiving on the port.

Figure 9-53 shows the ports on the ES5D21X04S00.

Figure 9-53 Ports on the ES5D21X04S00



1. Four 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D21X04S00 provides four 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s. [Table 9-108](#) lists the attributes of a 10GE SFP+ optical port.

NOTE

The four optical ports on the ES5D21X04S00 support only 10GE SFP+ optical modules, SFP+ copper cables, and AOC cables.

Table 9-108 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.12 10GE SFP+ Optical Modules and 11.13 10GE-CWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

[Table 9-109](#) lists technical specifications of the ES5D21X04S00.

Table 9-109 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 39.6 mm x 145.0 mm x 233 mm (1.6 in. x 5.7 in. x 9.2 in.)• Weight: 0.7 kg (1.54 lb)• Maximum power consumption: 11.23 W
Environment specifications	<ul style="list-style-type: none">• Operating temperature: 0°C to 45°C (32°F to 113°F)• Relative humidity: 5% RH to 95% RH• Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-110 provides the ES5D21X04S00 ordering information.

Table 9-110 Ordering information

Card Description	Card Name	Part Number
4-port 10GE SFP+ optical interface card (rear card)	ES5D21X04S00	03021PHQ

9.19 ES5D21X04S01 (4-Port 10 GE SFP+ Rear Interface Card)

Version Mapping

Table 9-111 lists the mapping between the card and software versions.

Table 9-111 Version mapping

Card Model	Software Version
ES5D21X04S01	V200R006C00 to V200R019C10 versions

Card Overview

The ES5D21X04S01 provides four 10GE SFP+ optical ports for data access and line-rate switching.

The ES5D21X04S01 can be installed in rear card slot 2 of the S5720-HI.

Table 9-112 Applicable switch models

Card	Switch Model
ES5D21X04S01	<ul style="list-style-type: none"> • S5720-32C-HI-24S-AC • S5720-56C-HI-AC • S5720-56C-PWR-HI-AC • S5720-56C-PWR-HI-AC1

Figure 9-54 ES5D21X04S01



Functions

Table 9-113 Functions

Function	Item
Basic function	Provides four 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports. NOTE The S5720-HI has supported service port-based stacking since V200R009C00.

Indicators and Ports

Figure 9-55 Indicators on the ES5D21X04S01

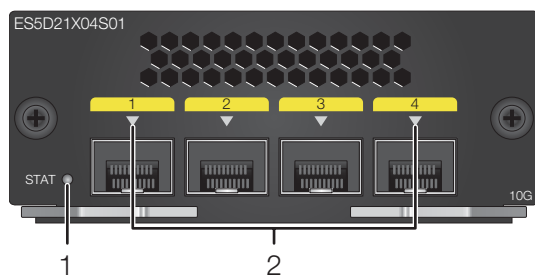
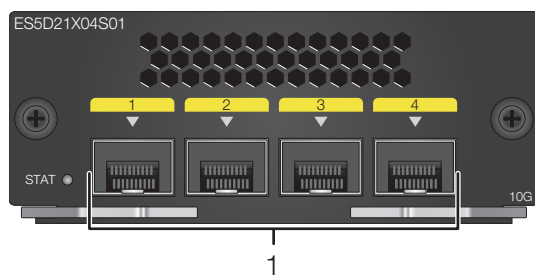


Table 9-114 Description of indicators

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is transmitting or receiving data.
		Off	No link is established on the port.

Figure 9-56 Ports on the ES5D21X04S01



1. Four 10GE SFP+ optical ports

10GE SFP+ optical port

The card provides four 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s. [Table 9-115](#) lists the attributes of a 10GE SFP+ optical port.

NOTE

When the card is installed on the S5720-HI, the four 10GE SFP+ optical ports support only 10GE SFP+ optical modules, SFP+ cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

Table 9-115 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module used (see 11.12 10GE SFP+ Optical Modules , 11.13 10GE-CWDM SFP+ Optical Modules , and 11.14 10GE-DWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 9-116 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.) Weight: 0.76 kg (1.68 lb) Maximum power consumption: 9.95 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0°C to 45°C (32°F to 113°F) Relative humidity: 5% RH to 95% RH Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 9-117](#) provides ordering information of the card.

Table 9-117 Ordering information

Card Description	Card Name	Part number
4-port 10 GE SFP+ rear interface card	ES5D21X04S01	03022MDR

9.20 ES5D21X02S01 (2-Port 10 Gig SFP+ Rear Interface Card, Used in S5720-EI Series)

Version Mapping

[Table 9-118](#) lists the mapping between the ES5D21X02S01 card and software versions.

Table 9-118 Version mapping

Card Model	Software Version
ES5D21X02S01	V200R007C00 to V200R019C10 versions NOTE This module is not supported in V200R007C10.

Card Overview

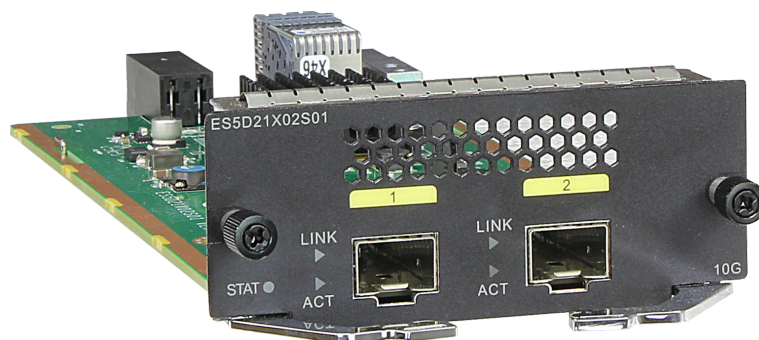
The ES5D21X02S01 provides two 10GE SFP+ optical ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in [Table 9-119](#).

Table 9-119 Applicable switch models

Card	Switch Model
ES5D21X02S01	S5720-C-EI and S5720-PC-EI series

[Figure 9-57](#) shows the appearance of the ES5D21X02S01.

Figure 9-57 ES5D21X02S01



Functions

Table 9-120 describes functions of the ES5D21X02S01.

Table 9-120 Functions

Function	Item
Basic function	Provides two 10GE SFP+ optical ports for data access and line-rate switching.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports.

Indicators and Ports

Figure 9-58 shows indicators on the ES5D21X02S01.

Figure 9-58 Indicators on the ES5D21X02S01

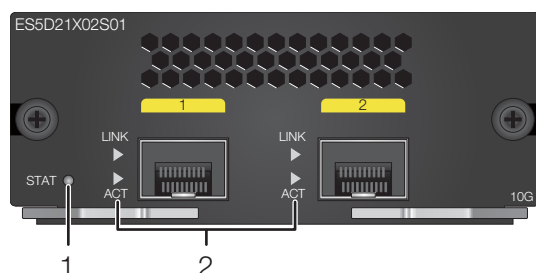


Table 9-121 describes indicators on the ES5D21X02S01.

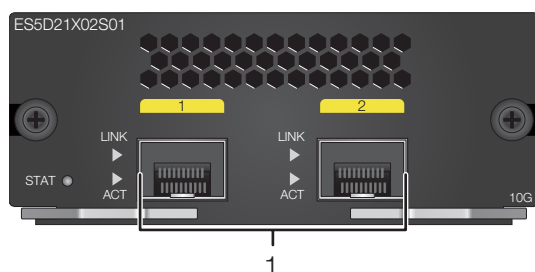
Table 9-121 Description of indicators on the ES5D21X02S01

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.

Number	Indicator	Color	Description
2	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

Figure 9-59 shows the ports on the ES5D21X02S01.

Figure 9-59 Ports on the ES5D21X02S01



1. Two 10GE SFP+ optical ports

10GE SFP+ optical port

10GE SFP+ optical ports on the ES5D21X02S01 can only transmit and receive service data at 10 Gbit/s. Table 9-122 lists the attributes of a 10GE SFP+ optical port.

NOTE

The two optical ports on the ES5D21X02S01 support only 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

Table 9-122 Attributes of a 10GE SFP+ optical port

Attribute	Item
Connector type	LC/PC

Attribute	Item
Optical port attributes	Depend on the optical module used (see 11.12 10GE SFP+ Optical Modules , 11.13 10GE-CWDM SFP+ Optical Modules , and 11.14 10GE-DWDM SFP+ Optical Modules)
Standards compliance	IEEE 802.3ae

Technical Specifications

[Table 9-123](#) lists technical specifications of the ES5D21X02S01.

Table 9-123 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.) • Weight: 0.78 kg (1.72 lb) • Maximum power consumption: 8 W
Environment specifications	<ul style="list-style-type: none"> • Operating temperature: 0°C to 45°C (32°F to 113°F) • Relative humidity: 5% RH to 95% RH • Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 9-124](#) provides the ES5D21X02S01 ordering information.

Table 9-124 Ordering information

Card Description	Card Name	Part Number
2-port 10 Gig SFP+ interface card, used in S5720-EI series (rear card)	ES5D21X02S01	03022RMH

9.21 ES5D21X02T01 (2-Port 10 Gig RJ45 Rear Interface Card, Used in S5720-EI Series)

Version Mapping

Table 9-125 lists the mapping between the ES5D21X02T01 card and software versions.

Table 9-125 Version mapping

Card Model	Software Version
ES5D21X02T01	V200R007C00 to V200R019C10 versions NOTE This module is not supported in V200R007C10.

Card Overview

The ES5D21X02T01 provides two 10GBASE-T RJ45 electrical ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in **Table 9-126**.

Table 9-126 Applicable switch models

Card	Switch Model
ES5D21X02T01	S5720-C-EI and S5720-PC-EI series

Figure 9-60 shows the appearance of the ES5D21X02T01.

Figure 9-60 ES5D21X02T01



Functions

Table 9-127 describes functions of the ES5D21X02T01.

Table 9-127 Functions

Function	Item
Basic function	Provides two 10GE RJ45 electrical ports for data access and line-rate switching.
Hot swapping	Supported
Service port stacking	Ports on the card can be used as stack ports.

Indicators and Ports

Figure 9-61 shows indicators on the ES5D21X02T01.

Figure 9-61 Indicators on the ES5D21X02T01

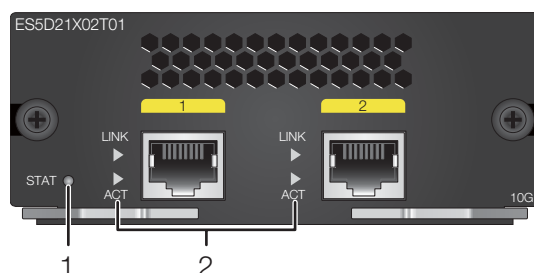


Table 9-128 describes indicators on the ES5D21X02T01.

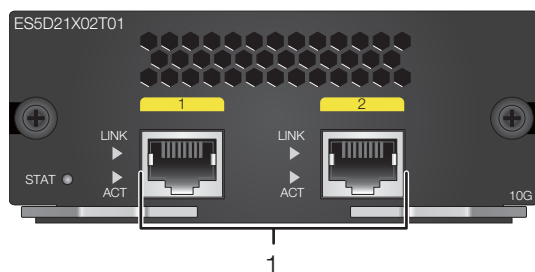
Table 9-128 Description of indicators on the ES5D21X02T01

Number	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running normally.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	LINK	Off	No link is established on the port.

Number	Indicator	Color	Description
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

Figure 9-62 shows the ports on the ES5D21X02T01.

Figure 9-62 Ports on the ES5D21X02T01



1. Two 10GBASE-T RJ45 electrical ports

10GBASE-T RJ45 electrical port

The two 10GBASE-T RJ45 electrical ports on the ES5D21X02T01 can only transmit services at 10 Gbit/s and cannot work at 100 Mbit/s or 1000 Mbit/s. Category 6A shielded twisted pair (STP) cables are recommended for the ports. [Table 9-129](#) lists the attributes of a 10GBASE-T RJ45 electrical port.

Table 9-129 Attributes of a 10GBASE-T RJ45 electrical port

Attribute	Item
Connector type	RJ45
Working Mode	10 Gbit/s
Standards compliance	IEEE802.3an, IEEE802.3az

[Table 9-130](#) lists the maximum transmission distances of different cables on 10GBASE-T RJ45 ports.

Table 9-130 Maximum transmission distances of different cables on 10GBASE-T RJ45 ports

Cable Type (6-a-1 Bundle)	10GBASE-T RJ45 Port
Cat6A U/UTP	Not supported
Cat6A F/UTP	100 m
Cat6A STP	100 m
Cat7	100 m

NOTE

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Technical Specifications

Table 9-131 lists technical specifications of the ES5D21X02T01.

Table 9-131 Technical Specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.9 in. x 8.2 in.)• Weight: 0.78 kg (1.72 lb)• Maximum power consumption: 16 W
Environment specifications	<ul style="list-style-type: none">• Operating temperature: 0°C to 45°C (32°F to 113°F)• Relative humidity: 5% RH to 95% RH• Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-132 provides the ES5D21X02T01 ordering information.

Table 9-132 Ordering information

Card Description	Card Name	Part Number
2-port 10GBASE-T RJ45 interface card, used in S5720-EI series (rear card)	ES5D21X02T01	03022RMK

9.22 ES5D21X08S00 (8-Port 10GE SFP+ Rear Optical Interface Card)

Version Mapping

Table 9-133 lists the mapping between the ES5D21X08S00 card and software versions.

Table 9-133 Version mapping

Card Model	Software Version
ES5D21X08S00	V200R012C00 to V200R019C10 versions

Card Overview

The ES5D21X08S00 provides eight 10GE SFP+ optical ports for data access and line-rate switching.

The ES5D21X08S00 can be installed in a rear card slot of the switch models listed in **Table 9-134**.

Table 9-134 Applicable switch models

Card	Switch Model
ES5D21X08S00	<ul style="list-style-type: none"> • S5730-36C-HI • S5730-36C-PWH-HI • S5730-44C-HI (can be installed only in slot 1) • S5730-44C-PWH-HI (can be installed only in slot 1) • S5730-60C-HI • S5730-60C-PWH-HI • S5730-68C-HI (can be installed only in slot 1) • S5730-68C-PWH-HI (can be installed only in slot 1) • S5730-44C-HI-24S (can be installed only in slot 1) • S5730-36C-HI-24S • S5730-60C-HI-48S • S5730-68C-HI-48S (can be installed only in slot 1)

Figure 9-63 ES5D21X08S00



Functions

Table 9-135 Functions

Function	Description
Basic function	Provides eight 10GE SFP+ optical ports for data access and line-rate switching.

Function	Description
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports. NOTE Only supported on the S5730-HI.

Indicators and Ports

Figure 9-64 Indicators on the ES5D21X08S00

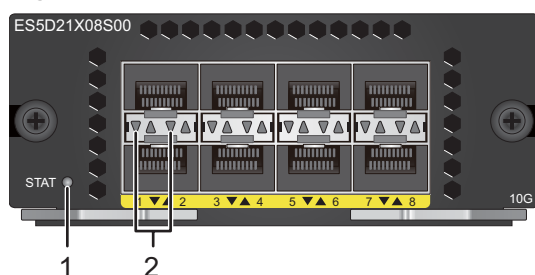
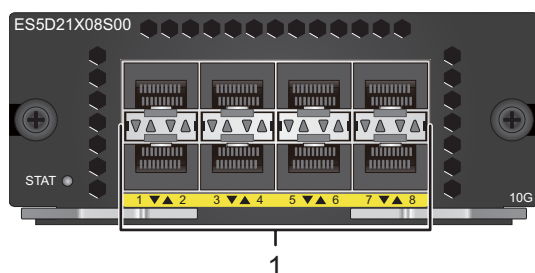


Table 9-136 Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	Two single-color indicators for each port <ul style="list-style-type: none"> Steady green: LINK indicator 	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Off: No link is established on the port.

No.	Indicator	Color	Description
	<ul style="list-style-type: none"> Blinking yellow: ACT indicator <p>NOTE Arrowheads show the positions of ports. A down arrowhead indicates a port at the bottom, and an up arrowhead indicates a port at the top.</p>	Yellow	<ul style="list-style-type: none"> Blinking: The port is transmitting or receiving data. Off: No data is transmitting or receiving on the port.

Figure 9-65 Ports on the ES5D21X08S00



1. Eight 10GE SFP+ optical ports

10GE SFP+ optical port

The ES5D21X08S00 provides 10GE SFP+ optical ports to transmit and receive service data at 1 Gbit/s or 10 Gbit/s. [Table 9-137](#) lists the attributes of a 10GE SFP+ optical port.

 **NOTE**

When the card is installed on the S5730-60C-HI, S5730-60C-PWH-HI, S5730-68C-HI, S5730-68C-PWH-HI, S5730-60C-HI-48S, or S5730-68C-HI-48S, ports 1 to 4 on the card only support the rate of 10 Gbit/s, and ports 5 to 8 support 1 Gbit/s and 10 Gbit/s.

When the card is installed on the S5730-36C-HI, S5730-36C-PWH-HI, S5730-44C-HI, S5730-44C-PWH-HI, S5730-36C-HI-24S, or S5730-44C-HI-24S, all ports on the card support 1 Gbit/s and 10 Gbit/s.

The 10GE SFP+ optical ports support GE optical modules (a maximum transmission distance of 40 km), GE copper modules, 10GE SFP+ optical modules (a maximum transmission distance of 10 km), SFP+ cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).

Table 9-137 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see 11.5 GE eSFP Optical Modules (a maximum transmission distance of 40 km), 11.10 GE SFP Copper Modules , and 11.12 10GE SFP+ Optical Modules (a maximum transmission distance of 10 km).
Standards compliance	IEEE 802.3ae

Technical Specifications

Table 9-138 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.) Weight: 0.26 kg (0.57 lb) Maximum power consumption: 35.8 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0°C to 45°C (32°F to 113°F) Relative humidity: 5% RH to 95% RH Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-139 provides the ES5D21X08S00 ordering information.

Table 9-139 Ordering information

Card Description	Card Model	Part Number
8-port 10GE SFP+ rear optical interface card	ES5D21X08S00	98010738

9.23 ES5D21X08T00 (8-Port 10GBASE-T RJ45 Rear Interface Card)

Version Mapping

Table 9-140 lists the mapping between the ES5D21X08T00 and software versions.

Table 9-140 Version mapping

Card Model	Software Version
ES5D21X08T00	S5730-HI: V200R012C00 to V200R019C10 versions S5731-H and S5731S-H: V200R019C00 and later versions

Card Overview

The ES5D21X08T00 provides eight 10GBASE-T RJ45 ports for data access and line-rate switching. It can be installed in a rear card slot of the switch models listed in **Table 9-141**.

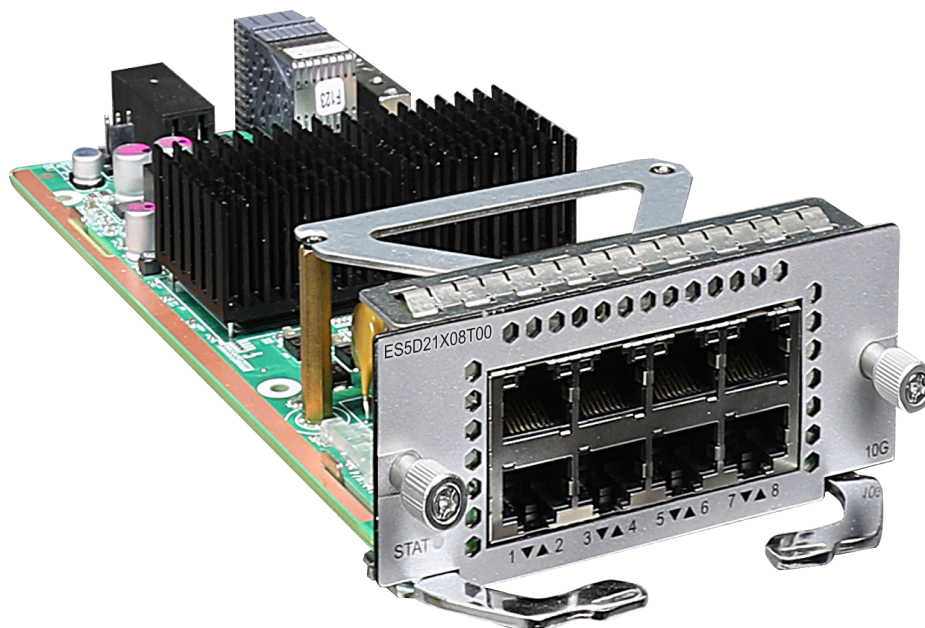
Table 9-141 Applicable switch models

Card	Switch Model
ES5D21X08T00	<ul style="list-style-type: none"> • S5730-36C-HI • S5730-44C-HI (can be installed only in slot 1) • S5730-36C-PWH-HI • S5730-44C-PWH-HI (can be installed only in slot 1) • S5730-60C-HI • S5730-68C-HI (can be installed only in slot 1) • S5730-60C-PWH-HI • S5730-68C-PWH-HI (can be installed only in slot 1) • S5730-44C-HI-24S (can be installed only in slot 1) • S5730-36C-HI-24S • S5730-60C-HI-48S • S5730-68C-HI-48S (can be installed only in slot 1) • S5731-H24T4XC • S5731-H24P4XC • S5731-H48T4XC • S5731-H48P4XC • S5731S-H24T4XC-A • S5731S-H48T4XC-A

Figure 9-66 ES5D21X08T00 (old)



Figure 9-67 ES5D21X08T00 (new)



Functions

Table 9-142 describes functions of the ES5D21X08T00.

Table 9-142 Functions

Function	Description
Basic function	Provides eight 10GE RJ45 ports for data access and line-rate switching.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

Indicators and Ports

Figure 9-68 Indicators on the ES5D21X08T00 (old)

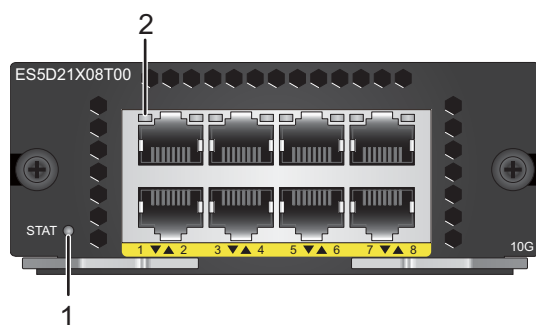


Figure 9-69 Indicators on the ES5D21X08T00 (new)

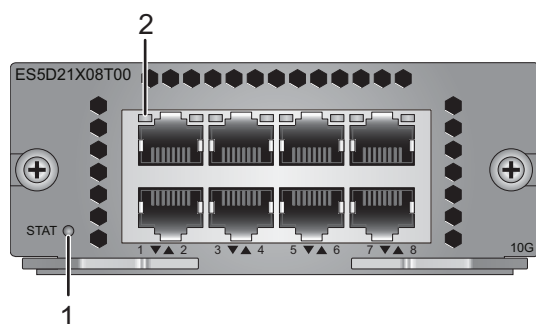


Table 9-143 shows indicators on the ES5D21X08T00.

Table 9-143 Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Off	No link is established on the port.
		Green	Steady on: A link has been established on the port. Blinking: The port is transmitting or receiving data.

Figure 9-70 Ports on the ES5D21X08T00 (old)

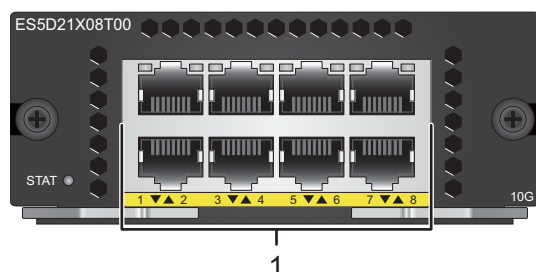
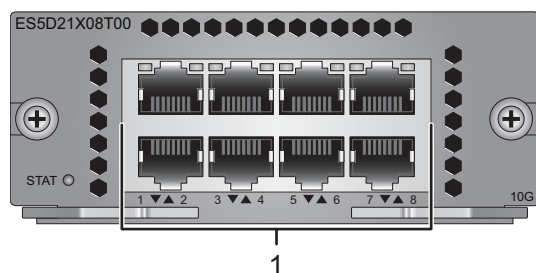


Figure 9-71 Ports on the ES5D21X08T00 (new)

1. Eight 10GBASE-T RJ45 ports

10GBASE-T RJ45 port

The ES5D21X08T00 provides eight 10GBASE-T RJ-45 electrical ports. The first four electrical ports support only 10 Gbit/s. The last four electrical ports support only 10 Gbit/s in versions earlier than V200R019C00, and also support 100 Mbit/s and 1000 Mbit/s in auto-negotiation mode in V200R019C00 and later versions. When the ports work at 10 Gbit/s, Category 6A shielded Ethernet cables are recommended. [Table 9-144](#) lists the attributes of a 10GBASE-T RJ45 port.

Table 9-144 Attributes of a 10GBASE-T RJ45 port

Attribute	Item
Connector type	RJ45
Standards compliance	IEEE802.3an, IEEE802.3az

[Table 9-145](#) lists the maximum transmission distances of different cables on 10GBASE-T RJ45 ports.

Table 9-145 Maximum transmission distances of different cables on 10GBASE-T RJ45 ports

Cable Type (6-a-1 Bundle)	10GBASE-T RJ45 Port
Cat6A U/UTP	Not supported
Cat6A F/UTP	100 m
Cat6A STP	100 m
Cat7	100 m

NOTE

6-a-1 stands for the six-around-one cable bundle mode, with one cable in the center and six cables bundled evenly around it.

Technical Specifications

Table 9-146 lists technical specifications of the ES5D21X08T00.

Table 9-146 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.)• Weight: 0.26 kg (0.57 lb)• Maximum power consumption: 22.1 W
Environment specifications	<ul style="list-style-type: none">• Operating temperature: 0°C to 45°C (32°F to 113°F)• Relative humidity: 5% RH to 95% RH• Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-147 provides the ES5D21X08T00 ordering information.

Table 9-147 Ordering information

Card Description	Card Model	Part Number
8-port 10GBASE-T RJ45 rear interface card	ES5D21X08T00	98010736

9.24 S7X08000 (8-Port 10GE SFP+ Optical Interface Card)

Version Mapping

Table 9-148 lists the mapping between the S7X08000 card and software versions.

Table 9-148 Version mapping

Card Model	Software Version
S7X08000	V200R019C10 and later versions

Card Overview

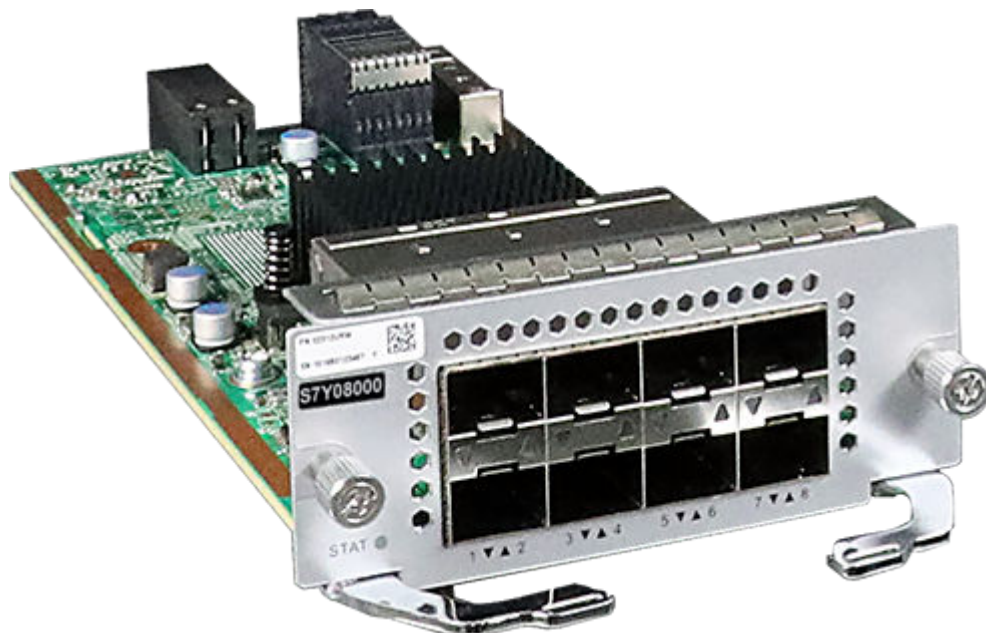
The S7X08000 provides eight 10GE SFP+ optical ports for data access and line-rate switching by default. The port mode can be changed. After the change, the first two ports are 25GE ports, and the last six ports become unavailable.

The S7X08000 can be installed in a rear card slot of the switch models listed in [Table 9-149](#).

Table 9-149 Applicable switch models

Card	Switch Model
S7X08000	<ul style="list-style-type: none"> • S5731-H24T4XC • S5731-H24P4XC • S5731-H48T4XC • S5731-H48P4XC • S5731S-H24T4XC-A • S5731S-H48T4XC-A • S5732-H24UM2CC • S5732-H48UM2CC

Figure 9-72 S7X08000



Functions

Table 9-150 Functions

Function	Description
Basic function	Provides eight 10GE SFP+ optical ports for data access and line-rate switching by default. You can run the set card port-config-mode 25g-port enable command to change the port mode. After this command is configured, the first two ports are 25GE ports and the last six ports become unavailable.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

Indicators and Ports

Figure 9-73 Indicators on the S7X08000

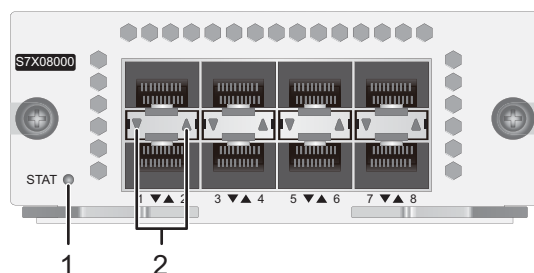
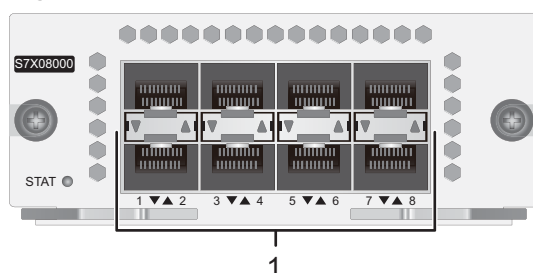


Table 9-151 Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.

No.	Indicator	Color	Description
2	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-74 Ports on the S7X08000

1. Eight 10GE SFP+ optical ports, supporting 10GE/GE

You can run the **set card port-config-mode 25g-port enable** command to change the port mode. After this command is configured, the first two ports are 25GE SFP28 optical ports, and the last six ports become unavailable.

10GE SFP+ optical port

The S7X08000 provides 10GE SFP+ optical ports to transmit and receive service data at 10 Gbit/s or 1 Gbit/s. [Table 9-152](#) lists the attributes of a 10GE SFP+ optical port.

NOTE

The 10GE SFP+ optical ports support GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), AOC cables (3 m and 10 m; SFP+ to SFP+), and SFP+ dedicated stack cables.

Table 9-152 Attributes of a 10GE SFP+ optical port

Attribute	Description
Connector type	LC/PC

Attribute	Description
Optical port attributes	Depend on the optical module. For details, see 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules , 11.12 10GE SFP+ Optical Modules , and 11.13 10GE-CWDM SFP+ Optical Modules .

25GE SFP28 optical port

The S7X08000 provides 25GE SFP28 optical ports to transmit and receive service data at 25 Gbit/s, 10 Gbit/s, or 1 Gbit/s. [Table 9-153](#) lists the attributes of a 25GE SFP28 optical port.

NOTE

- The 25GE SFP28 optical ports support 25GE optical modules, SFP28 copper cables (1 m, 3 m, and 5 m; SFP28 to SFP28), SFP28 AOC cables (3 m, 5 m, 7 m, and 10 m; SFP28 to SFP28), GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).
- When a 25GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 25 Gbit/s.
- When a 10GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 10 Gbit/s.
- Before installing a GE optical module or copper module on a 25GE SFP28 optical port, run the **port mode ge** command to configure the port to work at 1 Gbit/s.

Table 9-153 Attributes of a 25GE SFP28 optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see 11.15 25GE SFP28 Optical Modules , 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules , 11.12 10GE SFP+ Optical Modules , and 11.13 10GE-CWDM SFP+ Optical Modules .

Technical Specifications

Table 9-154 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none">• Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.)• Weight: 0.44 kg (0.97 lb)• Maximum power consumption: 33 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-155 provides the S7X08000 ordering information.

Table 9-155 Ordering information

Card Description	Card Model	Part Number
8-port 10GE SFP+ optical interface card	S7X08000	02312URW

9.25 S7Y08000 (8-Port 25GE SFP28 Optical Interface Card)

Version Mapping

Table 9-156 lists the mapping between the S7Y08000 card and software versions.

Table 9-156 Version mapping

Card Model	Software Version
S7Y08000	V200R019C10SPC500 and later versions

Card Overview

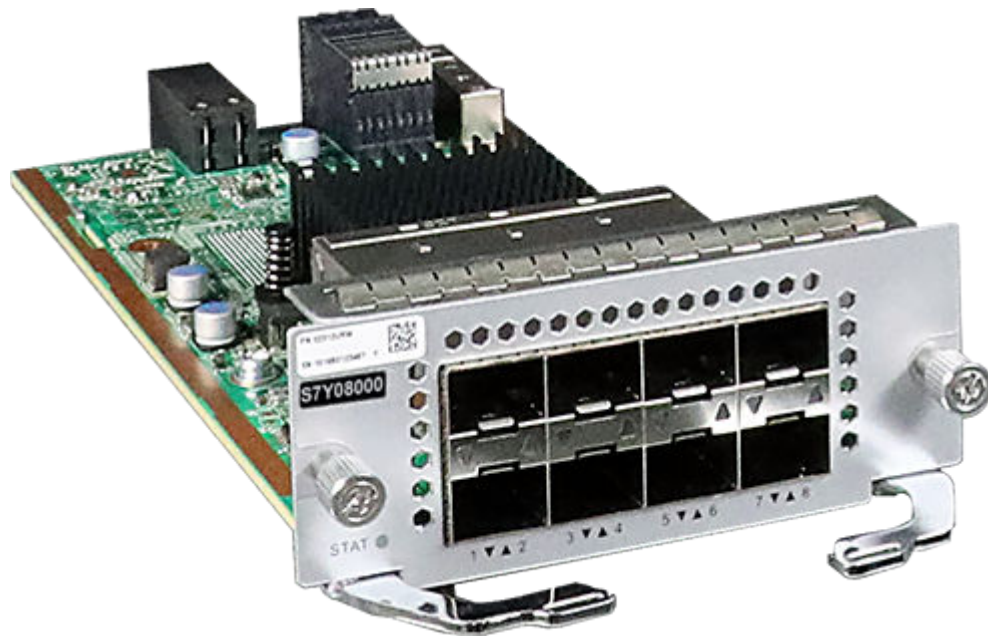
The S7Y08000 provides eight 25GE SFP28 optical ports for data access and switching by default.

The S7Y08000 can be installed in a rear card slot of the switch models listed in [Table 9-157](#).

Table 9-157 Applicable switch models

Card	Switch Model
S7Y08000	<ul style="list-style-type: none"> • S5732-H24UM2CC • S5732-H48UM2CC

Figure 9-75 S7Y08000



Functions

Table 9-158 Functions

Function	Description
Basic function	Provides eight 25GE SFP28 optical ports for data access and switching by default.
Hot swapping	Supported
Service ports for stacking	The service ports on the card can be used as stack ports.

Indicators and Ports

Figure 9-76 Indicators on the S7Y08000

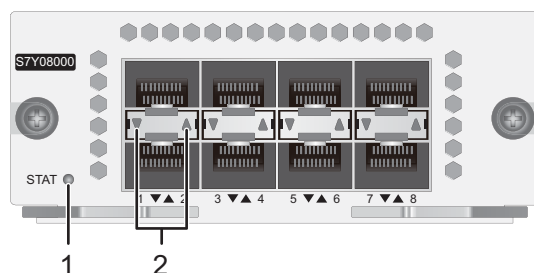
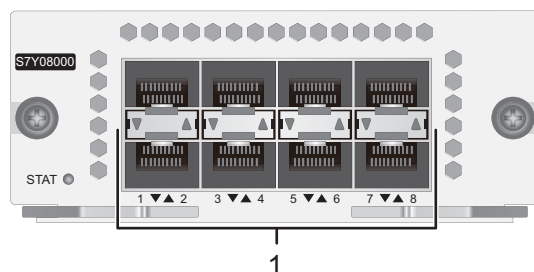


Table 9-159 Indicator description

No.	Indicator	Color	Description
1	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
2	ACT/LINK	Green	<ul style="list-style-type: none"> Steady on: A link is established on the port. Blinking: The port is sending or receiving data.
		Off	No link is established on the port.

Figure 9-77 Ports on the S7Y08000



1. Eight 25GE SFP28 optical ports, supporting 25GE/10GE/GE.

25GE SFP28 optical port

The S7Y08000 provides 25GE SFP28 optical ports to transmit and receive service data at 25 Gbit/s, 10 Gbit/s, or 1 Gbit/s. [Table 9-160](#) lists the attributes of a 25GE SFP28 optical port.

 **NOTE**

- The 25GE SFP28 optical ports support 25GE optical modules, SFP28 copper cables (1 m, 3 m, and 5 m; SFP28 to SFP28), SFP28 AOC cables (3 m, 5 m, 7 m, and 10 m; SFP28 to SFP28), GE optical modules, GE copper modules, 10GE SFP+ optical modules, SFP+ copper cables (1 m, 3 m, 5 m, and 10 m; SFP+ to SFP+), and AOC cables (3 m and 10 m; SFP+ to SFP+).
- When a 25GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 25 Gbit/s.
- When a 10GE optical module or cable is connected to a 25GE SFP28 optical port, the port can automatically adjust its rate to 10 Gbit/s.
- Before installing a GE optical module or copper module on a 25GE SFP28 optical port, run the **port mode ge** command to configure the port to work at 1 Gbit/s.

Table 9-160 Attributes of a 25GE SFP28 optical port

Attribute	Description
Connector type	LC/PC
Optical port attributes	Depend on the optical module. For details, see 11.15 25GE SFP28 Optical Modules , 11.5 GE eSFP Optical Modules , 11.7 GE-CWDM eSFP Optical Modules , 11.9 GE-DWDM eSFP Optical Modules , 11.10 GE SFP Copper Modules , 11.12 10GE SFP+ Optical Modules , and 11.13 10GE-CWDM SFP+ Optical Modules .

Technical Specifications

Table 9-161 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.57 in. x 3.94 in. x 8.19 in.) • Weight: 0.44 kg (0.97 lb) • Maximum power consumption: 33 W

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

[Table 9-162](#) provides the S7Y08000 ordering information.

Table 9-162 Ordering information

Card Description	Card Model	Part Number
8-port 25GE SFP28 optical interface card	S7Y08000	02312URV

9.26 ES5D21VST000 (Dedicated Stack Card with 2*QSFP + Interface)

Version Mapping

[Table 9-163](#) lists the mapping between the ES5D21VST000 card and software versions.

Table 9-163 Version mapping

Card Model	Software Version
ES5D21VST000	S5720-C-EI and S5720-PC-EI: V200R007C00 to V200R019C10 versions NOTE This module is not supported in V200R007C10. S5730-SI and S5730S-EI: V200R012C00 to V200R019C10 versions

Card Overview

The ES5D21VST000 is a stack card that provides two QSFP+ optical ports for stack connection. It can be installed in a rear card slot of the switch models listed in [Table 9-164](#).

Table 9-164 Applicable switch models

Card	Switch Model
ES5D21VST000	S5720-C-EI, S5720-PC-EI, S5730-SI, and S5730S-EI series

Figure 9-78 ES5D21VST000



Functions

Table 9-165 describes functions of the ES5D21VST000.

Table 9-165 Functions

Function	Description
Basic function	Provides two QSFP+ optical ports for setting up a stack system among multiple switches. The QSFP+ optical port cannot be split into four 10GE ports.
Hot swapping	Supported

Indicators and Ports

Figure 9-79 Indicators on the ES5D21VST000

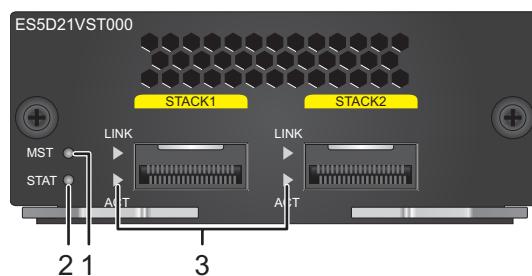
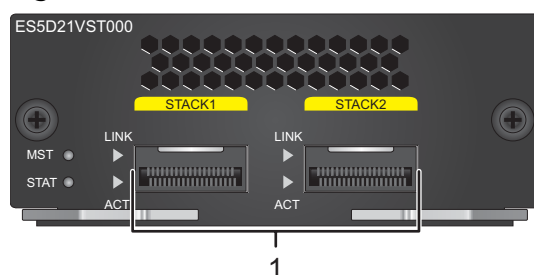


Table 9-166 Description of indicators on the ES5D21VST000

Number	Indicator	Color	Description
1	MST	Off	Off: The switch is the standby or slave switch in a stack or a standalone switch with the stacking function disabled.
		Green	Blinking: The switch is the master switch in a stack or a standalone switch with the stacking function enabled.
2	STAT	Off	The system software is not running.
		Green	<ul style="list-style-type: none"> Fast blinking: The system is starting. Slow blinking: The system is running properly.
		Red	Steady on: A fault that affects services has occurred. The fault cannot be rectified automatically and requires manual intervention.
3	LINK	Off	No link is established on the port.
		Green	Steady on: A link is established on the port.
	ACT	Off	The port is not transmitting or receiving data.
		Yellow	Blinking: The port is transmitting or receiving data.

Figure 9-80 Ports on the ES5D21VST000



1. Two QSFP+ optical ports

QSFP+ optical ports

QSFP+ optical ports on the ES5D21VST000 are used for setting up a stack system among multiple switches. [Table 9-167](#) lists the attributes of a QSFP+ optical port.

NOTE

When the card is installed on the S5720-EI, the two optical ports on the card can work with QSFP+ optical modules (only QSFP-40G-SR4 and QSFP-40G-iSR4 supported) and QSFP+ cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+). When the card is installed on the S5730-SI or S5730S-EI, the optical ports on the card can work with QSFP+ optical modules (excluding the QSFP-40G-SR-BD), QSFP+ AOC cables (10 m; QSFP+ to QSFP+), and QSFP+ cables (1 m, 3 m, and 5 m; QSFP+ to QSFP+).

Table 9-167 Attributes of a QSFP+ optical port

Attribute	Description
Connector type	MPO
Optical port attributes	Depend on the optical module used (see 11.16 40GE QSFP+ Optical Modules)
Standards compliance	IEEE 802.3ba

Technical Specifications

Table 9-168 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 40 mm x 100 mm x 208 mm (1.6 in. x 3.9 in. x 8.2 in.) Weight: 0.92 kg (2.03 lb) Maximum power consumption: 9 W
Environment specifications	<ul style="list-style-type: none"> Operating temperature: 0°C to 45°C (32°F to 113°F) Relative humidity: 5% RH to 95% RH Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-169 Ordering information

Card Description	Card Name	Part Number
Dedicated stack card with 2*QSFP+ interface (including one PCS of 1 m QSFP+ cable)	ES5D21VST000	02310YXY

9.27 ES5D00ETPC00 (Stack Rear Card)

Version Mapping

Table 9-170 lists the mapping between the ES5D00ETPC00 card and software versions.

Table 9-170 Version mapping

Card Model	Software Version
ES5D00ETPC00 NOTE After the display device command is executed, the PCB model of the card is displayed as CX22ETPC.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

Intelligent Stack (iStack) technology enables multiple stacking-capable devices to function as a logical device.

Before a stack is set up, each switch is an independent entity that has its own IP address and MAC address. You need to manage the switches separately. After a stack is set up, switches in the stack form a logical entity that can be managed and maintained using a single IP address. Stack technology improves forwarding performance and network reliability, and simplifies network management.

Switches can be connected as a stack using service ports or stack cards (ES5D00ETPC00).

The ES5D00ETPC00 stack card can be installed in a rear card slot of the switch models listed in **Table 9-171**.

Table 9-171 Applicable switch models

Card	Switch Model
ES5D00ETPC00	<ul style="list-style-type: none"> • S5700-24TP-SI-AC • S5700-24TP-SI-DC • S5700-48TP-SI-AC • S5700-48TP-SI-DC • S5700-24TP-PWR-SI • S5700-48TP-PWR-SI • S5700-28C-SI • S5700-52C-SI • S5700-28C-PWR-SI • S5700-52C-PWR-SI • S5700-28C-EI • S5700-52C-EI • S5700-28C-EI-24S • S5700-28C-PWR-EI • S5700-52C-PWR-EI • S5710-28C-LI • S5710-52C-LI • S5710-28C-PWR-LI • S5710-52C-PWR-LI

Figure 9-81 shows the appearance of the ES5D00ETPC00.

Figure 9-81 ES5D00ETPC00



Functions

Table 9-172 describes functions of the ES5D00ETPC00.

Table 9-172 Functions

Function	Description
Basic function	Provides two 12 Gbit/s electrical ports for stacking. The 12 Gbit/s electrical ports on multiple switches are connected using PCIe cables to set up a stack.
Topology	Switches in a stack can be connected in a chain or ring topology. A link failure in the chain topology causes the stack to split. In contrast, the ring topology changes into a chain topology upon a link failure so that services in the stack are not affected. Therefore, the ring topology is more reliable than the chain topology. Figure 9-82 and Figure 9-83 show the chain and ring topologies. NOTE When connecting stack cables, connect stack1 port of one switch to stack2 port of another switch.

Figure 9-82 Chain topology of a stack

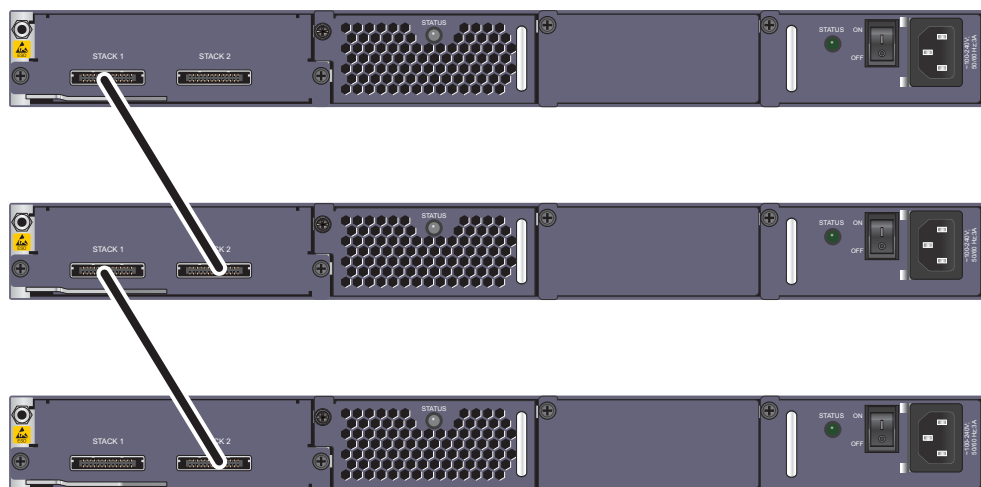
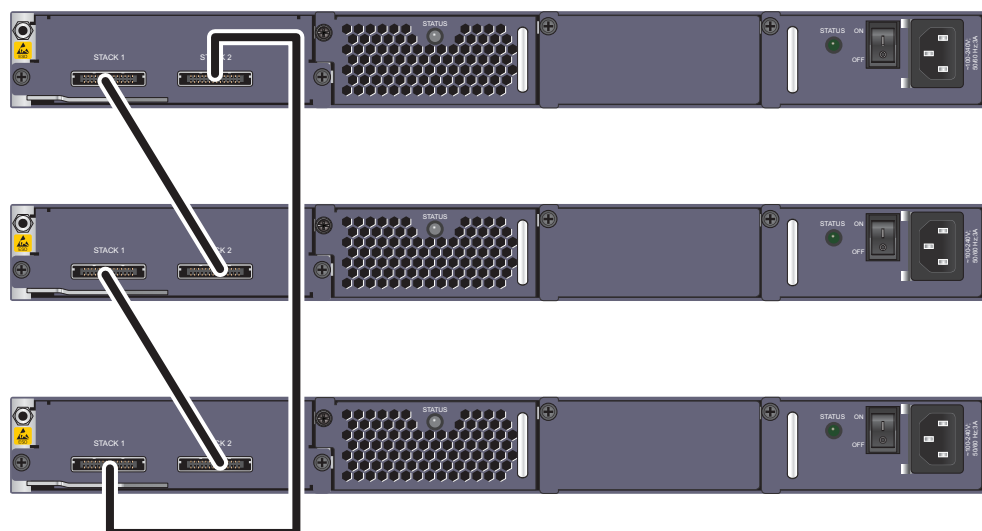


Figure 9-83 Ring topology of a stack



Usage Constraints

NOTICE

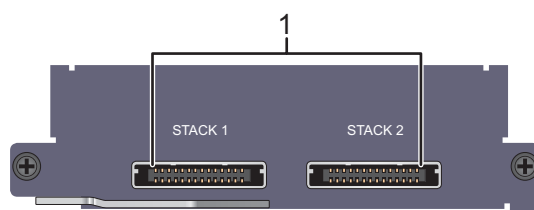
The following requirements must be met to set up a stack:

- All the member switches belong to the same series. The EI series and SI series cannot form a stack.
- All switches have stack cards installed and are connected using PCIe cables.
- The ES5D00ETPC00 is not hot swappable, but PCIe cables are hot swappable.

Port Description

Figure 9-84 shows ports on the ES5D00ETPC00.

Figure 9-84 Ports on the ES5D00ETPC00



1. Two stack electrical ports

Stack electrical port

The ES5D00ETPC00 provides two 12 Gbit/s electrical ports for stacking. The two 12 Gbit/s electrical ports must be used with [10.2 PCIe Cables](#). [Table 9-173](#) describes attributes of the 12 Gbit/s electrical port.

Table 9-173 Attributes of a stack electrical port

Attribute	Description
Connector type	PCIe
Standards compliance	IEEE 802.3ae
Frame format	Ethernet_II, Ethernet_SAP, Ethernet_SNAP
Network protocol	IP

Technical Specifications

Table 9-174 lists technical specifications of the ES5D00ETPC00.

Table 9-174 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 43 mm x 143 mm x 126 mm (1.69 in. x 5.63 in. x 4.96 in.) • Weight: 0.2 kg (0.44 lb) • Maximum power consumption: 0.5 W
Environment specifications	<ul style="list-style-type: none"> • Operating temperature: 0°C to 50°C (32°F to 122°F) • Relative humidity: 5% to 95% • Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-175 provides the card ordering information.

Table 9-175 Ordering information

Card Description	Card Name	Part Number
Ethernet Stack Interface Card (Including Stack Card, 100 cm Stack Cable)	ES5D001VST00	02319959
Ethernet Stack Interface Card (Including Stack Card, 300 cm Stack Cable)	ES5D2VS02000	02310QPL

9.28 ES5D00ETPB00 (Extended Rear Card)

Version Mapping

Table 9-176 lists the mapping between the ES5D00ETPB00 card and software versions.

Table 9-176 Version mapping

Card Model	Software Version
ES5D00ETPB00 NOTE After the display device command is executed, the PCB model of the card is displayed as CX22ETPB.	V100R005C01 to V200R005C03 NOTE This module is not supported in V200R003C02 or V200R003C10.

Card Overview

The ES5D00ETPB00 can be installed in a rear card slot of the switch models listed in **Table 9-177**.

Table 9-177 Applicable switch models

Card	Switch Model
ES5D00ETPB00	<ul style="list-style-type: none"> • S5700-28C-SI • S5700-52C-SI • S5700-28C-PWR-SI • S5700-52C-PWR-SI • S5700-28C-EI • S5700-52C-EI • S5700-28C-EI-24S • S5700-28C-PWR-EI • S5700-52C-PWR-EI • S5710-28C-LI • S5710-52C-LI • S5710-28C-PWR-LI • S5710-52C-PWR-LI

Figure 9-85 shows the appearance of the ES5D00ETPB00.

Figure 9-85 ES5D00ETPB00



Functions

Table 9-178 describes functions of the ES5D00ETPB00.

Table 9-178 Functions

Function	Description
Basic function	The ES5D00ETPB00 extended rear card must be used together with the ES5D000X4S01/ES5D000G4S01/ES5D00G4SA01 front card to provide four GE SFP ports or four 10GE SFP+ ports.

Usage Constraints

NOTICE

An ES5D000X4S01/ES5D000G4S01/ES5D00G4SA01 front card must be used with an ES5D00ETPB00 rear card.

The ES5D00ETPB00 is not hot swappable.

Technical Specifications

Table 9-179 lists technical specifications of the ES5D00ETPB00.

Table 9-179 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> Dimensions (H x W x D): 43 mm x 143 mm x 126 mm (1.69 in. x 5.63 in. x 4.96 in.) Weight: 0.2 kg (0.44 lb) Maximum power consumption: 0.1 W

Item	Description
Environment specifications	<ul style="list-style-type: none">• Operating temperature: 0°C to 50°C (32°F to 122°F)• Relative humidity: 5% to 95%• Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 9-180 provides the ES5D00ETPB00 ordering information.

Table 9-180 Ordering information

Card Description	Card Name	Part Number
Extended channel card	ES5D00ETPB00	03020MLA

10 Cables

- 10.1 Ground Cable
- 10.2 PCIe Cables
- 10.3 Optical Fiber
- 10.4 Ethernet Cable
- 10.5 DC Power Cable (OT and Cord End Terminals)
- 10.6 DC Power Cable (Quick-Connect Cord End Terminal)
- 10.7 2-Pin DC Power Cable (Phoenix Connector)
- 10.8 AC Power Cable
- 10.9 3-Pin AC Power Cable (Phoenix Connector)
- 10.10 Monitoring Port Cable (Phoenix Connector)
- 10.11 RPS1800 Power Cable
- 10.12 RPS Cable
- 10.13 Console Cable
- 10.14 Dedicated Stack Cable
- 10.15 Copper Cable
- 10.16 Lead-Acid Battery Temperature Sensor

10.1 Ground Cable

Appearance and Structure

Figure 10-1 shows the appearance of a typical ground cable.

NOTE

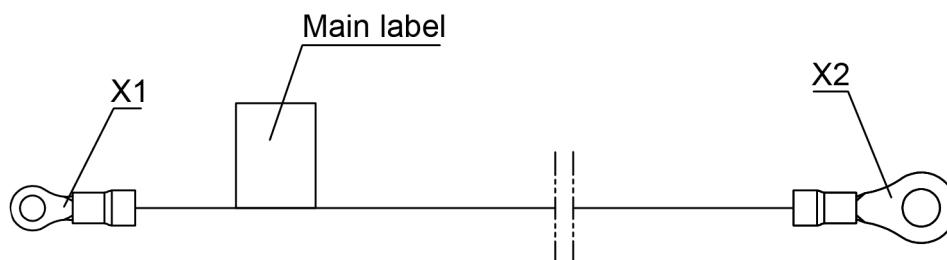
Other types of ground cables are similar to the example shown in the figure, except for their cross-sectional area, size of the cable lugs, and cable length.

Figure 10-1 Appearance of a ground cable



Figure 10-2 shows the structure of a ground cable.

Figure 10-2 Structure of a ground cable



Pin Assignments

Table 10-1 lists the pin assignments of a ground cable.

Table 10-1 Pin assignments of a ground cable

X1	X2	Wire Color	Conductor Cross-Sectional Area	Length
OT-4	OT-6	Green-yellow	4 mm ²	0.4 m

Connection

A ground cable grounds a device to protect it from lightning and electromagnetic interference. A ground cable is connected to a chassis in the following way:

- The OT-4 naked crimping connector connects to the ground point on the chassis.
- The OT-6 naked crimping connector connects to the ground point on the cabinet.

10.2 PCIe Cables

Appearance and Structure

The S5700 series switches can use PCIe cables as stack cables to connect stack ports on rear stack cards. Switches connected using stack cables form a logical switch to forward packets.

Figure 10-3 shows the appearance of a PCIe cable.

Figure 10-3 PCIe cable



NOTE

Both ends of a PCIe cable must be covered by an ESD cap.

Specifications

Table 10-2 Specifications of a PCIe cable

Attribute	Description	
Cable model	1 m PCIe cable	3 m PCIe cable NOTE This cable is available in V200R002C00 and later versions.
Connector type	PCIe	
Standards compliance	PCIe 8X	
Length	1.0 m	3.0 m
Applicable device models	<ul style="list-style-type: none">• S5700-SI• S5700-EI• S5710-C-LI	<ul style="list-style-type: none">• V200R002C00: S5700-52C-EI and S5700-28C-EI-24S• V200R003C00 and later versions:<ul style="list-style-type: none">– S5700-SI– S5700-EI

10.3 Optical Fiber

Active Optical Cable

An active optical cable (AOC) is an optical fiber with optical modules at both ends, making it easy to use. [Figure 10-4](#), [Figure 10-5](#), and [Figure 10-6](#) show the appearance of AOC cables.

Figure 10-4 SFP+ to SFP+ or SFP28 to SFP28 AOC cable

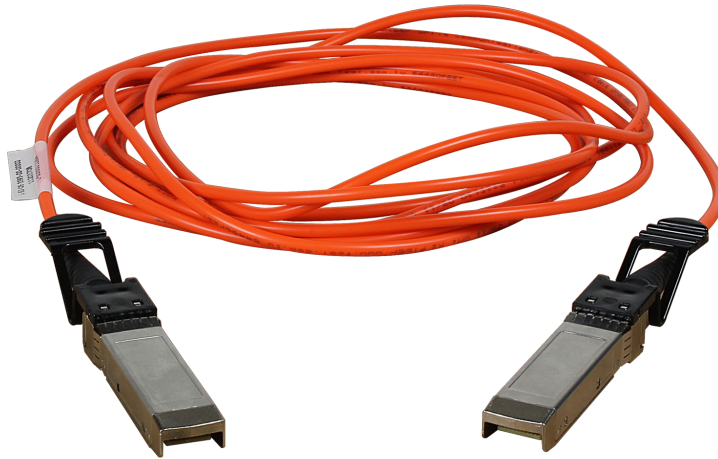


Figure 10-5 QSFP+ to QSFP+ or QSFP28 to QSFP28 AOC cable



Figure 10-6 QSFP+ to 4*SFP+ AOC cable



Table 10-3 lists the models and attributes of AOC cables.

Table 10-3 Attributes of AOC cables

Model	Length	Bend Radius	Connector Type	Part Number	Operating Temperature
SFP-10G-AOC3M	3 m	30 mm	SFP+ connectors at both ends	02310QWG	0°C to 70°C
SFP-10G-AOC10M	10 m	30 mm	SFP+ connectors at both ends	02310QWH	0°C to 70°C
QSFP-H40G-AOC10M	10 m	25 mm	QSFP+ connectors at both ends	02310SSH	0°C to 70°C
QSFP-4SFP10-AOC10M	10 m	25 mm	QSFP+ connector at one end and four SFP+ connectors at the other end	02310SSJ	0°C to 70°C
QSFP-100G-AOC-10M	10 m	25 mm	QSFP28 connectors at both ends	02311KNQ	0°C to 70°C
SFP-25G-AOC-3M	3 m	30 mm	SFP28 connectors at both ends	02311MPE	0°C to 70°C
SFP-25G-AOC-5M	5 m	30 mm	SFP28 connectors at both ends	02311MPD	0°C to 70°C
SFP-25G-AOC-7M	7 m	30 mm	SFP28 connectors at both ends	02311MPC	0°C to 70°C
SFP-25G-AOC-10M	10 m	30 mm	SFP28 connectors at both ends	02311KNT	0°C to 70°C

Fiber Jumper

A fiber jumper consists of one or more fibers of a certain length and the optical connectors at both ends. A fiber jumper connects an optical module to a fiber terminal box.

NOTE

- The MPO-MPO and MPO-2*MPO fibers have similar appearances except for the number of MPO connectors at the other end. The following figures show an MPO-MPO fiber for example.
- The MPO-4*DLC and MPO-10*DLC fibers have similar appearances except for the number of DLC connectors at the other end.
- The MPO-MPO fibers for S series switches use type B connectors (key Up/key Up).

Figure 10-7 shows a single-mode LC/PC fiber jumper.

Figure 10-7 Single-mode LC/PC fiber jumper



Figure 10-8 shows a multimode LC/PC fiber jumper.

Figure 10-8 Multimode LC/PC fiber jumper

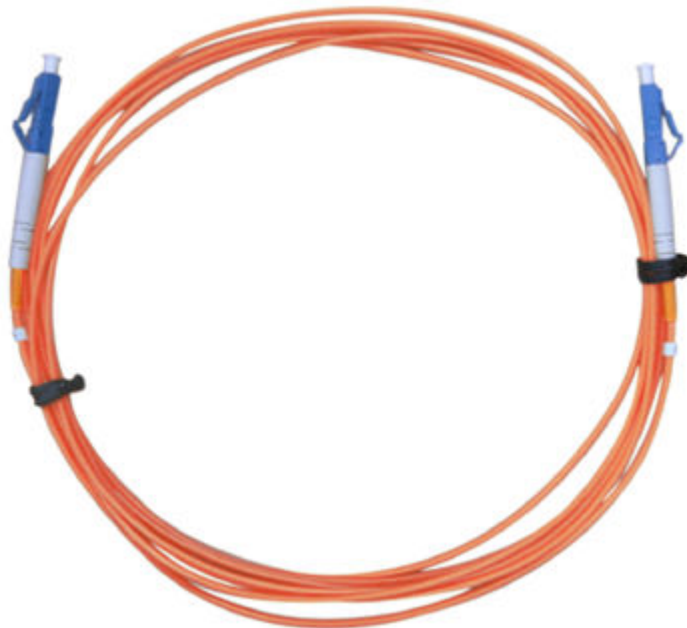


Figure 10-9 shows a single-mode SC/PC fiber jumper.

Figure 10-9 Single-mode SC/PC fiber jumper



Figure 10-10 shows an MPO-MPO fiber jumper.

Figure 10-10 MPO-MPO fiber jumper



Figure 10-11 shows an MPO-4*DLC fiber jumper.

Figure 10-11 MPO-4*DLC fiber jumper



Figure 10-12 shows an MPO-10*DLC fiber jumper.

Figure 10-12 MPO-10*DLC fiber jumper



Comply with the following rules when selecting fiber jumpers:

1. Determine the length of fiber jumpers based on the onsite cabling distance.
2. Determine the fiber type based on the optical module type.
 - Use a multimode fiber jumper for a multimode optical module.
 - Use a single-mode fiber jumper for a single-mode optical module.
3. Determine the optical connector type based on the interface type.
Ensure that the optical connector at each end of a fiber jumper is the same type as the interface to which it will be connected.

Figure 10-13 shows the structure of an 8-strand MPO-MPO fiber jumper.

Figure 10-13 Structure of an 8-strand MPO-MPO fiber jumper

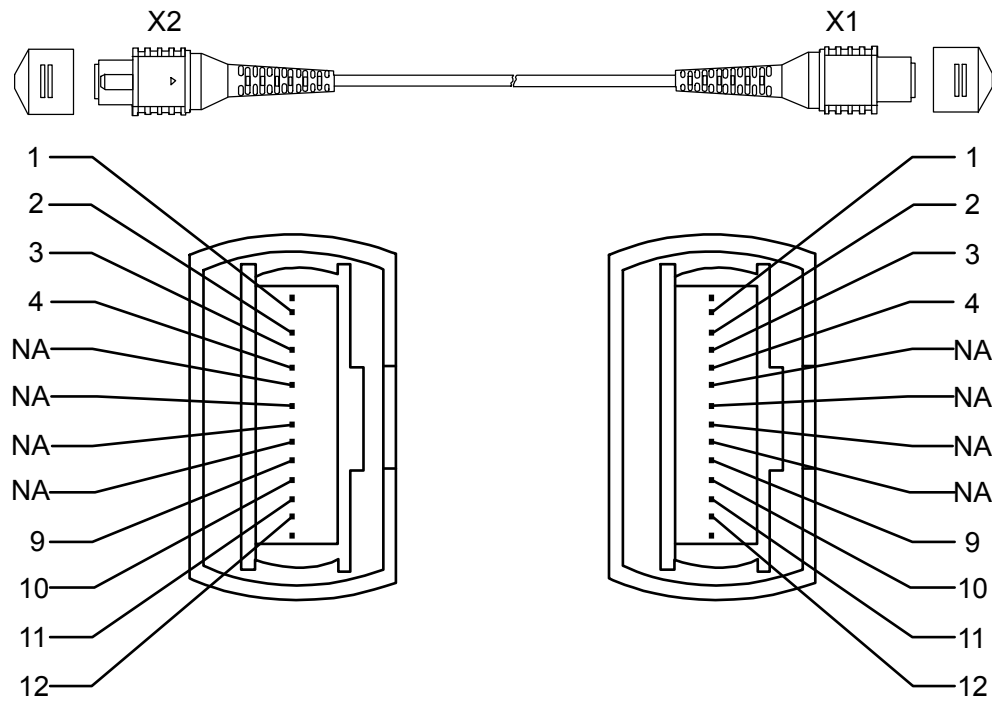


Figure 10-14 shows the structure of a 12-strand MPO-MPO fiber jumper.

Figure 10-14 Structure of a 12-strand MPO-MPO fiber jumper

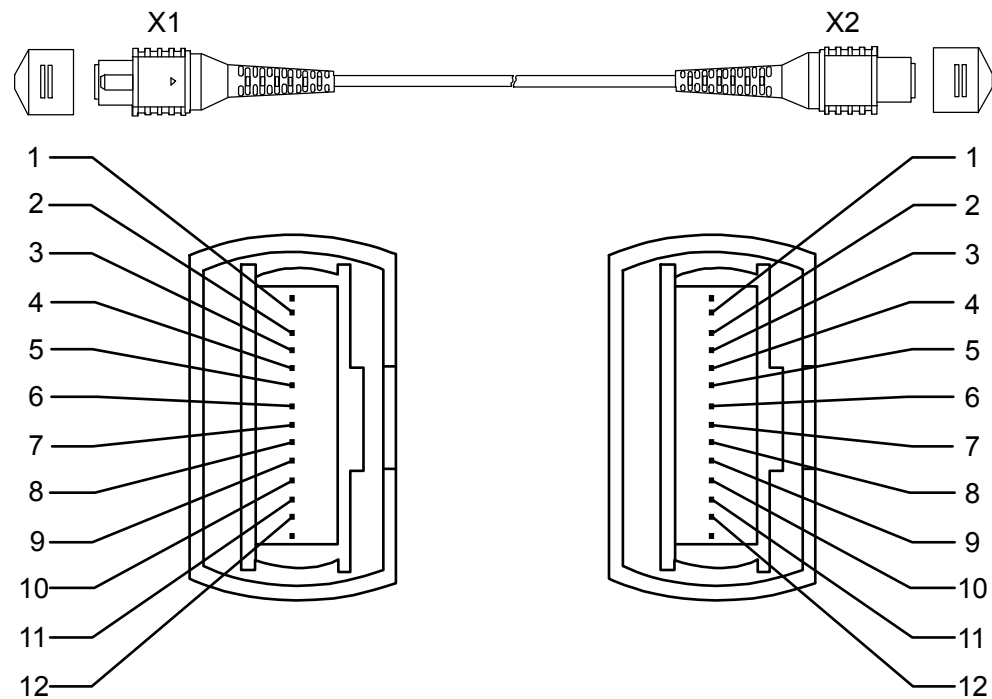


Figure 10-15 shows the structure of a 24-strand MPO-MPO fiber jumper.

Figure 10-15 Structure of a 24-strand MPO-MPO fiber jumper

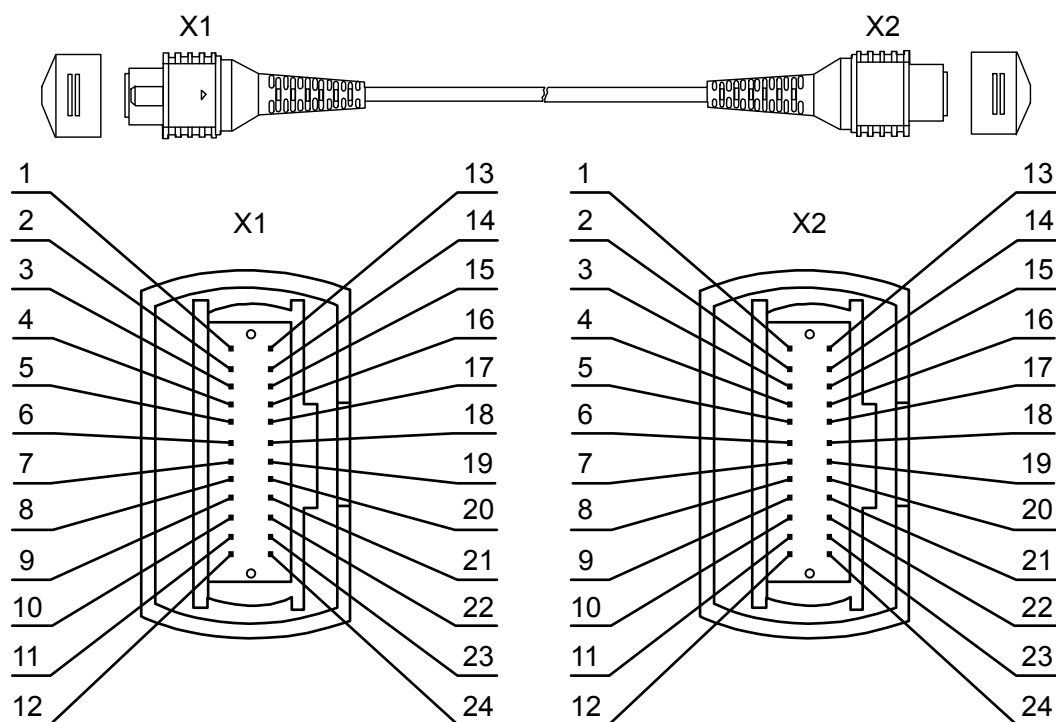


Figure 10-16 shows the structure of an MPO-4*DLC fiber jumper.

Figure 10-16 Structure of an MPO-4*DLC fiber jumper

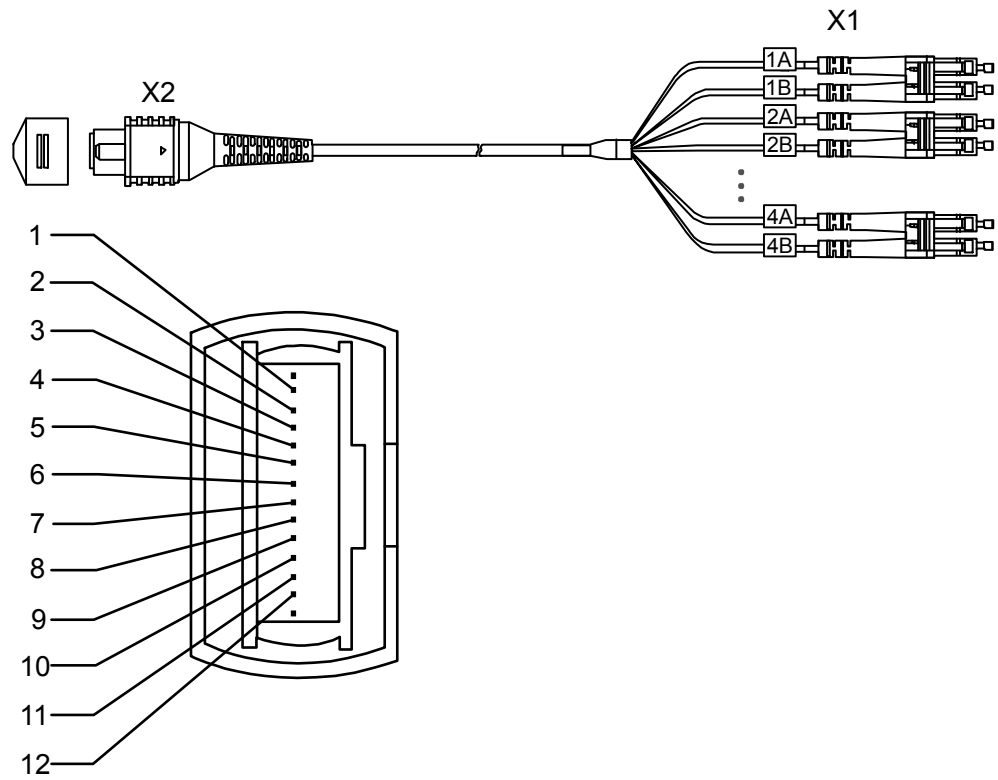


Figure 10-17 shows the structure of an MPO-2*MPO fiber jumper.

Figure 10-17 Structure of an MPO-2*MPO fiber jumper

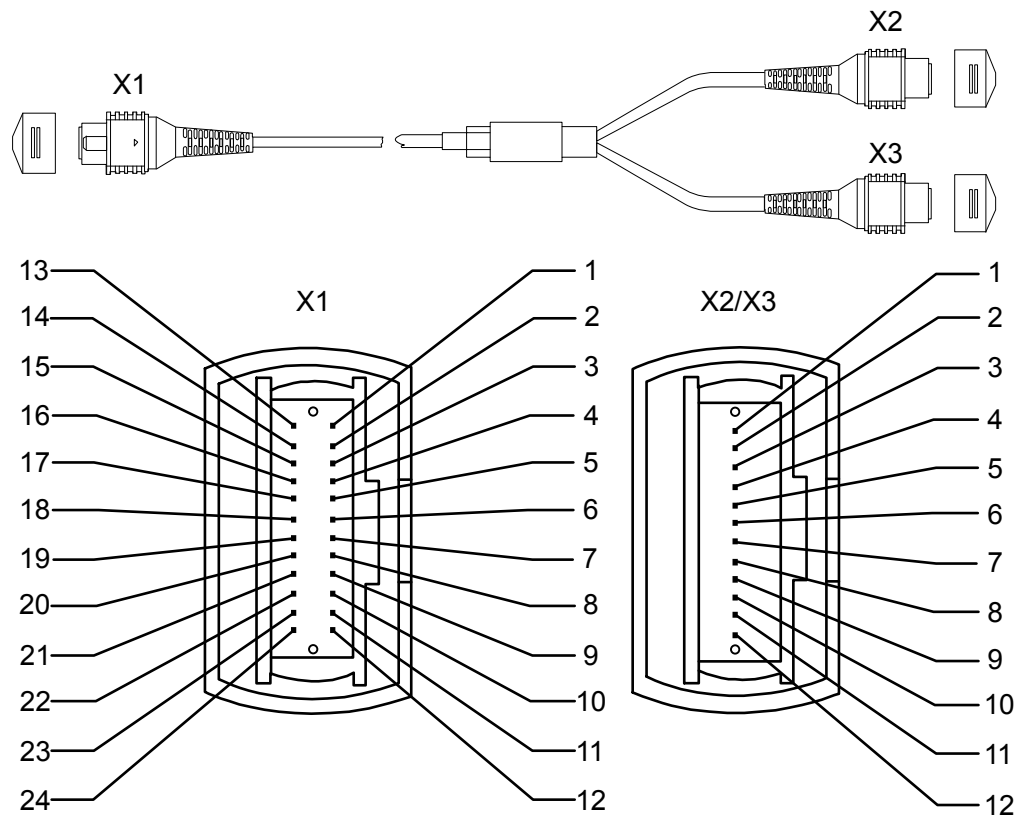


Figure 10-18 shows the structure of an MPO-10*DLC fiber jumper.

Figure 10-18 Structure of an MPO-10*DLC fiber jumper

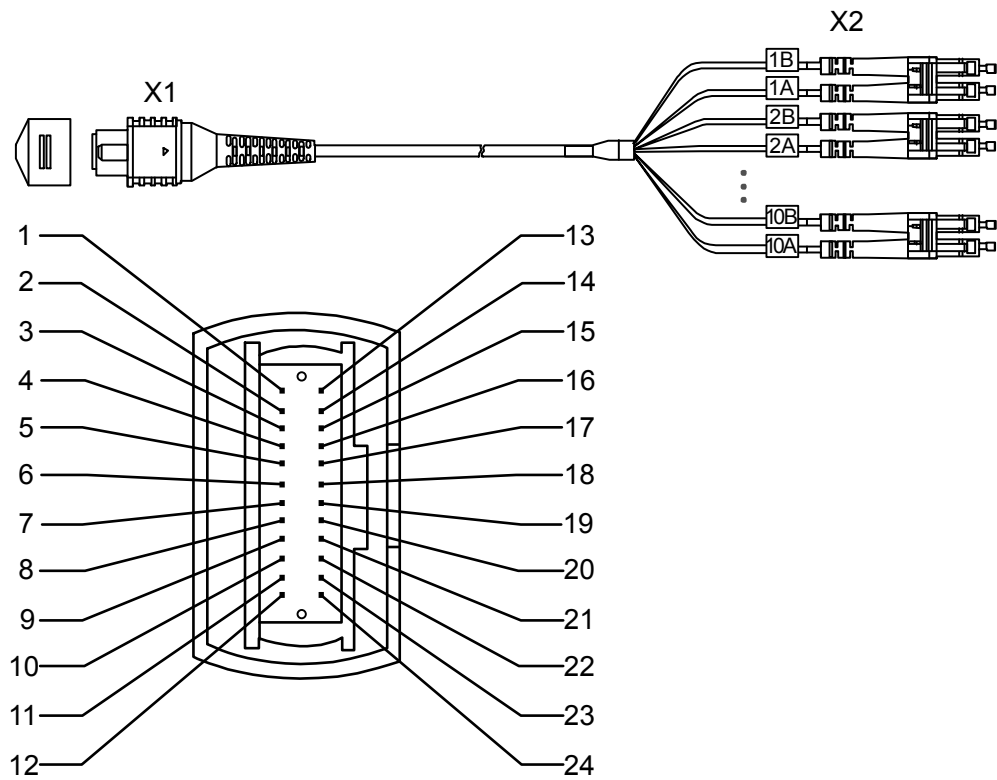


Table 10-4 lists the pin assignments of an 8-strand MPO-MPO fiber jumper.

Table 10-4 Pin assignments of an 8-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin
1	12
2	11
3	10
4	9
NA	NA
NA	NA
NA	NA
NA	NA
9	4
10	3
11	2

X1 Pin	X2 Pin
12	1

Table 10-5 lists the pin assignments of a 12-strand MPO-MPO fiber jumper.

Table 10-5 Pin assignments of a 12-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin
1	12
2	11
3	10
4	9
5	8
6	7
7	6
8	5
9	4
10	3
11	2
12	1

Table 10-6 lists the pin assignments of a 24-strand MPO-MPO fiber jumper.

Table 10-6 Pin assignments of a 24-strand MPO-MPO fiber jumper

X1 Pin	X2 Pin	X1 Pin	X2 Pin
1	24	13	12
2	23	14	11
3	22	15	10
4	21	16	9
5	20	17	8
6	19	18	7
7	18	19	6

X1 Pin	X2 Pin	X1 Pin	X2 Pin
8	17	20	5
9	16	21	4
10	15	22	3
11	14	23	2
12	13	24	1

Table 10-7 lists the pin assignments of an MPO-4*DLC fiber jumper.

Table 10-7 Pin assignments of an MPO-4*DLC fiber jumper

X2 Pin	X1 Pin
1	1A
2	2A
3	3A
4	4A
9	4B
10	3B
11	2B
12	1B

Table 10-8 lists the pin assignments of an MPO-2*MPO fiber jumper.

Table 10-8 Pin assignments of an MPO-2*MPO fiber jumper

X1 Pin	X2 Pin	X3 Pin
2	12	NA
3	11	NA
4	10	NA
5	9	NA
7	NA	12
8	NA	11
9	NA	10

X1 Pin	X2 Pin	X3 Pin
10	NA	9
14	1	NA
15	2	NA
16	3	NA
17	4	NA
19	NA	1
20	NA	2
21	NA	3
22	NA	4

Table 10-9 lists the pin assignments of an MPO-10*DLC fiber jumper.

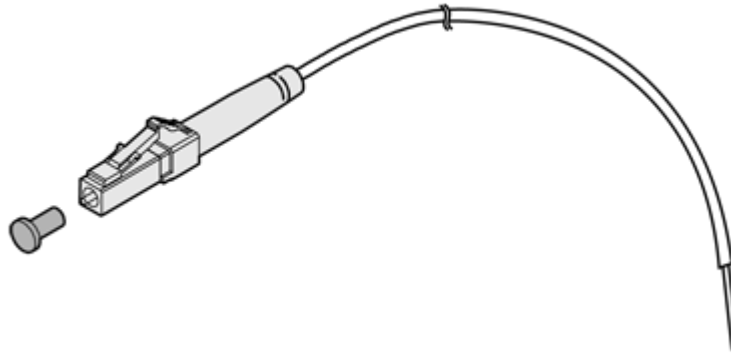
Table 10-9 Pin assignments of an MPO-10*DLC fiber jumper

X1 Pin	X2 Pin	X1 Pin	X2 Pin
2	1A	14	1B
3	2A	15	2B
4	3A	16	3B
5	4A	17	4B
6	5A	18	5B
7	6A	19	6B
8	7A	20	7B
9	8A	21	8B
10	9A	22	9B
11	10A	23	10B

Fiber Pigtail

A fiber pigtail is an optical fiber that has an optical connector on one end and a piece of exposed fiber at the other end. The exposed fiber can be fused to another optical fiber. Fiber pigtails are commonly used to connect optical fibers to optical modules in fiber terminal boxes (couplers and jumpers are also used). **Figure 10-19** shows the structure of a fiber pigtail.

Figure 10-19 Structure of a fiber pigtail



Fiber pigtails are classified into single-mode and multimode fiber pigtails and are used for short-distance connections.

Optical Fiber, Optical Connector, and Fiber Adapter

Optical Fibers

Optical fibers are classified into single-mode fibers and multimode fibers.

- Single-mode fibers have a diameter of 5-10 μm and transmit laser in one mode under a specified wavelength. These fibers support a wide frequency band and a large transmission capacity, so they are used for long-distance transmission. Most single-mode fibers are yellow, as shown in [Figure 10-7](#).
- Multimode fibers have a diameter of 50 μm or 62.5 μm and transmit laser light in multiple modes with a specified wavelength. These fibers have a lower transmission capacity than single-mode fibers and are used for short-distance transmission. Modal dispersion occurs during transmission over multimode fibers.

In the latest cabling infrastructure of ISO/IEC 11801, multimode fibers are classified into four categories: OM1, OM2, OM3, and OM4.

- OM1: traditional 62.5/125 μm multimode fibers. OM1 fibers have a large core diameter and numerical aperture, and provide high light gathering ability and bending resistance.
- OM2: traditional 50/125 μm multimode fibers. OM2 fibers have a small core diameter and numerical aperture. Compared with OM1 fibers, OM2 fibers provide higher bandwidth because they significantly reduce the modal dispersion. When transmitting data at 1 Gbit/s with 850 nm wavelength, OM1 and OM2 fibers support maximum link lengths of 220 m and 550 m, respectively. OM1 and OM2 fibers can provide sufficient bandwidth within a distance of 300 m. Generally, OM1 and OM2 fibers are orange, as shown in [Figure 10-8](#).
- OM3: new-generation multimode fibers, with longer transmission distances than OM1 and OM2 fibers.
- OM4: laser optimized multimode fibers with 50 μm core diameter. OM4 is an improvement to OM3 and only increases the modal bandwidth. OM4 fibers provide 4700 MHz*km of modal bandwidth, whereas OM3 fibers provide only 2000 MHz*km of modal bandwidth. Generally, OM3

and OM4 fibers are light green, as shown in [Figure 10-10](#). You can identify OM3 and OM4 fibers by their labels or printed marks.







MPO fibers are used for 40G and 100G optical modules. An MPO fiber consists of multiple multi-mode fiber strands, and each multi-mode fiber strand provides one laser transmission channel. Some fiber suppliers produce 8-strand MPO optical fibers, while some suppliers produce 12-strand or 24-strand MPO fibers.

- A 40G optical module uses four channels to transmit laser and four channels to receive laser. That is, a total of eight channels are required for a 40G optical module. 8-strand and 12-strand MPO fibers use the same definition of fiber channels. Therefore, they are equivalent in functionality when connecting to 40G optical modules.
- When 100G optical modules are used, choose MPO fibers according to the following rules:
 - For CFP optical modules, choose 24-strand fibers for the CFP-100G-SR10 module and 8-strand or 12-strand fibers for other modules.
 - Choose 8-strand or 12-strand fibers for QSFP28 modules.

Optical Connector

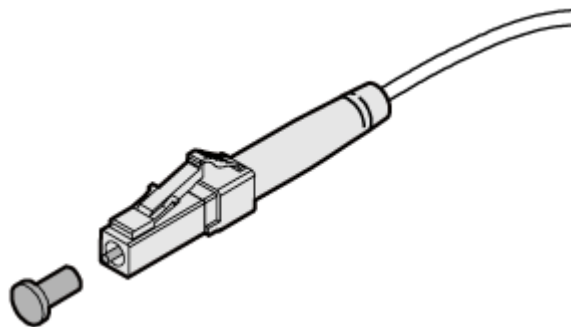
Optical connectors are used to connect optical fibers of the same type. [Table 10-10](#) lists common optical connectors.

Table 10-10 Common optical connectors

Connect or Type	Optical Connector			
Square connector	SC/PC connector 	LC/PC connector 	MTRJ/PC connector 	MPO connector 
Round connector	FC/PC connector 	ST/PC connector 	-	-

[Figure 10-20](#) shows an LC/PC optical connector.

Figure 10-20 LC/PC optical connector



NOTICE

When connecting or removing an LC/PC optical connector, align the connector with the optical port and do not rotate the fiber. Pay attention to the following points:

- To connect a fiber, align the optical connector with the optical port and gently insert the optical fiber into the port.
 - To remove a fiber, press the clip on the connector and pull the fiber out.
-

Fiber Adapter

A fiber adapter (also called a flange) is a fiber connection component. Two fiber connectors need to be connected using a fiber adapter. Fiber adapters are widely used in optical distribution frames (ODFs), fiber transmission equipment, and optical instruments.

10.4 Ethernet Cable

Types of Ethernet Cables

An Ethernet cable connects a maintenance terminal to the console port on the device for local or remote maintenance.

Ethernet cables are classified into straight-through cables and crossover cables.

- **Straight-through cable:** The twisted pairs in the RJ45 connectors at both ends are crimped in the same sequence. A straight-through cable connects two devices of different types, for example, a PC and a switch.
- **Crossover cable:** The twisted pairs in the RJ45 connectors at two ends are crimped in different sequences. A crossover cable connects two devices or interfaces of the same type, for example, two PCs.

Crossover and straight cables only differ in wire sequences, and function the same when transmitting data.

Huawei switches support both straight-through and crossover cables and their ports are adaptive to the cable types.

Use shielded Ethernet cables when switches complying with EN 50121-4 are used in environments that meet EN 50121-4 requirements.

Appearance and Structure

 **NOTE**

The straight-through cable and the crossover cable have the same appearance and use the RJ45 connector.

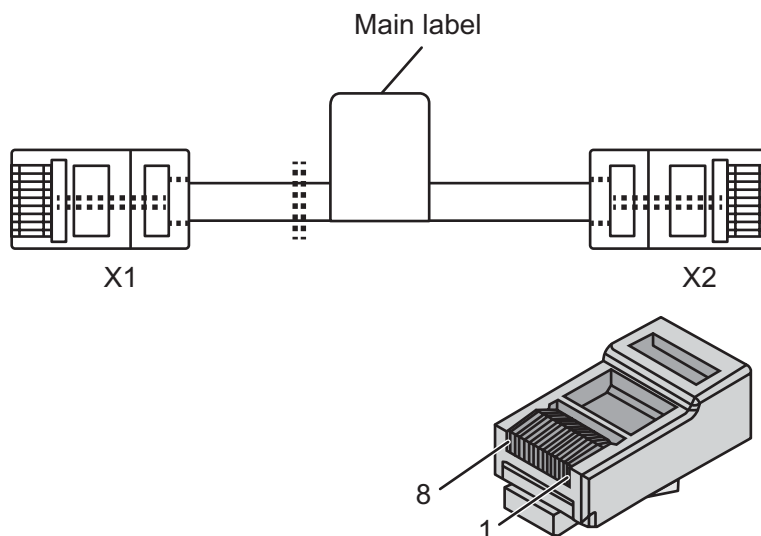
Figure 10-21 shows the appearance of an Ethernet cable.

Figure 10-21 Appearance of an Ethernet cable



Figure 10-22 shows the structure of an Ethernet cable.

Figure 10-22 Structure of an Ethernet cable



Pin Assignments

Table 10-11 shows the pin assignments of a straight-through cable.

Table 10-11 Pin assignments of a straight-through cable

X1 Pin	Wire Color	X2 Pin
1	White and orange	1
2	Orange	2
3	White and green	3
4	Blue	4
5	White and blue	5
6	Green	6
7	White and brown	7
8	Brown	8

Table 10-12 shows the pin assignments of a crossover cable.

Table 10-12 Pin assignments of a crossover cable

X1 Pin	Wire Color	X2 Pin
1	White and orange	3
2	Orange	6
3	White and green	1
4	Blue	4
5	White and blue	5
6	Green	2
7	White and brown	7
8	Brown	8

NOTE

To achieve the best electrical transmission performance, ensure that the wires connected to pins 1 and 2 and to pins 3 and 6 are twisted pairs.

10.5 DC Power Cable (OT and Cord End Terminals)

Types of DC Power Cables

DC power cables include a -48 V power return cable and a -48 V power cable. The -48 V power return cable is connected to a terminal marked RTN (+), and the -48 V power cable is connected to a terminal marked NEG (-).

Appearance and Structure

[Figure 10-23](#) and [Figure 10-24](#) show the appearance and structure of the 48 V power return cable and -48 V power cable.

Figure 10-23 Appearance of a -48 V power return cable



Figure 10-24 Appearance of a -48 V power cable



NOTE

A -48 V power return cable is black and is connected to the RTN(+) terminal of the DC power supply. A -48 V power cable is blue and is connected to the NEG(-) terminal of the DC power supply.

Connection

A DC power cable (with OT and cord end terminals) is connected to a DC power module with OT terminals as follows:

- The OT terminal is connected to the input port on the DC power module of the device.
- The cord end terminal is connected to an external power module.

10.6 DC Power Cable (Quick-Connect Cord End Terminal)

Appearance and Structure

DC power cables consist of the power cable for a 350 W/650 W DC power module and the power cable for a 1000 W DC power module.

Figure 10-25 shows the appearance of the power cable for a 350 W/650 W DC power module.

Figure 10-25 Appearance of the power cable for a 350 W/650 W DC power module



Figure 10-26 shows the structure of the power cable for a 350 W/650 W DC power module.

Figure 10-26 Structure of the power cable for a 350 W/650 W DC power module

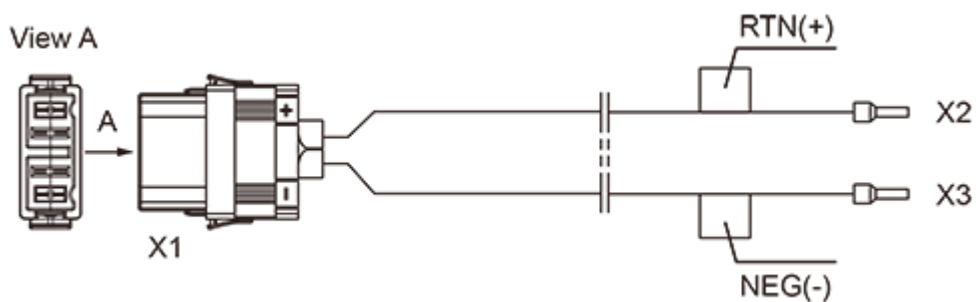


Figure 10-27 shows the appearance of the power cable for a 1000 W DC power module.

Figure 10-27 Appearance of the power cable for a 1000 W DC power module

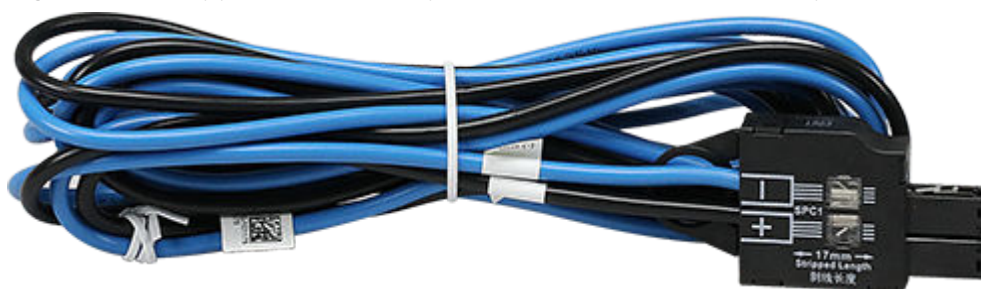
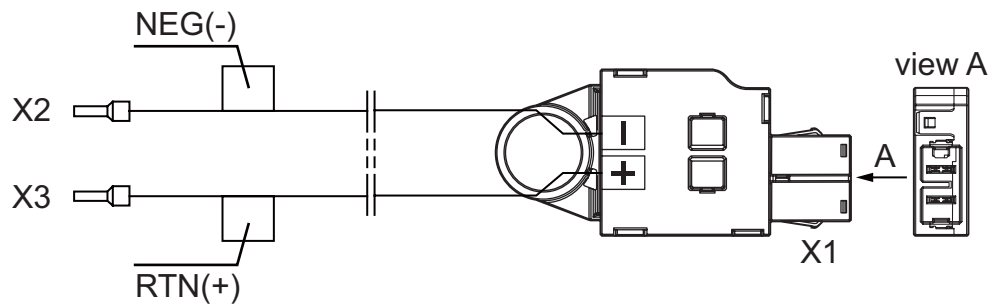


Figure 10-28 shows the structure of the power cable for a 1000 W DC power module.

Figure 10-28 Structure of the power cable for a 1000 W DC power module



Pin Assignments

Table 10-13 lists the pin assignments of the power cable for a 350 W/650 W DC power module.

Table 10-13 Pin assignments of the power cable for a 350 W/650 W DC power module

X1	X2	X3	Length	Conductor Cross-Sectional Area
2 female	Cord end terminal 4 ² grey	Cord end terminal 4 ² grey	3 m	3.332 mm ² (12AWG)

Table 10-14 lists the pin assignments of the power cable for a 1000 W DC power module.

Table 10-14 Pin assignments of the power cable for a 1000 W DC power module

X1	X2	X3	Length	Conductor Cross-Sectional Area
2 female	Cord end terminal 4 ² grey	Cord end terminal 4 ² grey	3 m	4 mm ² (14AWG)

Connection

A DC power cable connects to the DC power module of the device:

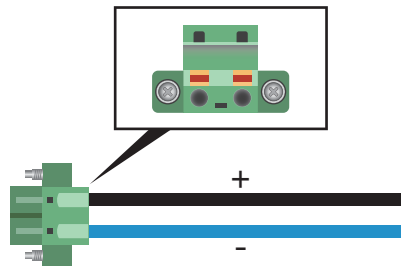
- X1 connector connects to the input port on the DC power module.
- X2/X3 cord end terminal connects to an external power module.

10.7 2-Pin DC Power Cable (Phoenix Connector)

Appearance and Structure

Figure 10-29 shows the appearance and structure of the 2-pin DC power cable and the Phoenix connector.

Figure 10-29 Structure of a 2-pin DC power cable and Phoenix connector



Specifications

Table 10-15 lists the specifications of the 2-pin DC power cable.

Table 10-15 Specifications of a 2-pin DC power cable

Minimum Conductor Cross-Sectional Area (for the Power Cable Delivered with the Switch)	Maximum Conductor Cross-Sectional Area
0.75 mm ² or 18 AWG	3 mm ² or 12 AWG

Connection

One end of the 2-pin DC power cable is used with the Phoenix connector and connected to the DC input port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to the DC power supply system.

10.8 AC Power Cable

Appearance and Structure

Figure 10-30 shows the appearance of an AC power cable.

Figure 10-30 AC power cable



NOTE

The AC power cables used in different countries and regions may have different specifications. **Figure 10-30** shows the AC power cable complying with China's national standard. The power cable and plug delivered with the chassis can only be used on this chassis, and cannot be used on other devices.

Connection

An AC power cable connects to the following:

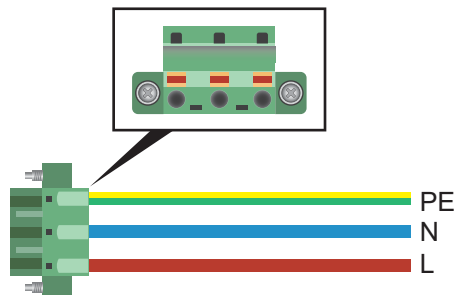
- The C13 straight female connector is connected to the AC power input port on the device
- The other end is connected to the mains supply.

10.9 3-Pin AC Power Cable (Phoenix Connector)

Appearance and Structure

Figure 10-31 shows the appearance and structure of the 3-pin AC power cable and the Phoenix connector.

Figure 10-31 Structure of a 3-pin AC power cable and Phoenix connector



⚠ DANGER

There is a risk of electric shock when handling the Phoenix connector. To avoid electric shock, ensure that wires are connected in the following sequences: red wire (live wire) connects to L; blue wire (neutral wire) connects to N; yellow/green wire (ground cable) connects to PE. In special circumstances, comply with local regulations or customer requirements.

The power cable and Phoenix connector need to be connected onsite. Ensure that there are no exposed metal parts after the power cable is connected to the Phoenix connector.

Specifications

Table 10-16 lists the specifications of the 3-pin AC power cable.

Table 10-16 Specifications of a 3-pin AC power cable

Minimum Conductor Cross-Sectional Area (for the Power Cable Delivered with the Switch)	Maximum Conductor Cross-Sectional Area
0.75 mm ² or 18 AWG NOTE The minimum conductor cross-sectional area for the S5720I-28X-PWH-SI-AC series switches is 1.25 mm ² or 16 AWG.	3 mm ² or 12 AWG

Connection

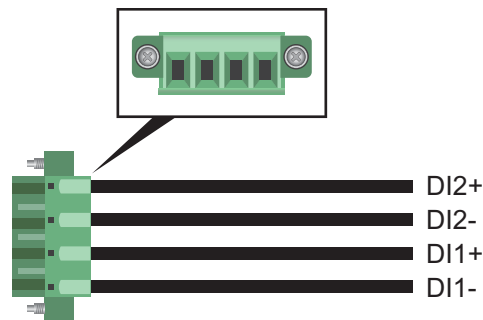
One end of the 3-pin AC power cable is used with the Phoenix connector and connected to the AC input port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to the AC power supply system.

10.10 Monitoring Port Cable (Phoenix Connector)

Appearance and Structure

Figure 10-32 shows the structure of the monitoring port cable and the Phoenix connector.

Figure 10-32 Structure of a monitoring port cable and Phoenix connector



The monitoring ports provide two input lines, which can be used to monitor two types of devices that support output voltage monitoring. DI1+ is the input high level of line 1 and DI1- is the input low level of line 1. Similarly, DI2+ is the input high level of line 2 and DI2- is the input low level of line 2.

Specifications

The monitoring port must be used with the Phoenix connector (included in the installation accessory package) and the monitoring port cable (purchased separately). The monitoring port cable must be a conductive cable. [Table 10-17](#) lists the specifications of the monitoring port cable.

Table 10-17 Specifications of a monitoring port cable

Minimum Conductor Cross-Sectional Area	Maximum Conductor Cross-Sectional Area
0.08 mm ² or 28 AWG	1.5 mm ² or 16 AWG

Connection

One end of the monitoring port cable is used with the Phoenix connector and connected to the monitoring port of the S5720I-SI. The other end needs to be made onsite. You can make the power cables according to site requirements and connect the cables to external devices to be monitored.

10.11 RPS1800 Power Cable

Appearance and Structure

[Figure 10-33](#) shows the appearance of the RPS1800 AC power cable.

Figure 10-33 Appearance of the RPS1800 AC power cable



NOTE

The PRS AC power cable used by the RPS1800 has the same appearance as a common AC power cable. However, the RPS AC power cable and common AC power cable connect to different connectors.

Connection

An RPS1800 AC power cable connects to the following:

- An AC power input port on the RPS1800 chassis
- The mains supply

10.12 RPS Cable

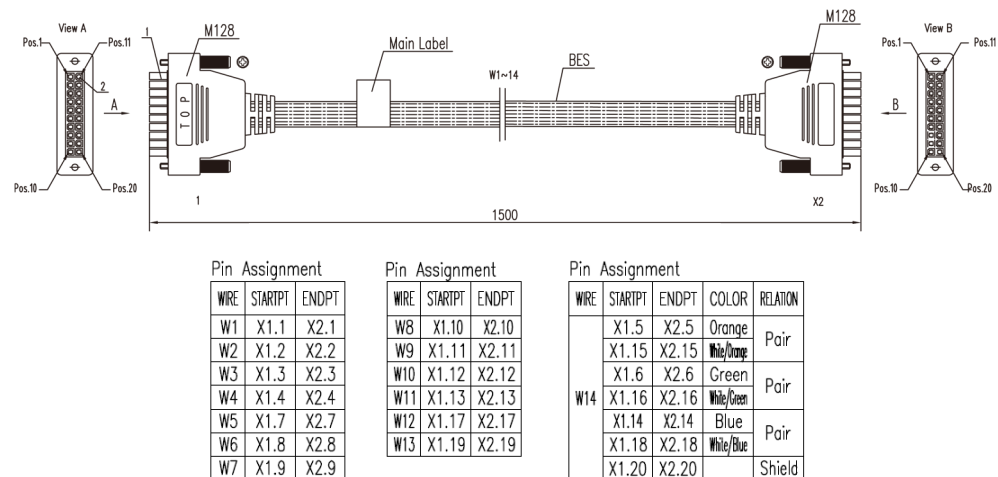
Appearance and Structure

[Figure 10-34](#) and [Figure 10-35](#) show the appearance and structure of an RPS cable.

Figure 10-34 Appearance of an RPS cable



Figure 10-35 Structure of an RPS cable



Connection

An RPS cable connects an RPS1800 power module to a switch so that the RPS1800 provides power to the switch. An RPS power cable connects to the following:

- A DC power output port on the RPS1800 chassis
- A switch to which power is provided

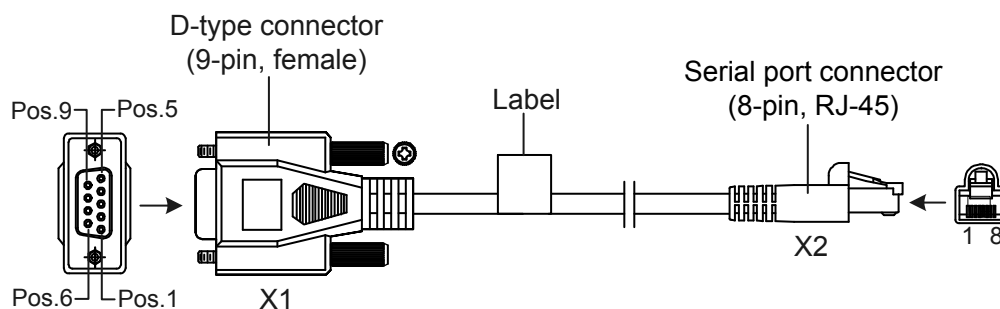
10.13 Console Cable

Appearance and Structure

Figure 10-36 and **Figure 10-37** show the appearance and structure of a console cable.

Figure 10-36 Appearance of a console cable



Figure 10-37 Structure of a console cable

Pin Assignments

Table 10-18 lists the pin assignments of console cable connectors.

Table 10-18 Pin assignments of console cable connectors

Connector	X1 (DB9)	X2 (RJ45)
Pin assignment	2	3
	3	6
	5	5

Connection

A console cable connects the console port of the device to the serial port of an operation terminal to transmit configuration data. A shielded cable or an unshielded cable can be used according to the onsite situation.

A console cable connects the device and terminal as follows:

- The 8-pin RJ45 connector is inserted into the console port of the device.
- The DB9 connector is inserted into the terminal serial port.

10.14 Dedicated Stack Cable

Types of Dedicated Stack Cables

Table 10-19 lists the applicable dedicated stack cables.

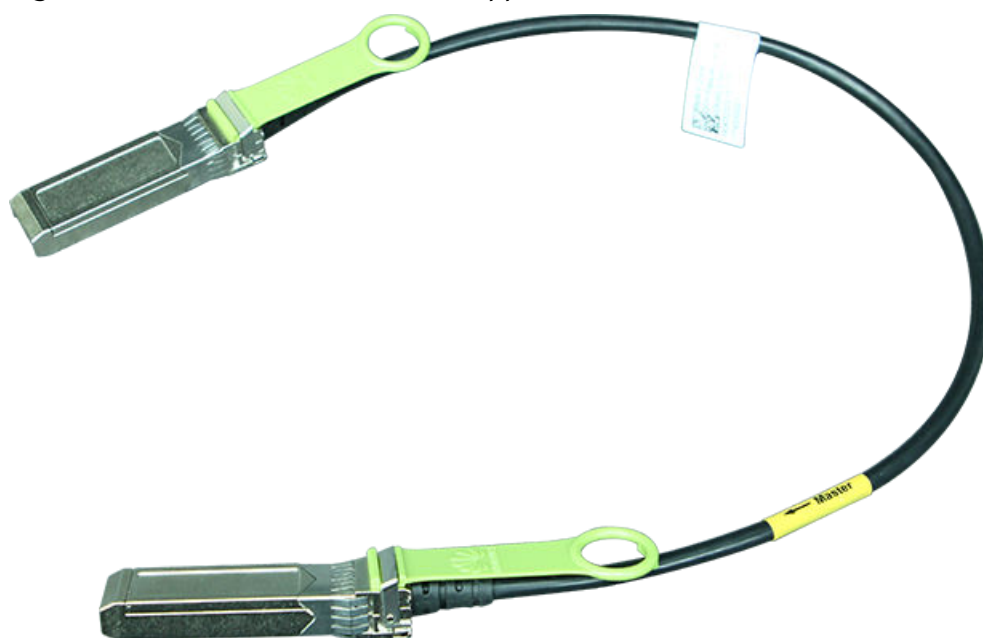
Table 10-19 Dedicated stack cables

Model	Length	Electrical Attribute	Bend Radius	Connector Type	Part Number
SFP-10G-CU0M5	0.5 m	Passive	25 mm	SFP+ to SFP+	02311VGK
SFP-10G-CU1M5	1.5 m	Passive	25 mm	SFP+ to SFP+	02311VGN

Appearance and Structure

Figure 10-38 shows the appearance of a dedicated stack cable.

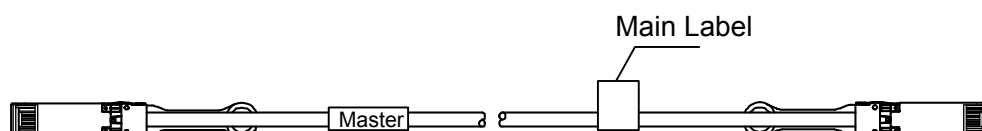
Figure 10-38 Dedicated stack cable appearance



Each dedicated stack cable has a Master tag on one end, and the untagged end is the slave end.

Figure 10-39 shows the structure of a dedicated stack cable.

Figure 10-39 Dedicated stack cable structure



Stack Setup

Dedicated stack cables can only be used to connect certain switch models, enabling them to set up a stack without manual configuration. For details on how

to connect the stack cables, see the printed Dedicated Stack Cable Connection Guide delivered with the cables.

Before setting up a stack, confirm the stack connection mode supported by the member switches, as well as the hardware and software requirements. For details, see "Determining the Stack Connection Support and Mode" under "Typical Stack Configuration of Fixed Switches" in the *Typical Configuration Examples*.

10.15 Copper Cable

Types of Copper Cables

Table 10-20 shows the types of copper cables.

Table 10-20 Types of copper cables

Model	Length	Electrical attribute	Bend Radius	Connector Type	Part Number
SFP-10G-CU1M	1 m	Passive	25 mm	SFP+ to SFP+	02310MUN
SFP-10G-CU3M	3 m	Passive	25 mm	SFP+ to SFP+	02310MUP
SFP-10G-CU5M	5 m	Passive	30 mm	SFP+ to SFP+	02310QPR
SFP-10G-AC10M	10 m	Active	25 mm	SFP+ to SFP+	02310MUQ
QSFP-40G-CU1M	1 m	Passive	35 mm	QSFP+ to QSFP+	02310MUG
QSFP-40G-CU3M	3 m	Passive	40 mm	QSFP+ to QSFP+	02310MUH
QSFP-40G-CU5M	5 m	Passive	45 mm	QSFP+ to QSFP+	02310MUJ
QSFP-4SFP10G-CU1M	1 m	Passive	25 mm	QSFP+ to 4*SFP+	02310MUK
QSFP-4SFP10G-CU3M	3 m	Passive	25 mm	QSFP+ to 4*SFP+	02310MUL
QSFP-4SFP10G-CU5M	5 m	Passive	30 mm	QSFP+ to 4*SFP+	02310MUM
SFP-25G-CU1M	1 m	Passive	35 mm	SFP28 to SFP28	02311NKS
SFP-25G-CU3M	3 m	Passive	35 mm	SFP28 to SFP28	02311NKV

Model	Length	Electrical attribute	Bend Radius	Connector Type	Part Number
SFP-25G-CU3M-N	3 m	Passive	40 mm	SFP28 to SFP28	02311MN V
SFP-25G-CU5M	5 m	Passive	40 mm	SFP28 to SFP28	02311MN W

NOTICE

The two ends of a copper cable must be covered by electrostatic discharge (ESD) caps.

When used for data transmission between service ports, copper cables can only connect Huawei switches of the same subseries. These copper cables cannot be used between Huawei switches of different subseries or between Huawei switches and other devices such as PCs, hosts, servers, or routers. For example, the S5735-L subseries can connect to the S5735-L subseries, but cannot connect to the S5735-S subseries.

Appearance and Structure

Figure 10-40 shows the appearance of an SFP/SFP+/SFP28 copper cable.

Figure 10-40 Appearance of an SFP/SFP+/SFP28 copper cable



Figure 10-41 shows the appearance of a QSFP+ copper cable.

Figure 10-41 Appearance of a QSFP+ copper cable



Figure 10-42 shows the appearance of a QSFP+ to 4*SFP+ copper cable.

Figure 10-42 Appearance of a QSFP+ to 4*SFP+ copper cable



Figure 10-43 shows the structure of an SFP/SFP+/SFP28 copper cable.

Figure 10-43 Structure of an SFP/SFP+/SFP28 copper cable

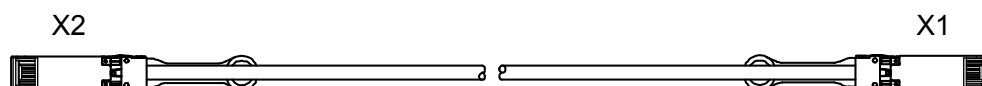


Figure 10-44 shows the structure of a QSFP+ copper cable.

Figure 10-44 Structure of a QSFP+ copper cable

Front view:



Rear view:

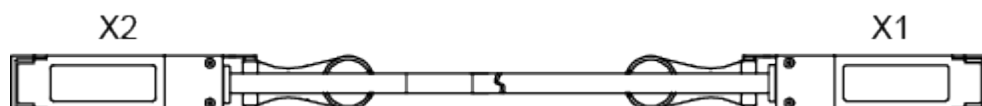
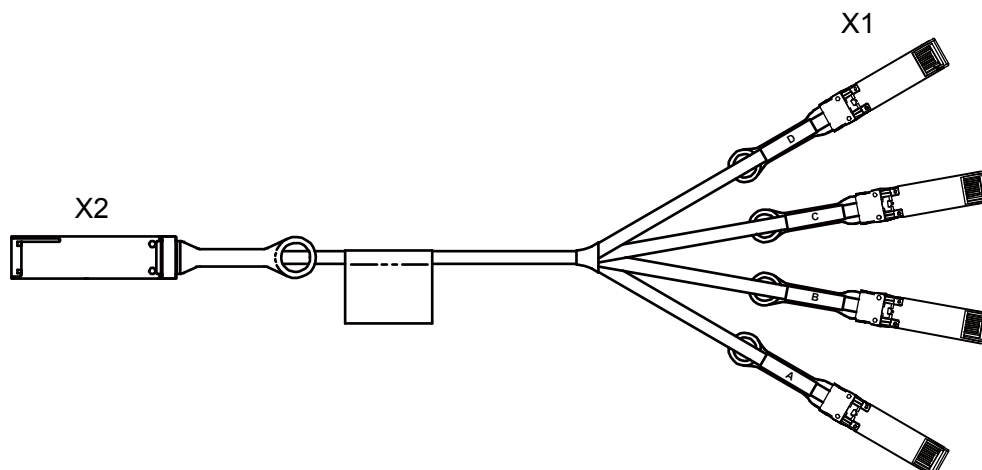


Figure 10-45 shows the structure of a QSFP+ to 4*SFP+ copper cable.

Figure 10-45 Structure of a QSFP+ to 4*SFP+ copper cable

Stack Description

In addition to data transmission, copper cables can be used for stack connection.

Before setting up a stack, familiarize yourself with the device-supported stack connection modes and software and hardware requirements. For details, see "Determining the Stack Connection Support and Mode" under "Typical Stack Configuration of Fixed Switches" in the *Typical Configuration Examples*.

10.16 Lead-Acid Battery Temperature Sensor

A lead-acid battery temperature sensor monitors ambient temperature of a lead-acid battery in real time to provide charge temperature compensation.

NOTE

Due to the negative temperature feature of a lead-acid battery, the charge voltage must be adjusted based on the ambient temperature. The battery charger must provide higher charge voltage when the temperature is low and provide lower charge voltage when the temperature is high, so that the lead-acid battery can be fully charged. The PBB-12AHA module can control the charge voltage for the lead-acid battery based on the temperature collected by the temperature sensor. Using a temperature sensor can prolong the life time of the lead-acid battery.

Appearance and Structure

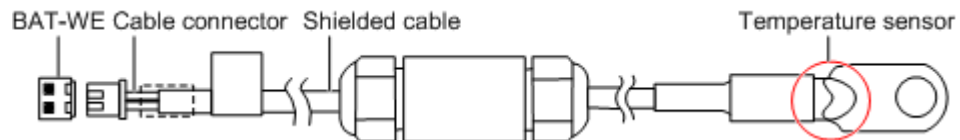
[Figure 10-46](#) shows the appearance of a lead-acid battery temperature sensor.

Figure 10-46 Appearance of a lead-acid battery temperature sensor



Figure 10-47 shows the structure of a lead-acid battery temperature sensor.

Figure 10-47 Structure of a lead-acid battery temperature sensor



Connection

Follow these instructions when using a lead-acid battery temperature sensor:

- Connect the cable connector to the SENSOR port on the PBB-12AHA lead-acid battery charger module.
- Place the temperature probe (with an OT terminal) where it can collect the most accurate ambient temperature of the lead-acid battery. You are advised to place the temperature probe near the lead-acid battery and bind the sensor cable with the power cables of the lead-acid battery. Do not connect the temperature probe to any other heating device. Hang the temperature probe in air and keep it away from any heating device.

11 Pluggable Modules for Interfaces

- [11.1 Important Notes About Using Optical Modules Certified for Huawei Switches](#)
- [11.2 Understanding Optical Modules](#)
- [11.3 Understanding Copper Modules](#)
- [11.4 FE SFP/eSFP Optical Modules](#)
- [11.5 GE eSFP Optical Modules](#)
- [11.6 GE CSFP Optical Modules](#)
- [11.7 GE-CWDM eSFP Optical Modules](#)
- [11.8 GE-CWDM eSFP Optical Modules \(Used Only in the OADM scenario\)](#)
- [11.9 GE-DWDM eSFP Optical Modules](#)
- [11.10 GE SFP Copper Modules](#)
- [11.11 SFP Stack Optical Modules](#)
- [11.12 10GE SFP+ Optical Modules](#)
- [11.13 10GE-CWDM SFP+ Optical Modules](#)
- [11.14 10GE-DWDM SFP+ Optical Modules](#)
- [11.15 25GE SFP28 Optical Modules](#)
- [11.16 40GE QSFP+ Optical Modules](#)
- [11.17 Industrial Optical Modules](#)
- [11.18 100GE QSFP28 Optical Modules](#)
- [11.19 GPON Optical Modules](#)

11.1 Important Notes About Using Optical Modules Certified for Huawei Switches

11.1.1 How to Identify Huawei-Certified Switch Optical Modules

NOTICE

- A switch must use optical or copper modules that have been certified for use on Huawei switches. Non-certified optical or copper modules cannot ensure transmission reliability and may affect service stability. Huawei is not liable for any problem caused by the use of non-certified optical or copper modules and will not fix such problems.
- The methods provided here are only for reference. To confirm whether optical modules you are using have been certified for use on Huawei switches, contact Huawei technical support.

10GE or Lower Speed Optical Modules

Huawei started certification on 10GE or lower speed optical modules for switch products on July 1, 2013.

To determine whether optical modules delivered for Huawei switches before July 1, 2013 are certified ones, contact Huawei technical support.

If your optical modules are delivered after July 1, 2013, use either of the following methods to determine whether they have been certified by Huawei.

Method 1: Check for "HUAWEI" on the label

If an optical module has been certified by Huawei, its label contains "HUAWEI", as shown in [Figure 11-1](#).

Figure 11-1 "HUAWEI" on the label of a Huawei-certified switch optical module



Method 2: Run the display transceiver command

An optical module has received Huawei switch certification if it meets the following conditions:

- In the **display elabel** command output, the **Manufactured** field displays a date later than 2013-07-01.
- In the **display version** command output, the displayed version is V200R001C00 or later.
- In the **display transceiver** command output, the **Vendor Name** field displays **HUAWEI**.

 **NOTE**

The SFP-FE-SX-MM1310 (part number: 02315233) is a Huawei-certified 100M optical module. However, the **Vendor Name** field displays the original manufacturer name, instead of **HUAWEI**.

For copper modules, the **Vendor Name** field also displays the original manufacturer name, instead of **HUAWEI**.

25GE, 40GE, and 100GE Optical Modules

Huawei started certification on 25GE, 40GE, and 100GE optical modules for switch products on January 1, 2016.

To determine whether optical modules delivered for Huawei switches before January 1, 2016 are certified ones, contact Huawei technical support.

If your optical modules are delivered after January 1, 2016, use either of the following methods to determine whether they have been certified by Huawei.

Method 1: Check for "HUAWEI" on the label

If an optical module has been certified by Huawei, its label contains "HUAWEI", as shown in [Figure 11-1](#).

Method 2: Run the display transceiver command

A 25GE, 40GE, or 100GE optical module has received Huawei switch certification if it meets the following conditions:

- In the **display elabel** command output, the **Manufactured** field displays a date later than 2016-01-01.
- In the **display version** command output, the displayed version is V200R008 or later.
- In the **display transceiver** command output, the **Vendor Name** field displays **HUAWEI**.

 **NOTE**

For the optical modules connected to high-speed cables or AOC cables, the **Vendor Name** field displays the original manufacturer name, instead of **HUAWEI**. For the methods of checking whether such an optical module has been certified by Huawei, contact technical support personnel.

11.1.2 Risks of Using Non-Huawei-Certified Switch Optical Modules

During certification of optical modules for Huawei switches, Huawei completes comprehensive functionality verification to ensure quality of optical modules. The verified items include optical module plug/unplug, transmit optical power, receive optical power, signal transmission quality, data reading, error tolerance, compatibility, electromagnetic compatibility (EMC), and environmental parameters.

Non-Huawei-certified switch optical modules may cause the following problems:

- Non-standard structure and size cause failures to install optical modules on adjacent optical interfaces.

Structures or sizes of some non-Huawei-certified optical modules do not comply with the Multi-Source Agreement (MSA). When such an optical module is installed on an optical interface, the size of this optical module hinders optical module installation on adjacent optical interfaces.

- Data bus defects cause suspension of a switch's data bus.

Some non-Huawei-certified optical modules have defects in data bus designs. Using such an optical module on a switch causes suspension of the connected data bus on the switch. As a result, data on the suspended bus cannot be read.

- Improper edge connector size damages electronic devices of optical interfaces.

If a non-Huawei-certified switch optical module with improper edge connector size is used on an optical interface, electronic devices of the optical interface will be damaged by short circuits.

- Unnormalized temperature monitoring causes incorrect alarms.

The temperature monitoring systems of some non-Huawei-certified switch optical modules do not comply with industry standards and report temperature values higher than the real temperature. When such optical modules are used on a switch, the system will report incorrect temperature alarms.

- Improper register settings cause errors or failures in reading parameters or diagnostic information.

Some non-Huawei-certified switch optical modules have improper register values on page A0, which can cause errors or failures when the system attempts to read parameters or diagnostic information from a data bus.

- Some non-Huawei-certified switch optical modules are not designed in compliance with EMC standards and have low anti-interference capability. Additionally, they bring electromagnetic interference to nearby devices.

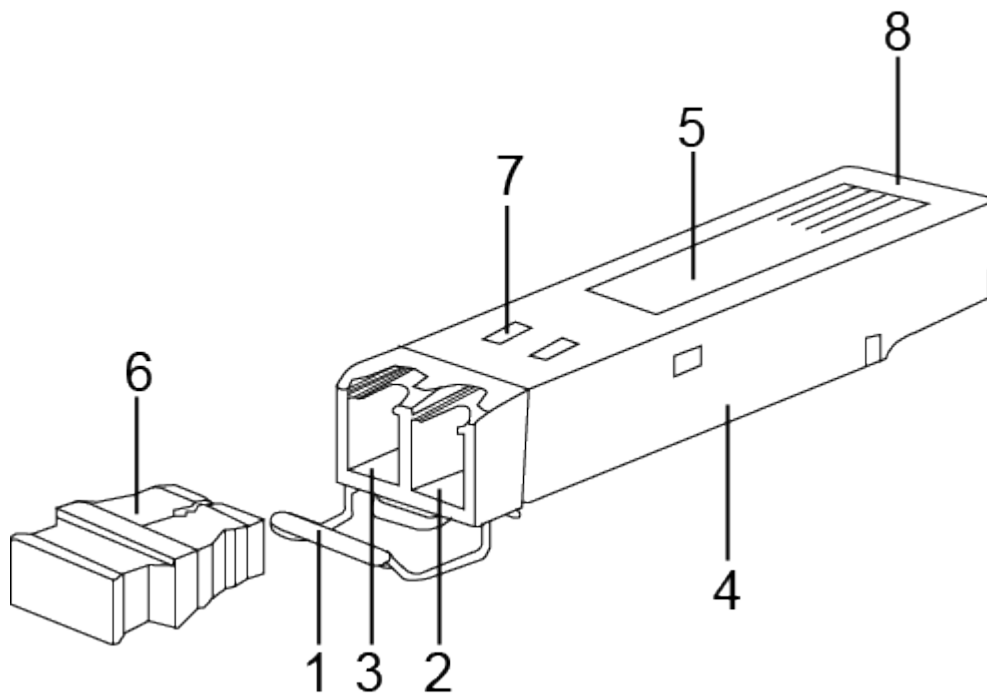
- The operating temperature ranges of non-Huawei-certified switch optical modules cannot meet service requirements. When they are used under relatively high temperature, the optical power decreases, resulting in service interruption.

11.2 Understanding Optical Modules

11.2.1 What Is an Optical Module

On an optical network, a sender needs to convert electrical signals into optical signals before sending them to a receiver, and the receiver needs to convert received optical signals into electrical signals. An optical module is a component that completes electrical/optical conversion on an optical network. [Figure 11-2](#) shows the structure of an optical module.

Figure 11-2 Structure of an optical module (using an SFP/eSFP optical module as an example)



1. Handle	2. Receiver	3. Transmitter
4. Shell	5. Label	6. Dust plug
7. Spring	8. Connector	-

Figure 11-3 shows an SFP/eSFP optical module.

Figure 11-3 SFP/eSFP optical module



Figure 11-4 shows the appearance of an SFP+ optical module.

Figure 11-4 Appearance of an SFP+ optical module



Figure 11-5 shows the appearance of a SFP28 optical module.

Figure 11-5 SFP28 optical module

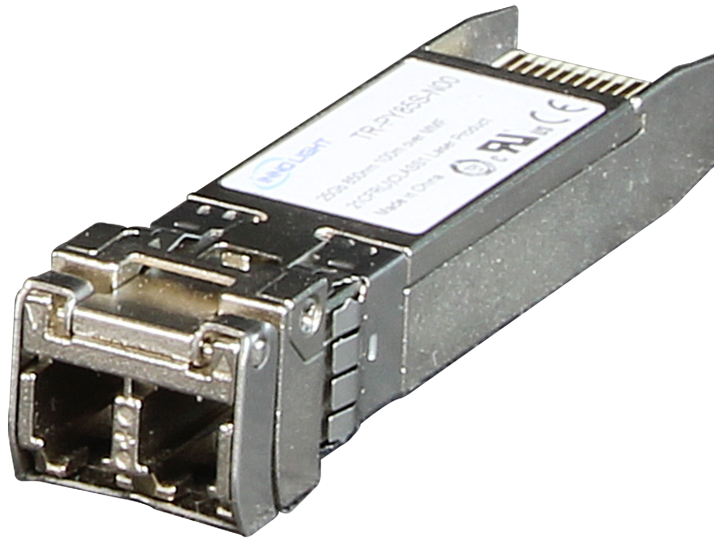


Figure 11-6 and **Figure 11-7** show the appearance of a QSFP+ optical module.

Figure 11-6 Appearance of a QSFP+ optical module (for LC optical fibers)

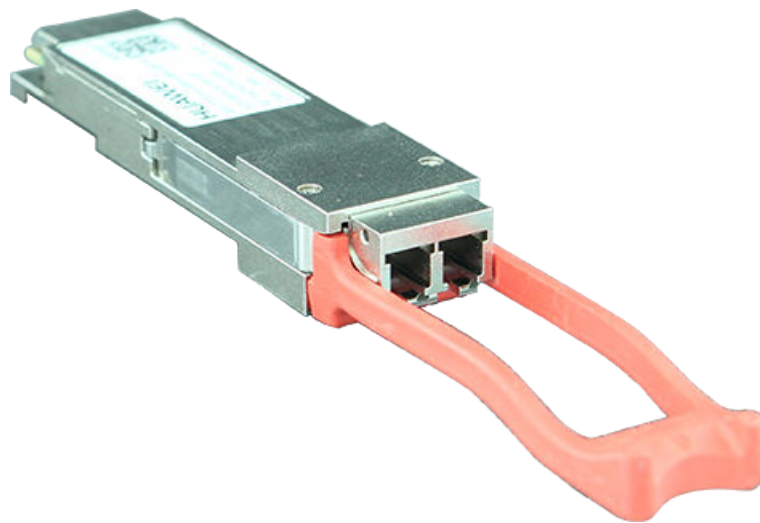
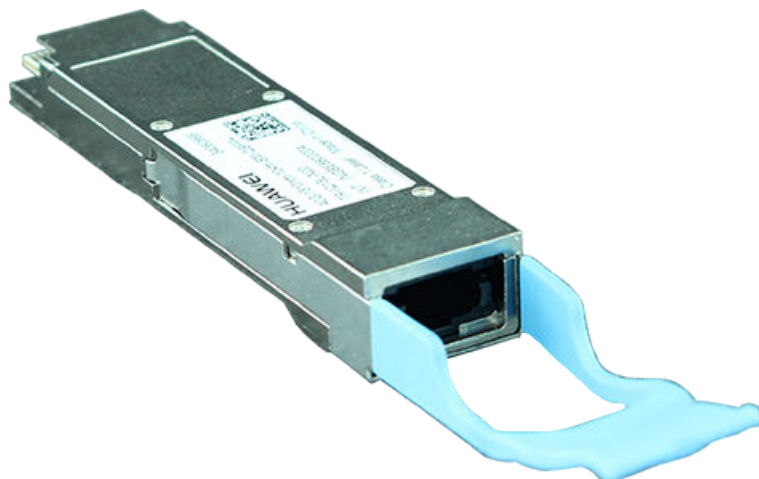


Figure 11-7 Appearance of a QSFP+ optical module (for MPO optical fibers)



NOTICE

The side with an L-shaped notch close to the connector is the top of a QSFP+ optical module, as shown in [Figure 11-6](#). When connecting a QSFP+ optical module to a port, keep the top side upward. Do not insert the QSFP+ optical module upside down.

Currently, there is no formal standard for 40G Ethernet. Therefore, a device may not display complete diagnostic information about 40GE optical modules. This is an acceptable fact in the telecommunications industry and does not affect functions of 40GE optical modules.

[Figure 11-8](#) shows the appearance of a CSFP optical module.

Figure 11-8 Appearance of a CSFP optical module



[Figure 11-9](#) shows the appearance of an XFP module.

Figure 11-9 Appearance of an XFP optical module



NOTE

The SFP+ and XFP optical modules are 10GE hot-pluggable optical modules. Compared with the SFP+ optical modules, the XFP optical modules have a larger caliber.

Figure 11-10 and **Figure 11-11** show CFP optical modules for different optical fibers.

Figure 11-10 CFP 100GE optical module (for LC optical fibers)



Figure 11-11 CFP 100GE optical module (for MPO optical fibers)



Figure 11-12 and **Figure 11-13** show the appearance of a QSFP28 optical module.

Figure 11-12 Appearance of a QSFP28 optical module (for MPO optical fibers)

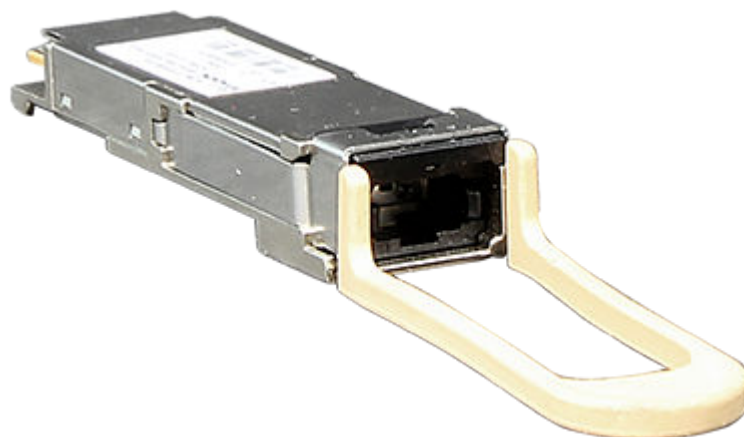


Figure 11-13 Appearance of a QSFP28 optical module (for LC optical fibers)



11.2.2 Types of Optical Modules

Optical modules are available in various types to meet diversified requirements.

- **Classified by transmission rates**

Depending on transmission rates, optical modules are classified into 100GE, 40GE, 25GE, 10GE, FE, and GE optical modules.

- **Classified by encapsulation types**

The higher transmission rate an optical module provides, the more complex structure it has. Optical modules are encapsulated in different modes to provide different structures. Huawei switches support optical modules of the following encapsulation types: CFP, QSFP+, QSFP28, XFP, SFP, eSFP, and SFP+. All optical modules are hot swappable.

- SFP: small form-factor pluggable. SFP optical modules support LC fiber connectors.
- eSFP: enhanced small form-factor pluggable. An eSFP module is an SFP module that supports monitoring of voltage, temperature, bias current, transmit optical power, and receive optical power. Therefore, eSFP is also called SFP sometimes.
- SFP+: small form-factor pluggable plus, SFP with a higher rate. SFP+ optical modules are more sensitive to electromagnetic interference (EMI) because they have a higher rate. To reduce EMI, SFP+ optical modules have more springs than SFP optical modules and the cages for SFP+ modules on a card are tighter.
- XFP: 10 Gigabit small form-factor pluggable. X is the Roman numeral 10, meaning that all XFP optical modules provide a 10 Gbit/s transmission rate. XFP optical modules support LC fiber connectors. They are wider and longer than SFP+ optical modules.
- SFP28: with the same interface size as an SFP+ module. An SFP28 interface can use a 25GE SFP28 optical module.
- QSFP+: quad small form-factor pluggable. QSFP+ optical modules support MPO fiber connectors and are larger than SFP+ optical modules.
- CFP: centum form-factor pluggable. The dimensions of a CFP optical module are 144.75 mm x 82 mm x 13.6 mm (L x W x H). CFP is a new optical module standard that can be used in data communication and telecommunications fields.
- QSFP28: with the same interface size as a QSFP+ module. A QSFP28 interface can use a 100GE QSFP28 optical module or a 40GE QSFP+ optical module.

- **Classified by physical layer standards**

Different physical layer standards are defined to allow data transmission in different modes. Therefore, different types of optical modules are produced to comply with these standards. For details, see **Standards compliance** of the specific optical module.

- **Classified by modes**

Optical fibers are classified into single-mode and multimode fibers. Therefore, optical modules are also classified into single-mode and multimode modules to support different optical fibers.

- Single-mode optical modules are used with single-mode fibers. Single-mode fibers support a wide band and large transmission capacity, and are used for long-distance transmission.
- Multimode optical modules are used with multimode fibers. Multimode fibers have lower transmission performance than single-mode fibers because of modal dispersion, but their costs are also lower. They are used for small-capacity, short-distance transmission.

Wavelength division multiplexing modules differ from other optical modules in center wavelengths. A common optical module has a center wavelength of 850 nm, 1310 nm, or 1550 nm, whereas a wavelength division multiplexing module transmits lights with different center wavelengths. Wavelength division multiplexing modules are classified into two types: coarse wavelength division multiplexing (CWDM) and dense wavelength division multiplexing (DWDM). Within the same band, DWDM modules are available in more types and use wavelength resources more efficiently than CWDM modules. DWDM and CWDM modules allow lights with different center wavelengths to be transmitted on one fiber without interfering each other. Therefore, a passive multiplexer can be used to combine the lights into one channel, which is then split into multiple channels by a demultiplexer on the remote end. This reduces the optical fibers required. DWDM and CWDM modules are used for long-distance transmission.

The transmit power of a long-distance optical module is often larger than its overload power. Therefore, when using such optical modules, select optical fibers of an appropriate length to ensure that the actual receive power is smaller than the overload power. If the optical fibers connected to a long-distance optical module are too short, use an optical attenuator to reduce the receive power on the remote optical module. Otherwise, the remote optical module may be burnt. Generally, an optical attenuator is required if an optical module supporting a transmission distance longer than 10 km is used together with short optical fibers.

11.2.3 Parameter Description

Transmit optical power	Output optical power of an optical module when it is working properly. When two optical modules are connected, the transmit optical power of one end must be within the range of receive optical power on the other end.
Receive optical power	Average input optical power that the receiver of an optical module can receive within a range of bit error rate (BER = 10^{-12}). The upper limit of this parameter is the overload optical power and the lower limit is the maximum receiver sensitivity. When two optical modules are connected, the receive optical power on one end determines the range of transmit optical power on the other end.
Maximum receiver sensitivity	Minimum average input optical power that the receiver of an optical module can receive within a range of bit error rate (BER = 10^{-12}). When two optical modules are connected, the maximum receiver sensitivity on one end determines the minimum value of transmit optical power on the other end.

Overload optical power	Maximum average input optical power that the receiver of an optical module can receive within a range of bit error rate ($BER = 10^{-12}$). When two optical modules are connected, the overload optical power on one end determines the maximum transmit optical power on the other end.
Extinction ratio	Minimum ratio of the average optical power with signals transmitted against the average optical power without signals transmitted in complete modulation mode. The extinction ratio indicates the capability of an optical module to identify signal 0 and signal 1. This parameter is a quality indicator for optical modules. Optical modules with a large extinction ratio may not have good quality. Qualified optical modules should have an extinction ratio complying with IEEE 802.3.
Fiber mode	Mode of optical fibers defined based on core diameters and features of optical fibers. Optical fibers are classified into single-mode and multimode fibers. Generally, multimode fibers have large core diameters and severe dispersion, so they transmit optical signals over short distances. Single-mode fibers have low dispersion and can transmit optical signals over long distances.
Modal bandwidth	Bandwidth measured at a point with transmit power several dB lower than that of the point with the peak center wavelength. Modal bandwidth reflects spectrum characteristics of multimode fibers. The higher modal bandwidth a multimode fiber has, the longer transmission distance the fiber supports.
Fiber diameter	Diameter of the core of a fiber. According to international standards for optical fibers, the diameter of a multimode fiber is 62.5 μm or 50 μm , and the diameter of a single-mode fiber is 9 μm . Select optical fibers with diameters supported by the optical modules.
Fiber class	Optical signals with different wavelengths have their best working windows in different optical fibers. To help efficiently adjust wavelengths or dispersion features of optical fibers and change their refractive indexes, the following fiber classes are defined: multimode fiber (G.651), common single-mode fiber (G.652), shifted dispersion fiber (G.653), and non-zero shifted dispersion fiber (G.655). G.651 and G.652 are commonly used fiber classes. Optical fibers of higher classes support longer transmission distances. When selecting optical fibers for optical modules, determine the classes of fibers based on the required transmission distances.
Connector type	Type of the interface on an optical module to accommodate a fiber. Commonly used connector types are LC (applicable to all the SFP, SFP+, and XFP modules), SC, and MPO (applicable to 150 m QSFP+ and CXP modules). Select optical fibers with connectors supported by the optical modules.

Transmission distance	Maximum distance over which optical signals can transmit. Optical signals sent from different types of sources can transmit over different distances due to negative effects of optical fibers, such as dispersion and attenuation. When connecting optical interfaces, select optical modules and fibers based on the maximum signal transmission distance.
Interface rate	Maximum rate of electrical signals that an optical component can transmit without bit errors. The interface rates defined in Ethernet standards include 125 Mbit/s, 1.25 Gbit/s, 10.3125 Gbit/s, and 41.25 Gbit/s. When connecting optical interfaces, select optical modules and fibers based on the maximum signal transmission rate.
Center wavelength	Wavelength measured at the midpoint of the half-amplitude line in the transmit spectrum. Two connected optical modules must have the same center wavelength.
MSA	Multi-Source Agreement, a non-profit organization jointly established by optical module manufacturers. This agreement defines the structure and dimensions of optical transceivers by referring to Optical Internetworking Forum (OIF) and International Telecommunication Union (ITU) standards.

11.2.4 How to View Optical Module Parameters

Viewing the Hardware Description

If you know the model or type of an optical module, you can view the section "Pluggable Modules for Interfaces" in the *Hardware Description* to look up parameters of the optical module, including the center wavelength, transmission distance, fiber types supported, receive optical power, and transmit optical power.

Using a Command

If an optical module is installed in a running switch, you can run the **display transceiver** command to view parameters of the optical module, including the center wavelength, transmission distance, fiber types supported, receive optical power, and transmit optical power.

11.2.5 Rules for Optical Module Interoperation

Interoperation Rules

Optical modules with the same standards can interoperate with each other. The standards define the rate, wavelength, and transmission distance of optical modules, but not their encapsulation modes (two interoperated optical modules can have different encapsulation modes).

If you need to achieve interoperability between optical modules with different standards, contact technical support personnel.

When Huawei switches are connected to other products such as routers, comply with the preceding optical module interoperation rules.

Standards Description

The following describes the standards, using 1000BASE-LX10 as an example:

- 1000 indicates the rate (1000 Mbit/s, in this case). Other rates include 10 Mbit/s, 100 Mbit/s, 10 Gbit/s, 40 Gbit/s, and 100 Gbit/s.
- BASE indicates baseband transmission.
- L represents a center wavelength of the laser. Currently, the following center wavelengths are available: S (short wavelength: 850 nm), L (long wavelength: 1310 nm), E (extra long wavelength: 1550 nm), and B (single-fiber bidirectional long wavelength).
- X represents the encoding format. The encoding formats include T (twisted pair), X (8B/10B), R (64B/66B), and W (WIS).
- 10 indicates the number of channels. Currently, the value can be 4 or 10. If there is no number, the value is 1.

NOTE

This example provides the definitions in IEEE standards, which are not applicable to all optical modules, for example, non-standard optical modules.

The following organizations or agreements define standards related to optical modules:

- IEEE 802.3, which defines MAC and PHY standards
- Small Form Factor (SFF) committee or Multi-Source Agreements (MSAs), which define optical module hardware, software, and structure standards

Interoperability of 40GE and 100GE Optical Modules

Huawei S series switches support the following types of 40GE and 100GE optical modules:

- 40GE QSFP+ optical modules
- 40GE CFP optical modules
- 100GE CFP optical modules
- 100GE QSFP28 optical modules

Figure 11-14 Interoperability of 40GE optical modules in different encapsulation modes

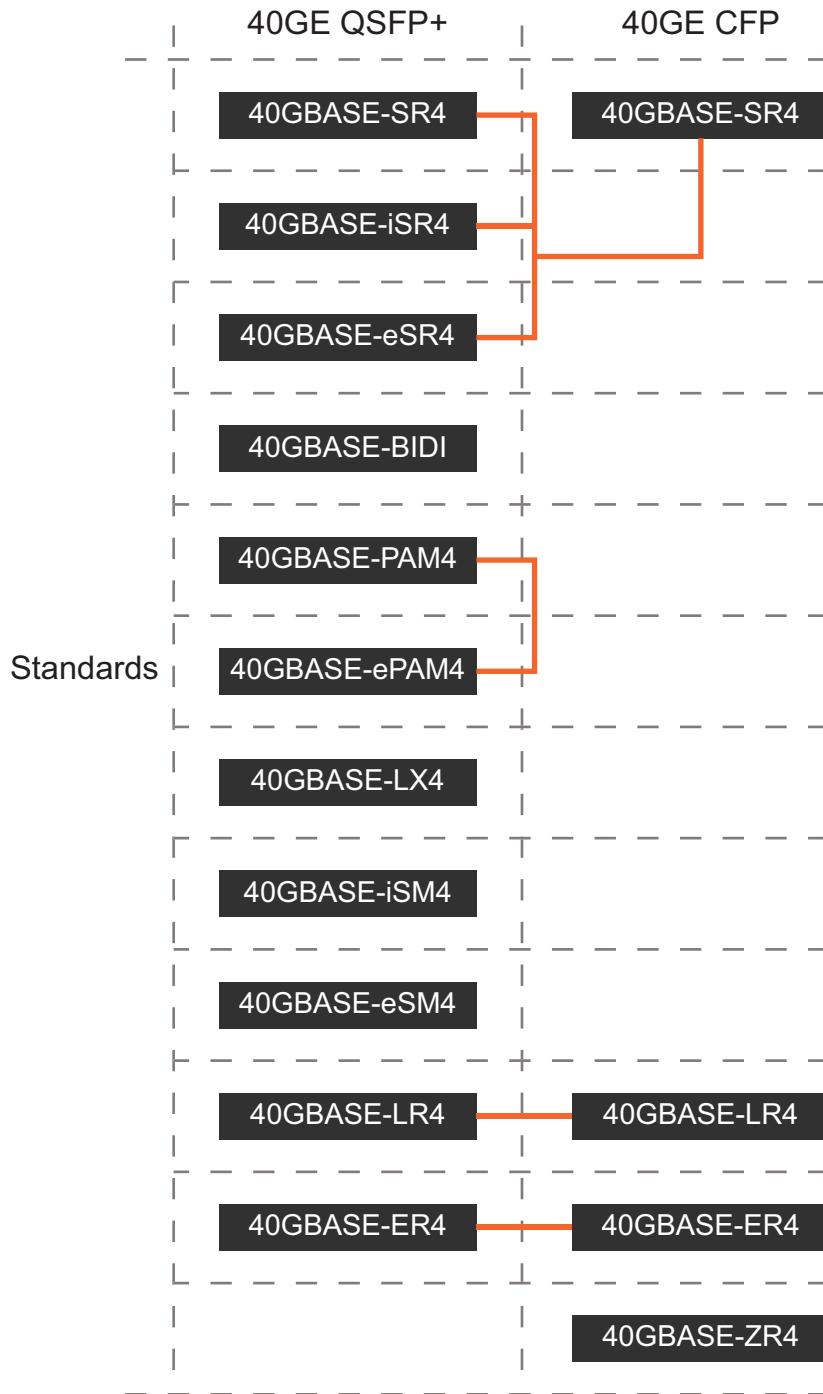
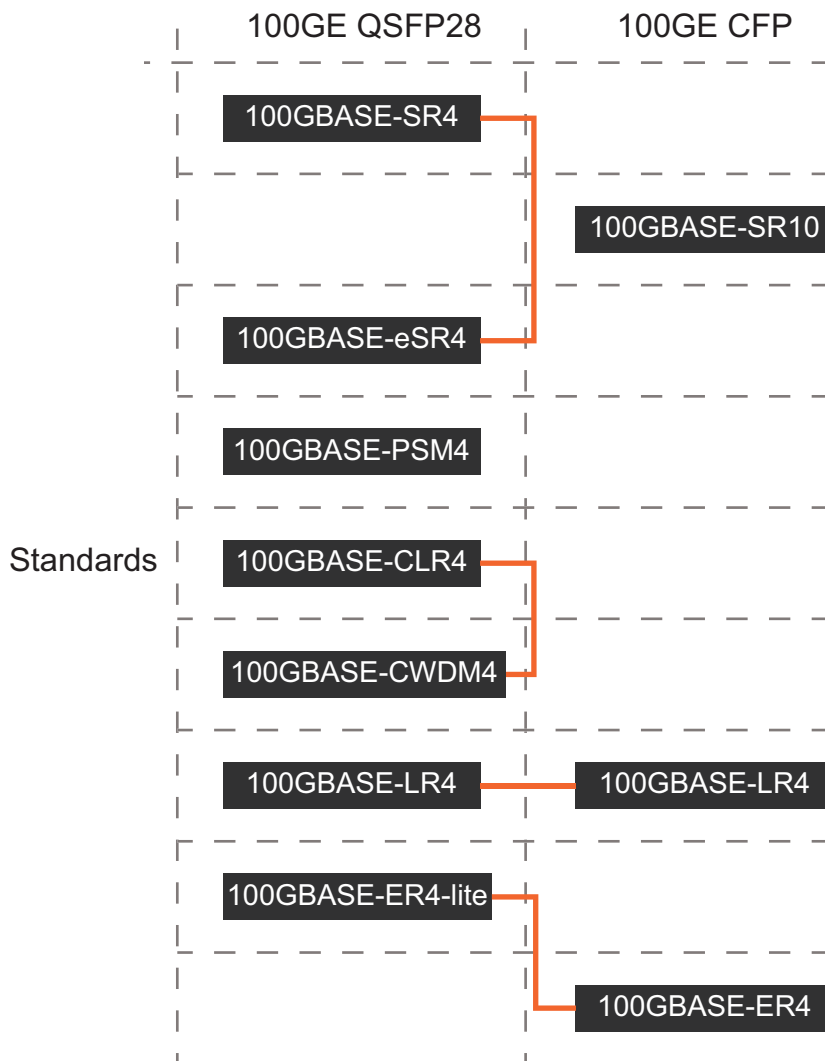


Figure 11-15 Interoperability of 100GE optical modules in different encapsulation modes



NOTE

Optical modules complying with the standards connected in the preceding figures can interoperate with each other.

iSR4 and eSR4 are non-standard formats derived from SR4, and support interoperation with SR4.

A 40GBASE-PAM4 optical module can interoperate with a 40GBASE-ePAM4 optical module.

A 100GBASE-CLR4 optical module can interoperate with a 100GBASE-CWDM4 optical module.

A 100GBASE-ER4-lite optical module can interoperate with a 100GBASE-ER4 optical module, at a maximum distance of 30 km.

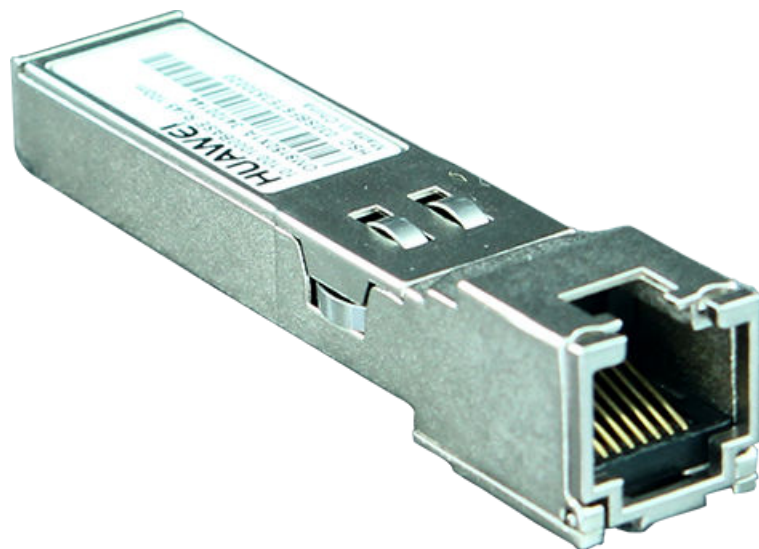
11.3 Understanding Copper Modules

Copper modules are also called RJ45 modules. Unlike optical modules, copper modules do not perform electrical-optical conversion. When two optical interfaces

have copper modules installed, the interfaces can be connected using a copper cable. Currently, Huawei offers only GE copper modules with RJ45 interfaces. GE copper modules work with Category 5 network cables, comply with 1000BASE-T (IEEE 802.3ab), and support a maximum transmission distance of 100 m.

Figure 11-16 shows a GE SFP copper module.

Figure 11-16 Appearance of a GE SFP copper module



11.4 FE SFP/eSFP Optical Modules

11.4.1 SFP-FE-SX-MM1310

Table 11-1 Technical specifications

Item	Description
Transceiver form factor	SFP
Transmission speed	FE
Center wavelength (nm)	1310
Standards compliance	100BASE-FX
Connector type	LC
Applicable cable and maximum transmission distance	Multimode fiber (50 μm or 62.5 μm diameter): 2 km
Transmit power (dBm)	-19.0 to -14.0

Item	Description
Maximum receiver sensitivity (dBm)	-30.0
Overload power (dBm)	-14.0
Extinction ratio (dB)	10
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315233

11.4.2 eSFP-FE-LX-SM1310

Table 11-2 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	FE
Center wavelength (nm)	1310
Standards compliance	Non-standard
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 15 km
Transmit power (dBm)	-15.0 to -8.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-8.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315205

11.4.3 S-SFP-FE-LH40-SM1310

Table 11-3 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	FE
Center wavelength (nm)	1310
Standards compliance	Non-standard
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-5.0 to 0
Maximum receiver sensitivity (dBm)	-37.0
Overload power (dBm)	-10.0
Extinction ratio (dB)	10.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02317344

11.4.4 S-SFP-FE-LH80-SM1550

Table 11-4 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	FE
Center wavelength (nm)	1550
Standards compliance	Non-standard
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	-5.0 to 0

Item	Description
Maximum receiver sensitivity (dBm)	-37.0
Overload power (dBm)	-10.0
Extinction ratio (dB)	10.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02317345

11.4.5 SFP-FE-LX-SM1310-BIDI (Single-Fiber-Bidirectional Module)

Table 11-5 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	FE
Center wavelength (nm)	Rx: 1550/Tx: 1310
Standards compliance	100BASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 15 km
Transmit power (dBm)	-15.0 to -8.0
Maximum receiver sensitivity (dBm)	-32.0
Overload power (dBm)	-8.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315203

 **NOTE**

BIDI optical modules must be used in pairs. For example, SFP-FE-LX-SM1310-BIDI must be used with SFP-FE-LX-SM1550-BIDI.

11.4.6 SFP-FE-LX-SM1550-BIDI (Single-Fiber-Bidirectional Module)

Table 11-6 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	FE
Center wavelength (nm)	Rx: 1310/Tx: 1550
Standards compliance	100BASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 15 km
Transmit power (dBm)	-15.0 to -8.0
Maximum receiver sensitivity (dBm)	-32.0
Overload power (dBm)	-8.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315202

NOTE

BIDI optical modules must be used in pairs. For example, SFP-FE-LX-SM1550-BIDI must be used with SFP-FE-LX-SM1310-BIDI.

11.5 GE eSFP Optical Modules

11.5.1 eSFP-GE-SX-MM850

Table 11-7 Technical specifications

Item	Description
Transceiver form factor	eSFP

Item	Description
Transmission speed	GE
Center wavelength (nm)	850
Standards compliance	1000BASE-SX
Connector type	LC
Applicable cable and maximum transmission distance	<ul style="list-style-type: none">• Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.22 km• Multimode fiber (OM1): 0.275 km• Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.5 km• Multimode fiber (OM2): 0.55 km• Multimode fiber (OM3): 1 km
Transmit power (dBm)	-9.5 to -2.5
Maximum receiver sensitivity (dBm)	-17.0
Overload power (dBm)	0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315204

11.5.2 SFP-GE-SX-C

Table 11-8 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	850
Standards compliance	1000BASE-SX
Connector type	LC

Item	Description
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> • Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.22 km • Multimode fiber (OM1): 0.275 km • Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.5 km • Multimode fiber (OM2): 0.55 km • Multimode fiber (OM3): 1 km
Transmit power (dBm)	-9.5 to -2.5
Maximum receiver sensitivity (dBm)	-17.0
Overload power (dBm)	0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02312UUB

11.5.3 SFP-GE-LX-SM1310

Table 11-9 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1310
Standards compliance	1000BASE-LX10/LH
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9.0 to -3.0
Maximum receiver sensitivity (dBm)	-20.0
Overload power (dBm)	-3.0
Extinction ratio (dB)	9

Item	Description
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315200

11.5.4 SFP-GE-LX10-C

Table 11-10 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1310
Standards compliance	1000BASE-LX10/LH
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9.0 to -3.0
Maximum receiver sensitivity (dBm)	-20.0
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02312UUC

11.5.5 S-SFP-GE-LH40-SM1310

Table 11-11 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE

Item	Description
Center wavelength (nm)	1310
Standards compliance	1000BASE-EX (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-5.0 to 0
Maximum receiver sensitivity (dBm)	-23
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02317346

11.5.6 SFP-GE-EX-C

Table 11-12 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE
Center wavelength (nm)	1310
Standards compliance	1000BASE-EX (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-5.0 to 0
Maximum receiver sensitivity (dBm)	-23
Overload power (dBm)	-3.0
Extinction ratio (dB)	9

Item	Description
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02312UUD

11.5.7 S-SFP-GE-LH40-SM1550

Table 11-13 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE
Center wavelength (nm)	1550
Standards compliance	Non-standard
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-5.0 to 0
Maximum receiver sensitivity (dBm)	-22
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02317347

11.5.8 S-SFP-GE-LH80-SM1550

Table 11-14 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE

Item	Description
Center wavelength (nm)	1550
Standards compliance	1000BASE-ZX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	-2.0 to +5.0
Maximum receiver sensitivity (dBm)	-23
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02317348

11.5.9 eSFP-GE-ZX100-SM1550

Table 11-15 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1550
Standards compliance	1000BASE-ZX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 100 km
Transmit power (dBm)	0 to 5
Maximum receiver sensitivity (dBm)	-30.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	9.5

Item	Description
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315206

11.5.10 SFP-GE-LX-SM1310-BIDI (Single-Fiber-Bidirectional Module)

Table 11-16 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1490/Tx: 1310
Standards compliance	1000BASE-BX10
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9.0 to -3.0
Maximum receiver sensitivity (dBm)	-19.5
Overload power (dBm)	-3.0
Extinction ratio (dB)	6
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315285

 **NOTE**

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-LX-SM1310-BIDI must be used with SFP-GE-LX-SM1490-BIDI.

11.5.11 SFP-GE-LX-SM1490-BIDI (Single-Fiber-Bidirectional Module)

Table 11-17 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1310/Tx: 1490
Standards compliance	1000BASE-BX10
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9.0 to -3.0
Maximum receiver sensitivity (dBm)	-19.5
Overload power (dBm)	-3.0
Extinction ratio (dB)	6
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02315286

 **NOTE**

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-LX-SM1490-BIDI must be used with SFP-GE-LX-SM1310-BIDI.

11.5.12 LE2MGSC40DE0 (Single-Fiber-Bidirectional Module)

Table 11-18 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1490/Tx: 1310
Standards compliance	1000BASE-BX
Connector type	LC

Item	Description
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-2.0 to +3.0
Maximum receiver sensitivity (dBm)	-23
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310KVV

 **NOTE**

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, LE2MGSC40DE0 must be used with LE2MGSC40ED0.

11.5.13 LE2MGSC40ED0 (Single-Fiber-Bidirectional Module)

Table 11-19 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1310/Tx: 1490
Standards compliance	1000BASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-2.0 to +3.0
Maximum receiver sensitivity (dBm)	-23
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)

Item	Description
Part number	02310KVU

NOTE

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, LE2MGSC40ED0 must be used with LE2MGSC40DE0.

11.5.14 SFP-GE-ZBXD1 (Single-Fiber-Bidirectional Module)

Table 11-20 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1490/Tx: 1570
Standards compliance	Non-standard
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	-2.0 to +4.0
Maximum receiver sensitivity (dBm)	-26
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311DDB

NOTE

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-ZBXD1 must be used with SFP-GE-ZBXU1.

11.5.15 SFP-GE-ZBXU1 (Single-Fiber-Bidirectional Module)

Table 11-21 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1570/Tx: 1490
Standards compliance	Non-standard
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	-2.0 to +4.0
Maximum receiver sensitivity (dBm)	-26
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311DDC

NOTE

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-ZBXU1 must be used with SFP-GE-ZBXD1.

11.5.16 SFP-GE-BXU1-SC (Single-Fiber-Bidirectional Module)

Table 11-22 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1310/Tx: 1490
Standards compliance	Non-standard
Connector type	SC

Item	Description
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9.0 to -3.0
Maximum receiver sensitivity (dBm)	-19.5
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310TQH

11.6 GE CSFP Optical Modules

11.6.1 CSFP-GE-FE-BXD1

Table 11-23 Technical specifications

Item	Description
Transceiver form factor	CSFP
Transmission speed	FE/GE auto-sensing
Center wavelength (nm)	Rx: 1310/Tx: 1490
Standards compliance	1000BASE-BX10
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9.0 to -3.0
Maximum receiver sensitivity (dBm)	-23
Overload power (dBm)	-3.0
Extinction ratio (dB)	6.6
Operating temperature	0°C to 70°C (32°F to 158°F)

Item	Description
Part number	02310TEE

NOTE

If a CSFP optical module is installed on a switch that does not support it, the switch cannot detect whether the optical module is present.

11.6.2 CSFP-GE-FE-BIDI2

Table 11-24 Technical specifications

Item	Description
Transceiver form factor	CSFP
Transmission speed	FE/GE auto-sensing
Center wavelength (nm)	Rx: 1310/Tx: 1490
Standards compliance	Non-standard
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 20 km
Transmit power (dBm)	-9.0 to -3.0
Maximum receiver sensitivity (dBm)	-23
Overload power (dBm)	-3.0
Extinction ratio (dB)	6.6
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310WRR

NOTE

If a CSFP optical module is installed on a switch that does not support it, the switch cannot detect whether the optical module is present.

11.6.3 CSFP-GE-FE-BIDI4

Table 11-25 Technical specifications

Item	Description
Transceiver form factor	CSFP
Transmission speed	FE/GE auto-sensing
Center wavelength (nm)	Rx: 1310/Tx: 1490
Standards compliance	1000BASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-5.0 to 0
Maximum receiver sensitivity (dBm)	-25
Overload power (dBm)	0
Extinction ratio (dB)	6.6
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02310XQV

NOTE

If a CSFP optical module is installed on a switch that does not support it, the switch cannot detect whether the optical module is present.

11.7 GE-CWDM eSFP Optical Modules

11.7.1 CWDM-SFPGE-1471

Table 11-26 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1471

Item	Description
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310LPN

11.7.2 CWDM-SFPGE-1491

Table 11-27 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1491
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)

Item	Description
Part number	02310LPK

11.7.3 CWDM-SFPGE-1511

Table 11-28 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1511
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310LPH

11.7.4 CWDM-SFPGE-1531

Table 11-29 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1531

Item	Description
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310LPL

11.7.5 CWDM-SFPGE-1551

Table 11-30 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1551
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)

Item	Description
Part number	02312AXN

11.7.6 CWDM-SFPGE-1571

Table 11-31 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1571
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02312AXM

11.7.7 CWDM-SFPGE-1591

Table 11-32 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1591

Item	Description
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02312AXK

11.7.8 CWDM-SFPGE-1611

Table 11-33 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1611
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	0°C to 70°C (32°F to 158°F)

Item	Description
Part number	02310LPJ

11.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)

11.8.1 CWDM-SFPGE-1271

Table 11-34 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1271
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AXC

11.8.2 CWDM-SFPGE-1291

Table 11-35 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1291
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AXB

11.8.3 CWDM-SFPGE-1311

Table 11-36 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1311
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0

Item	Description
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AXA

11.8.4 CWDM-SFPGE-1331

Table 11-37 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1331
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AWY

11.8.5 CWDM-SFPGE-1351

Table 11-38 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1351
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AWX

11.8.6 CWDM-SFPGE-1371

Table 11-39 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1371
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0

Item	Description
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AWW

11.8.7 CWDM-SFPGE-1391

Table 11-40 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1391
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AWV

11.8.8 CWDM-SFPGE-1411

Table 11-41 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1411
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AWU

11.8.9 CWDM-SFPGE-1431

Table 11-42 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1431
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0

Item	Description
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AWT

11.8.10 CWDM-SFPGE-1451

Table 11-43 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1451
Standards compliance	GE-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 5.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-9.0
Extinction ratio (dB)	8.5
Operating temperature	-5°C to +75°C (23°F to 167°F)
Part number	02312AWS

11.9 GE-DWDM eSFP Optical Modules

11.9.1 DWDM-SFPGE-1560-61

Table 11-44 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1560.61
Standards compliance	GE-DWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 120 km
Transmit power (dBm)	0 to 4.0
Maximum receiver sensitivity (dBm)	-28.0
Overload power (dBm)	-8.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310LLE

11.10 GE SFP Copper Modules

11.10.1 SFP-1000BaseT

Table 11-45 Technical specifications

Item	Description
Transceiver form factor	SFP
Transmission speed	The transmission speed varies depending on the port where the copper transceiver module is used.
Standards compliance	1000BASE-T
Connector type	RJ45
Surge protection	Common mode: ± 1 kV

Item	Description
Applicable cable and maximum transmission distance	Ethernet cable: 0.1 km
Part number	02314171

11.11 SFP Stack Optical Modules

11.11.1 SFP-6GE-LR

Table 11-46 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	6GE
Center wavelength (nm)	1310
Standards compliance	6GBASE-LR (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 2 km
Transmit power (dBm)	-8.4 to +0.5
Maximum receiver sensitivity (dBm)	-13.8
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02310SRD

11.12 10GE SFP+ Optical Modules

11.12.1 SFP-10G-USR

Table 11-47 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	850
Standards compliance	10GBASE-USR (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Multimode fiber (OM3): 0.1 km
Transmit power (dBm)	-7.3 to -1.0
Maximum receiver sensitivity (dBm)	-10.7
Overload power (dBm)	0.5
Extinction ratio (dB)	3.0
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310MNW

11.12.2 OSXD22N00

Table 11-48 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1310
Standards compliance	10GBASE-LRM
Connector type	LC
Applicable cable and maximum transmission distance	<ul style="list-style-type: none">• Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.1 km• Multimode fiber (with modal bandwidth of 500 MHz*km and diameter of 62.5 μm): 0.22 km• Multimode fiber (OM1, OM2, OM3): 0.22 km

Item	Description
Transmit power (dBm)	-6.5 to +0.5
Maximum receiver sensitivity (dBm)	-6.5
Overload power (dBm)	1.5
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310CRM

11.12.3 OMXD30000

Table 11-49 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	850
Standards compliance	10GBASE-SR
Connector type	LC
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> • Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km • Multimode fiber (OM1): 0.033 km • Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km • Multimode fiber (OM2): 0.082 km • Multimode fiber (OM3): 0.3 km • Multimode fiber (OM4): 0.4 km
Transmit power (dBm)	-7.3 to -1.0
Maximum receiver sensitivity (dBm)	-11.1
Overload power (dBm)	-1.0
Extinction ratio (dB)	3.0
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02318169

11.12.4 SFP-10G-SR-C

Table 11-50 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	850
Standards compliance	10GBASE-SR
Connector type	LC
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> • Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km • Multimode fiber (OM1): 0.033 km • Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km • Multimode fiber (OM2): 0.082 km • Multimode fiber (OM3): 0.3 km • Multimode fiber (OM4): 0.4 km
Transmit power (dBm)	-7.3 to -1.0
Maximum receiver sensitivity (dBm)	-11.1
Overload power (dBm)	-1.0
Extinction ratio (dB)	3.0
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02312UUE

11.12.5 SFP-10G-iLR

Table 11-51 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE

Item	Description
Center wavelength (nm)	1310
Standards compliance	10GBASE-iLR (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 1.4 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02311BJJ

NOTE

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

11.12.6 SFP-10G-iLR-C

Table 11-52 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1310
Standards compliance	10GBASE-iLR (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 1.4 km
Transmit power (dBm)	-8.2 to +0.5

Item	Description
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02312UUF

 **NOTE**

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

11.12.7 OSX010000

Table 11-53 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1310
Standards compliance	10GBASE-LR
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-12.6
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02318170

11.12.8 SFP-10G-LR-C

Table 11-54 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1310
Standards compliance	10GBASE-LR
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-12.6
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02312UUG

11.12.9 OSX040N01

Table 11-55 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1550
Standards compliance	10GBASE-ER
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km

Item	Description
Transmit power (dBm)	-4.7 to +4.0
Maximum receiver sensitivity (dBm)	-14.1
Overload power (dBm)	-1.0
Extinction ratio (dB)	3.0
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310CNF

11.12.10 SFP-10G-ER-C

Table 11-56 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1550
Standards compliance	10GBASE-ER
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-4.7 to +4.0
Maximum receiver sensitivity (dBm)	-14.1
Overload power (dBm)	-1.0
Extinction ratio (dB)	3.0
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02312UUH

11.12.11 SFP-10G-ER-1310

Table 11-57 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1310
Standards compliance	Non-standard and compatible with the 10Gbase-ER
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-2.0 to +4.0
Maximum receiver sensitivity (dBm)	-20
Overload power (dBm)	-7.0
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311RLX

NOTE

If the SFP-10G-ER-1310 is connected to a 10Gbase-ER standard optical module (1550 nm, 10GE, 40 km), the maximum transmission distance is only 20 km due to different specifications such as wavelength and receiving sensitivity.

This module can only be used on a switch running V200R010C00 or a later version.

11.12.12 SFP-10G-ZR

Table 11-58 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1550
Standards compliance	10GBASE-ZR
Connector type	LC

Item	Description
Applicable cable and maximum transmission distance	Single-mode fiber: 80 km
Transmit power (dBm)	0 to 4.0
Maximum receiver sensitivity (dBm)	-24.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	9
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SNN

11.12.13 SFP-10G-BXU1 (Single-Fiber-Bidirectional Module)

Table 11-59 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	Rx: 1330/Tx: 1270
Standards compliance	10GBASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02310QBJ

NOTE

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXU1 must be used with SFP-10G-BXD1.

11.12.14 SFP-10G-BXD1 (Single-Fiber-Bidirectional Module)

Table 11-60 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	Rx: 1270/Tx: 1330
Standards compliance	10GBASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02310QDT

NOTE

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXD1 must be used with SFP-10G-BXU1.

11.12.15 SFP-10G-ER-SM1330-BIDI (Single-Fiber-Bidirectional Module)

Table 11-61 Technical specifications

Item	Description
Transceiver form factor	SFP+

Item	Description
Transmission speed	10GE
Center wavelength (nm)	Rx: 1270/Tx: 1330
Standards compliance	10GBASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	0 to 5
Maximum receiver sensitivity (dBm)	-18
Overload power (dBm)	-9
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311BJB

 **NOTE**

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-ER-SM1330-BIDI must be used with SFP-10G-ER-SM1270-BIDI.

11.12.16 SFP-10G-ER-SM1270-BIDI (Single-Fiber-Bidirectional Module)

Table 11-62 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	Rx: 1330/Tx: 1270
Standards compliance	10GBASE-BX
Connector type	LC

Item	Description
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	0 to 5
Maximum receiver sensitivity (dBm)	-18
Overload power (dBm)	-9
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311BJC

 **NOTE**

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-ER-SM1270-BIDI must be used with SFP-10G-ER-SM1330-BIDI.

11.13 10GE-CWDM SFP+ Optical Modules

11.13.1 SFP-10G-ZCW1471

Table 11-63 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1471
Standards compliance	10G-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 70 km
Transmit power (dBm)	0 to 4.0

Item	Description
Maximum receiver sensitivity (dBm)	-23.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SSG

11.13.2 SFP-10G-ZCW1491

Table 11-64 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1491
Standards compliance	10G-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 70 km
Transmit power (dBm)	0 to 4.0
Maximum receiver sensitivity (dBm)	-23.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SSF

11.13.3 SFP-10G-ZCW1511

Table 11-65 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1511
Standards compliance	10G-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 70 km
Transmit power (dBm)	0 to 4.0
Maximum receiver sensitivity (dBm)	-23.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SSE

11.13.4 SFP-10G-ZCW1531

Table 11-66 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1531
Standards compliance	10G-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 70 km
Transmit power (dBm)	0 to 4.0

Item	Description
Maximum receiver sensitivity (dBm)	-23.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SSD

11.13.5 SFP-10G-ZCW1551

Table 11-67 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1551
Standards compliance	10G-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 70 km
Transmit power (dBm)	0 to 4.0
Maximum receiver sensitivity (dBm)	-23.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SSC

11.13.6 SFP-10G-ZCW1571

Table 11-68 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1571
Standards compliance	10G-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 70 km
Transmit power (dBm)	0 to 4.0
Maximum receiver sensitivity (dBm)	-23.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SSB

11.13.7 SFP-10G-ZCW1591

Table 11-69 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1591
Standards compliance	10G-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 70 km
Transmit power (dBm)	0 to 4.0

Item	Description
Maximum receiver sensitivity (dBm)	-23.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SSA

11.13.8 SFP-10G-ZCW1611

Table 11-70 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1611
Standards compliance	10G-CWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 70 km
Transmit power (dBm)	0 to 4.0
Maximum receiver sensitivity (dBm)	-23.0
Overload power (dBm)	-7.0
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310SRY

11.14 10GE-DWDM SFP+ Optical Modules

11.14.1 SFP-10G-ZDWT

Table 11-71 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1529.16 to 1560.61
Standards compliance	10GBASE-DWDM
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 60 km
Transmit power (dBm)	-1 to +3
Maximum receiver sensitivity (dBm)	-24
Overload power (dBm)	-1
Extinction ratio (dB)	8.2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310YUT

NOTE

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

The optical module takes a long time to start. Therefore, a low optical power alarm may be generated when such an optical module is installed on a switch.

11.15 25GE SFP28 Optical Modules

11.15.1 SFP-25G-LR

Table 11-72 Technical specifications

Item	Description
Transceiver form factor	SFP28
Transmission speed	25GE
Center wavelength (nm)	1310

Item	Description
Standards compliance	25GBASE-LR
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-7.0 to +2.0
Maximum receiver sensitivity (dBm)	-11.3
Overload power (dBm)	2.0
Extinction ratio (dB)	3.5
Operating temperature	-40°C to 85°C (-40°F to 185°F)
Part number	02312LSE

11.15.2 SFP-25G-SR

Table 11-73 Technical specifications

Item	Description
Transceiver form factor	SFP28
Transmission speed	25GE
Center wavelength (nm)	850
Standards compliance	25GBASE-SR
Connector type	LC
Applicable cable and maximum transmission distance	Multimode fiber (OM3): <ul style="list-style-type: none"> Disables the RS-FEC function: 0.03 km Enables the RS-FEC function: 0.07 km Multimode fiber (OM4): <ul style="list-style-type: none"> Disables the RS-FEC function: 0.04 km Enables the RS-FEC function: 0.1 km
Transmit power (dBm)	-8.4 to +2.4
Maximum receiver sensitivity (dBm)	-10.3
Overload power (dBm)	2.4

Item	Description
Extinction ratio (dB)	2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311KNR

11.16 40GE QSFP+ Optical Modules

11.16.1 QSFP-40G-SR4

Table 11-74 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	850
Standards compliance	40GBASE-SR4
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> • Multimode fiber (OM3): 0.1 km • Multimode fiber (OM4): 0.15 km
Transmit power (dBm)	-7.6 to +2.4
Maximum receiver sensitivity (dBm)	-5.4
Overload power (dBm)	2.4
Extinction ratio (dB)	3.0
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310MHQ

11.16.2 QSFP-40G-iSR4

Table 11-75 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	850
Standards compliance	40GBASE-SR4 40GBASE-iSR4 (non-standard)
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> • Multimode fiber (OM3): 0.1 km • Multimode fiber (OM4): 0.15 km
Transmit power (dBm)	-7.6 to +0.5
Maximum receiver sensitivity (dBm)	-9.5
Overload power (dBm)	2.4
Extinction ratio (dB)	3.0
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310MHR

11.16.3 QSFP-40G-eSR4

Table 11-76 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	850
Standards compliance	40GBASE-eSR4 (non-standard)
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)

Item	Description
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> • Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.026 km • Multimode fiber (OM1): 0.033 km • Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.066 km • Multimode fiber (OM2): 0.082 km • Multimode fiber (OM3): 0.3 km • Multimode fiber (OM4): 0.4 km
Transmit power (dBm)	-7.6 to +0.5
Maximum receiver sensitivity (dBm)	-5.4
Overload power (dBm)	2.4
Extinction ratio (dB)	3.0
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310RMB

11.16.4 QSFP-40G-iSM4

Table 11-77 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	1310
Standards compliance	40GBASE-iSM4 (non-standard)
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)
Applicable cable and maximum transmission distance	Single-mode fiber: 1.4 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-11.5
Overload power (dBm)	0.5

Item	Description
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311DRW

11.16.5 QSFP-40G-eSM4

Table 11-78 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	1310
Standards compliance	40GBASE-eSM4 (non-standard)
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-12.6
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C
Part number	02311DTR

11.16.6 QSFP-40G-LX4

Table 11-79 Technical specifications

Item	Description
Transceiver form factor	QSFP+

Item	Description
Transmission speed	40GE
Center wavelength (nm)	1271, 1291, 1311, 1331
Standards compliance	40GBASE-LX4
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 2 km Multimode fiber (OM3): 0.15 km
Transmit power (dBm)	-7.0 to +2.3
Maximum receiver sensitivity (dBm)	-11.5
Overload power (dBm)	2.3
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311HNP

 **NOTE**

When QSFP-40G-LX4 optical modules use multimode fibers, the fibers cannot be connected through multiple optical distribution frames (ODFs).

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

11.16.7 QSFP-40G-LR4

Table 11-80 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	1271, 1291, 1311, 1331
Standards compliance	40GBASE-LR4
Connector type	LC

Item	Description
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-7.0 to +2.3
Maximum receiver sensitivity (dBm)	-11.5
Overload power (dBm)	3.3
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02310MHS

11.16.8 QSFP-40G-ER4

Table 11-81 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	1271, 1291, 1311, 1331
Standards compliance	40GBASE-ER4
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-2.7 to +4.5
Maximum receiver sensitivity (dBm)	-19.5
Overload power (dBm)	-4.5
Extinction ratio (dB)	5.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311BKT

 **NOTE**

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

11.16.9 QSFP-40G-SR-BD

Table 11-82 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	850, 900
Standards compliance	40GBASE-BIDI (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	<ul style="list-style-type: none">• Multimode fiber (OM3): 0.1 km• Multimode fiber (OM4): 0.15 km
Transmit power (dBm)	-4 to +5
Maximum receiver sensitivity (dBm)	-4.5
Overload power (dBm)	5
Extinction ratio (dB)	4.5
Operating temperature	10°C to 70°C (50°F to 158°F) NOTICE Temporary interruption or packet loss may occur on ports of the switch if the operating temperature is below 10°C (50°F).
Part number	02311FPA

 **NOTE**

QSFP-40G-SR-BD optical modules cannot be used for CSS or stack connection before the V200R019C10SPC500 version.

QSFP-40G-SR-BD optical modules do not support some digital diagnostic monitoring (DDM) function.

This module can only be used on a switch running V200R009C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

11.16.10 QSFP-40G-SDLC-PAM

Table 11-83 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	850
Standards compliance	40GBASE-PAM4 (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	<ul style="list-style-type: none">• Multimode fiber (OM3): 100 m• Multimode fiber (OM4): 150 m
Transmit power (dBm)	-2.5 to +2.4
Maximum receiver sensitivity (dBm)	-8.0
Overload power (dBm)	2.4
Extinction ratio (dB)	3
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311PUU

NOTE

This module can only be used on a switch running V200R011C10 or a later version.

11.16.11 QSFP-40G-eSDLC-PAM

Table 11-84 Technical specifications

Item	Description
Transceiver form factor	QSFP+
Transmission speed	40GE
Center wavelength (nm)	850
Standards compliance	40GBASE-ePAM4 (non-standard)
Connector type	LC

Item	Description
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> Multimode fiber (OM3): 100 m Multimode fiber (OM4): 300 m
Transmit power (dBm)	-2 to +2.4
Maximum receiver sensitivity (dBm)	-8.0
Overload power (dBm)	2.4
Extinction ratio (dB)	3
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311QTR

 **NOTE**

This module can only be used on a switch running V200R011C10 or a later version.

11.17 Industrial Optical Modules

11.17.1 OGSM01880

Table 11-85 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	850
Standards compliance	1000BASE-SX
Connector type	LC
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> Multimode fiber (with modal bandwidth of 160 MHz*km and diameter of 62.5 μm): 0.22 km Multimode fiber (OM1): 0.275 km Multimode fiber (with modal bandwidth of 400 MHz*km and diameter of 50 μm): 0.5 km Multimode fiber (OM2): 0.55 km
Transmit power (dBm)	-10 to -2.5

Item	Description
Maximum receiver sensitivity (dBm)	-17.0
Overload power (dBm)	0
Extinction ratio (dB)	9
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02310LJG

11.17.2 OGSC10DD0

Table 11-86 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed	GE
Center wavelength (nm)	1310
Standards compliance	1000BASE-LX10/LH
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9.0 to -3.0
Maximum receiver sensitivity (dBm)	-19
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02310LJH

11.17.3 OGSC40DD0

Table 11-87 Technical specifications

Item	Description
Transceiver type	eSFP
Transmission speed	GE
Center wavelength (nm)	1310
Standards compliance	Non-standard
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	-5.0 to 0
Maximum receiver sensitivity (dBm)	-22.5
Overload power (dBm)	-3.0
Extinction ratio (dB)	9
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02310LJJ

11.17.4 SFP+10GE-LH10-SM1310

Table 11-88 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1310
Standards compliance	10GBASE-LR
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-8.2 to +0.5

Item	Description
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02311MUU

11.17.5 SFP-10G-SR

Table 11-89 Technical Specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	850
Standards compliance	10GBASE-SR
Connector type	LC
Applicable cable and maximum transmission distance	Multimode fiber (OM3): 0.3 km
Transmit power (dBm)	-7.3 to -1.0
Maximum receiver sensitivity (dBm)	-11.1
Overload power (dBm)	-1.0
Extinction ratio (dB)	3.0
Operating temperature	0°C to 85°C (32°F to 185°F)
Part number	02311SKW

11.17.6 SFP-10G-iLR

Table 11-90 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1310
Standards compliance	10GBASE-iLR (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 1.4 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02311BJJ

NOTE

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

11.17.7 SFP-10G-iLR-C

Table 11-91 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	1310
Standards compliance	10GBASE-iLR (non-standard)
Connector type	LC

Item	Description
Applicable cable and maximum transmission distance	Single-mode fiber: 1.4 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02312UUF

 **NOTE**

This module can only be used on a switch running V200R008C00 or a later version. A switch running an earlier version may fail to obtain information about this module.

11.17.8 SFP-10G-BXU1 (Single-Fiber-Bidirectional Module)

Table 11-92 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	Rx: 1330/Tx: 1270
Standards compliance	10GBASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)

Item	Description
Part number	02310QBJ

NOTE

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXU1 must be used with SFP-10G-BXD1.

11.17.9 SFP-10G-BXD1 (Single-Fiber-Bidirectional Module)

Table 11-93 Technical specifications

Item	Description
Transceiver form factor	SFP+
Transmission speed	10GE
Center wavelength (nm)	Rx: 1270/Tx: 1330
Standards compliance	10GBASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-8.2 to +0.5
Maximum receiver sensitivity (dBm)	-14.4
Overload power (dBm)	0.5
Extinction ratio (dB)	3.5
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02310QDT

NOTE

Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-10G-BXD1 must be used with SFP-10G-BXU1.

11.17.10 SFP-GE-BX-D1-I (Single-Fiber-Bidirectional Module)

Table 11-94 Technical specifications

Item	Description
Transceiver form factor	SFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1310/Tx: 1490
Standards compliance	1000BASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9 to -3
Maximum receiver sensitivity (dBm)	-19.5
Overload power (dBm)	-3
Extinction ratio (dB)	9
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02311DMA

NOTE

This module can only be used on a switch running V200R012C00 or a later version.
Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.

11.17.11 SFP-GE-BX-U1-I (Single-Fiber-Bidirectional Module)

Table 11-95 Technical specifications

Item	Description
Transceiver form factor	SFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1490/Tx: 1310
Standards compliance	1000BASE-BX
Connector type	LC

Item	Description
Applicable cable and maximum transmission distance	Single-mode fiber: 10 km
Transmit power (dBm)	-9 to -3
Maximum receiver sensitivity (dBm)	-19.5
Overload power (dBm)	-3
Extinction ratio (dB)	9
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02311DMF

 **NOTE**

This module can only be used on a switch running V200R012C00 or a later version.
Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX-D1-I must be used with SFP-GE-BX-U1-I.

11.17.12 SFP-GE-BX40-U-I (Single-Fiber-Bidirectional Module)

Table 11-96 Technical specifications

Item	Description
Transceiver form factor	SFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1490/Tx: 1310
Standards compliance	1000BASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	1.5 to 6.5
Maximum receiver sensitivity (dBm)	-26
Overload power (dBm)	-7
Extinction ratio (dB)	8.2

Item	Description
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02312TMB

NOTE

This module can only be used on a switch running V200R019C00 or a later version.
Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-U-I must be used with SFP-GE-BX40-D-I.

11.17.13 SFP-GE-BX40-D-I (Single-Fiber-Bidirectional Module)

Table 11-97 Technical specifications

Item	Description
Transceiver form factor	SFP
Transmission speed	GE
Center wavelength (nm)	Rx: 1310/Tx: 1490
Standards compliance	1000BASE-BX
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber: 40 km
Transmit power (dBm)	1.5 to 6.5
Maximum receiver sensitivity (dBm)	-26
Overload power (dBm)	-7
Extinction ratio (dB)	8.2
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	02312TMC

NOTE

This module can only be used on a switch running V200R019C00 or a later version.
Single-fiber bidirectional (BIDI) optical modules must be used in pairs. For example, SFP-GE-BX40-D-I must be used with SFP-GE-BX40-U-I.

11.18 100GE QSFP28 Optical Modules

11.18.1 QSFP28-100G-LR4

Table 11-98 Technical specifications

Item	Description
Transceiver form factor	QSFP28
Transmission speed	100GE
Center wavelength (nm)	1295, 1300, 1304, 1309
Standards compliance	100GBASE-LR4
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber (G.652): 10 km
Transmit power (dBm)	-4.3 to +4.5
Maximum receiver sensitivity (dBm)	-8.6
Overload power (dBm)	4.5
Extinction ratio (dB)	4
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311KNU

11.18.2 QSFP28-100G-PSM4

Table 11-99 Technical specifications

Item	Description
Transceiver form factor	QSFP28
Transmission speed	100GE
Center wavelength (nm)	1310
Standards compliance	100GBASE-PSM4 (non-standard)

Item	Description
Connector type	MPO/APC (8-strand or 12-strand, type B, female connector)
Applicable cable and maximum transmission distance	Single-mode fiber (G.652): 500 m
Transmit power (dBm)	-9.4 to +2
Maximum receiver sensitivity (dBm)	-11.35
Overload power (dBm)	2.2
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311MNM

11.18.3 QSFP28-100G-SR4

Table 11-100 Technical specifications

Item	Description
Transceiver form factor	QSFP28
Transmission speed	100GE
Center wavelength (nm)	850
Standards compliance	100GBASE-SR4
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Applicable cable and maximum transmission distance	<ul style="list-style-type: none"> • Multimode fiber (OM3): 70 m • Multimode fiber (OM4): 100 m
Transmit power (dBm)	-8.4 to +2.4
Maximum receiver sensitivity (dBm)	-10.3
Overload power (dBm)	2.4
Extinction ratio (dB)	2
Operating temperature	0°C to 70°C (32°F to 158°F)

Item	Description
Part number	02311GBW

11.18.4 QSFP-100G-eSR4

Table 11-101 Technical specifications

Item	Description
Transceiver form factor	QSFP28
Transmission speed	100GE
Center wavelength (nm)	850
Standards compliance	100GBase-eSR4 (non-standard)
Connector type	MPO/PC (8-strand or 12-strand, type B, female connector)
Applicable cable and maximum transmission distance	<ul style="list-style-type: none">• Multimode fiber (OM3): 200 m• Multimode fiber (OM4): 300 m
Transmit power (dBm)	-8.4 to +2.4
Maximum receiver sensitivity (dBm)	-9.2
Overload power (dBm)	2.4
Extinction ratio (dB)	≥ 2
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311PSH

11.18.5 QSFP-100G-CLR4

Table 11-102 Technical specifications

Item	Description
Transceiver form factor	QSFP28
Transmission speed	100GE

Item	Description
Center wavelength (nm)	1271, 1291, 1311, 1331
Standards compliance	100GBASE-CLR4 (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber (G.652): 2 km
Transmit power (dBm)	-6.5 to +2.5
Maximum receiver sensitivity (dBm)	-10.7
Overload power (dBm)	2.5
Extinction ratio (dB)	3.5
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311MNP

11.18.6 QSFP-100G-CWDM4

Table 11-103 Technical specifications

Item	Description
Transceiver form factor	QSFP28
Transmission speed	100GE
Center wavelength (nm)	1271, 1291, 1311, 1331
Standards compliance	100GBASE-CWDM4 (non-standard)
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber (G.652): 2 km
Transmit power (dBm)	-6.5 to +2.5
Maximum receiver sensitivity (dBm)	-9.8
Overload power (dBm)	2.5
Extinction ratio (dB)	3.5

Item	Description
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311MNN

11.18.7 QSFP-100G-ER4-Lite

Table 11-104 Technical specifications

Item	Description
Transceiver form factor	QSFP28
Transmission speed	100GE
Center wavelength (nm)	1295, 1300, 1304, 1309
Standards compliance	Non-standard and compatible with the 100GBASE-ER4
Connector type	LC
Applicable cable and maximum transmission distance	Single-mode fiber (G.652): <ul style="list-style-type: none">• Disables the RS-FEC function: 30 km• Enables the RS-FEC function: 40 km
Transmit power (dBm)	-2.5 to +2.9
Maximum receiver sensitivity (dBm)	-18.4
Overload power (dBm)	-3.5
Extinction ratio (dB)	8
Operating temperature	0°C to 70°C (32°F to 158°F)
Part number	02311YXR

 **NOTE**

This module can only be used on a switch running V200R012C00 or a later version.
The RS-FEC function can be enabled on this module in V200R019C00 or a later version.

11.19 GPON Optical Modules

11.19.1 H87MMA5671A2

Table 11-105 Technical specifications

Item	Description
Transceiver form factor	eSFP
Transmission speed (Gbit/s)	Rx: 2.488/Tx: 1.244 NOTE In practice, the maximum upstream service bandwidth is 1.1 Gbit/s and downlink service bandwidth is 2.3 Gbit/s.
Center wavelength (nm)	Rx: 1490/Tx: 1310
Standards compliance	GPON CLASS B+
Connector type	SC
Applicable cable and maximum transmission distance	Single-mode fiber: 20 km
Transmit power (dBm)	0.5 to 5.0
Maximum receiver sensitivity (dBm)	-27
Overload power (dBm)	-8.0
Extinction ratio (dB)	10
Operating temperature	-40°C to +85°C (-40°F to +185°F)
Part number	03031QHU

 NOTE

Ensure that the optical power is not overloaded. Otherwise, the optical module may be burnt.

This module can only be used on a switch running V200R012C00 or a later version.

12 Accessories

[12.1 SSD-240GB \(240 GB SSD Card\)](#)

[12.2 WLA220W01-20 kA Surge Protector](#)

[12.3 OADM Combiner and Circulator](#)

12.1 SSD-240GB (240 GB SSD Card)

Version Mapping

Table 12-1 lists the mapping between the SSD-240GB card and software versions.

Table 12-1 Version mapping

Card Model	Software Version
SSD-240GB	V200R012C00 to V200R019C10 versions

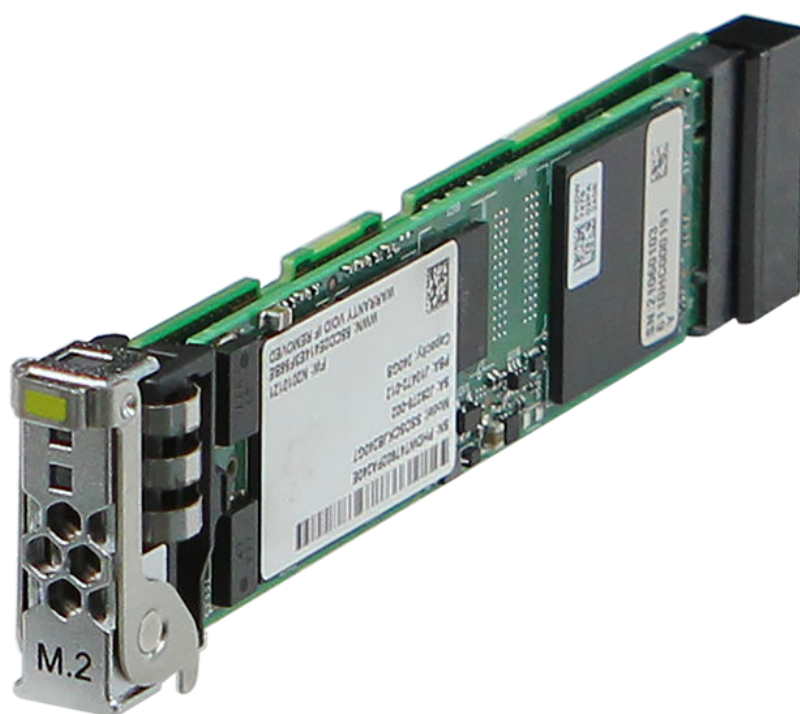
Card Overview

The SSD-240GB can be installed in the SSD card slot at the rear of the S5730-HI.

Table 12-2 Applicable switch models

Card	Switch Model
SSD-240GB	<ul style="list-style-type: none"> • S5730-36C-HI • S5730-36C-PWH-HI • S5730-60C-HI • S5730-60C-PWH-HI • S5730-36C-HI-24S • S5730-60C-HI-48S

Figure 12-1 SSD-240GB appearance



Functions

Table 12-3 Functions

Function	Description
Storage space	240 GB NOTE You can only use the display version command to view the storage space of a solid-state drive (SSD), and use the format ssd command to format the SSD.

Function	Description
Hot swapping	Not supported

Indicator Description

Figure 12-2 Indicators on the SSD-240GB

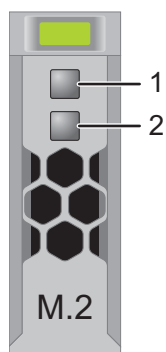


Table 12-4 Indicator description

No.	Indicator	Color	Description
1	Fault indicator	Off	The SSD card is running properly.
		Yellow	Steady on: The SSD card cannot be detected or fails.
2	Active indicator	Off	The SSD card is not in position or fails.
		Green	<ul style="list-style-type: none"> Steady on: The SSD card is in inactive state. Blinking: The SSD card is being read, written to, or synchronized with.

Technical Specifications

Table 12-5 Technical specifications

Item	Description
Physical specifications	<ul style="list-style-type: none"> • Dimensions (H x W x D): 25 mm x 8 mm x 110 mm (0.98 in. x 0.31 in. x 4.33 in.) • Weight: 0.1 kg (0.22 lb) • Maximum power consumption: 3.5 W
Environment specifications	<ul style="list-style-type: none"> • Operating temperature: 0°C to 45°C (32°F to 113°F) • Relative humidity: 5% RH to 95% RH • Storage temperature: -40°C to +70°C (-40°F to +158°F)

Ordering Information

Ordering information is subject to updates with product version upgrades. The ordering information provided in this manual is for reference only. To obtain the latest ordering information, contact Huawei switch distributors or Huawei local office.

Table 12-6 provides the SSD-240GB ordering information.

Table 12-6 Ordering information

Card Description	Card Name	Part Number
240 GB SSD card	SSD-240GB	03032TXD

12.2 WLA220W01-20 kA Surge Protector

Overview

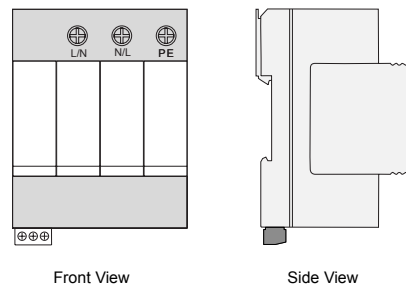
A 20 kA surge protector (model: WLA220W01) protects the 220 V single-phase power system and powered devices against the surge voltage caused by lightning strikes.

Appearance

A 20 kA surge protector uses an integrated base to facilitate installation and maintenance, and provides an alarm port (dry contact point) for remote monitoring.

Figure 12-3 shows the appearance of a 20 kA surge protector.

Figure 12-3 Appearance of a 20 kA surge protector



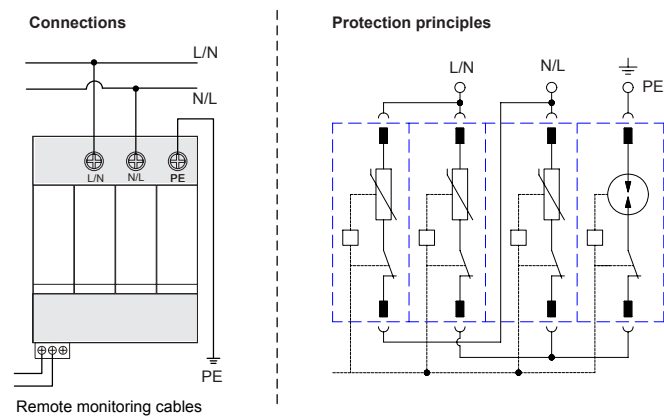
Principles

A 20 kA surge protector uses the 3+1 protection circuit and provides overheat and overcurrent protection. When the surge protector fails, it is automatically disconnected from the power grid to avoid fire caused by a short circuit.

When the status indication window of a surge protector is red, the surge protector fails and must be replaced immediately. If a remote alarm buzzer is connected to the surge protector, the alarm buzzer will generate alarm signals.

Figure 12-4 shows the protection principles of a 20 kA surge protector.

Figure 12-4 Protection principles of a 20 kA surge protector



Application Scenario

When the S5720I-SI series switches are installed in outdoor cabinets, 20 kA surge protectors must be used in some scenarios. Ensure that the following requirements are met:

- AC switch:
 - If the 220 V mains supply is used, install a 20 kA surge protector between the power port of the switch and the mains.
 - If power is supplied by an isolated inverter near the outdoor cabinet, no surge protector needs to be installed between the power port of the switch and the inverter.
- DC switch: An isolated power supply must be used and placed in the same outdoor cabinet as the switch. Surge protection is required for the power input of the outdoor cabinet. The surge protector, power supply, and switch must be equipotential. The outdoor cabinet must be properly grounded and the grounding impedance must be less than or equal to 10 ohms. If a DC switch is connected to the PAC-260WA-E or PAC240S56-CN power module that is powered by the 220 V mains, install a 20 kA surge protector between the power input port of the PAC-260WA-E or PAC240S56-CN and the mains.

The 20 kA surge protector and S5720I-SI switch can be decoupled using 5-10 m power cables or decoupling inductors, as shown in [Figure 12-5](#) and [Figure 12-6](#).

Figure 12-5 Using 5-10 m power cables for decoupling

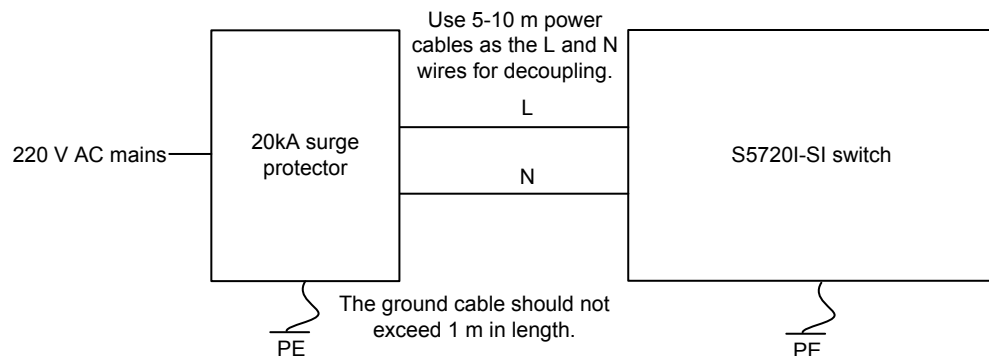
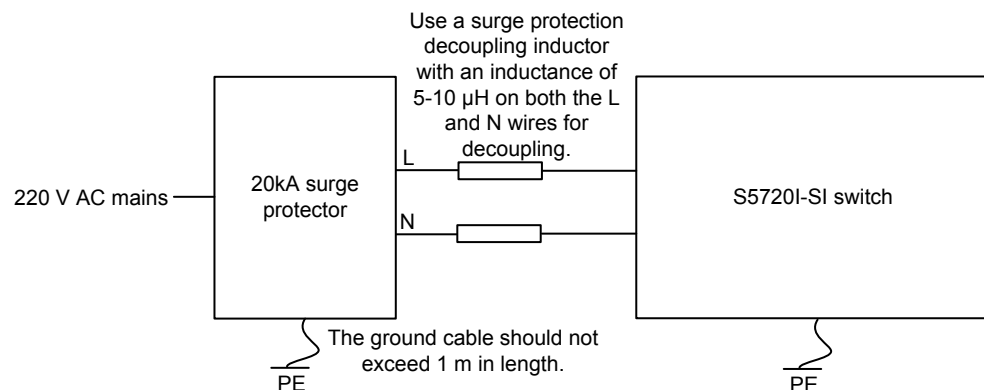


Figure 12-6 Using decoupling inductors for decoupling



NOTE

- The recommended cross-sectional area of a live wire/neutral wire (L/N) power cable for decoupling is 1.25 mm².
- The cross-sectional area of a PE ground cable must be greater than or equal to 16 mm².
- If there is no space for placing 5-10 m power cables in the cabinet for decoupling, install a hollow-core surge protection decoupling inductor with an inductance of 5-10 μ H on both the L and N wires. The decoupling inductors need to be purchased separately.

Specifications

Table 12-7 lists the specifications of a 20 kA surge protector.

Table 12-7 Specifications of a 20 kA surge protector

Item	Description
Dimensions (H x W x D)	72 mm x 90 mm x 65 mm (2.83 in. x 3.54 in. x 2.56 in.)
Nominal voltage	220 V AC
Maximum continuous operating voltage (U_c)	385 V AC
Maximum discharge current (I_{max})	40 kA (8/20 μ s)
Nominal discharge current (I_n)	20 kA (8/20 μ s)
Protection level (U_p)	1.8 kV
Status indication window (four red/green bi-color windows)	<ul style="list-style-type: none">• Green: normal state• Red: failure
Part number	19020062

12.3 OADM Combiner and Circulator

Overview

The optical add/drop multiplexer (OADM) combiner can be logically divided into a transmit device and a receive device, which work together to add/drop fixed wavelengths to/from the multiplexed signals. The OADM combiner features low insertion loss, flexible capacity expansion, and low cost, reducing the usage of long-distance optical fibers.

A circulator is used with an OADM combiner. The circulator can separate signals from each other by implementing unidirectional transmission of high-frequency signals and controlling the transmission of electromagnetic waves along a certain ring.

The OADM combiner and circulator are passive devices (can be used without power supply). [Table 12-8](#) lists the models of OADM combiners and circulators.

Table 12-8 OADM combiner and circulator

Type	Model	Description
OADM combiner	OADM-OC-00	OADM module - 18 channels - indoor - integrated circulator
OADM combiner	OADM-00-00	OADM module - 18 channels - outdoor
Circulator	OC-1270-1380-00	Optical circulator - 1270 nm - 1380 nm
Circulator	OC-1381-1500-00	Optical circulator - 1381 nm - 1500 nm
Circulator	OC-1501-1620-00	Optical circulator - 1501 nm - 1620 nm

Appearance

[Figure 12-7](#) and [Figure 12-8](#) shows the appearances of the OADM combiner.

Figure 12-7 Appearance of the OADM combiner (OADM-OC-00)



Figure 12-8 Appearance of the OADM combiner (OADM-00-00)



[Figure 12-9](#) shows the appearance of a circulator.

Figure 12-9 Appearance of the circulator



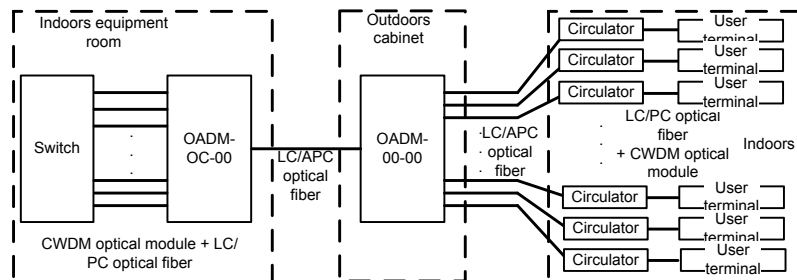
NOTE

Except for having different nameplates on the bottom surface, the three types of circulators have the same appearance.

Application Scenario

The OADM combiner and circulator are mainly used between switches and end users. They are used with **11.8 GE-CWDM eSFP Optical Modules (Used Only in the OADM scenario)** to implement GE fiber to the home (FTTH).

Figure 12-10 Typical application scenario of OADM combiners and circulators

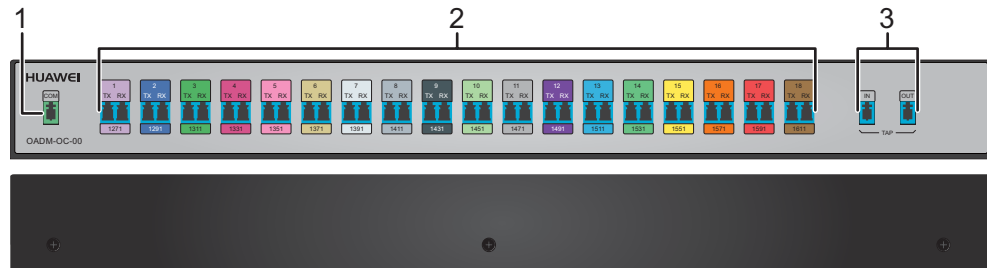


The following lists the cable requirements for connections of devices and components:

- The switch and OADM-OC-00 are installed in the indoor equipment room: The switch is connected to the combiner using the CWDM optical module, and the LC/PC optical fiber is used.
- The OADM-00-00 is installed in an outdoor cabinet near the user side: The OADM-00-00 and OADM-OC-00 are connected through a long-distance LC/APC optical fiber, reducing the number of long-distance optical fibers.
- The circulators are installed indoors: The circulators are connected to the OADM-00-00 using LC/APC optical fibers.
- The CWDM optical modules are installed on the user terminals: The CWDM optical modules are connected to circulators using LC/PC optical fibers.

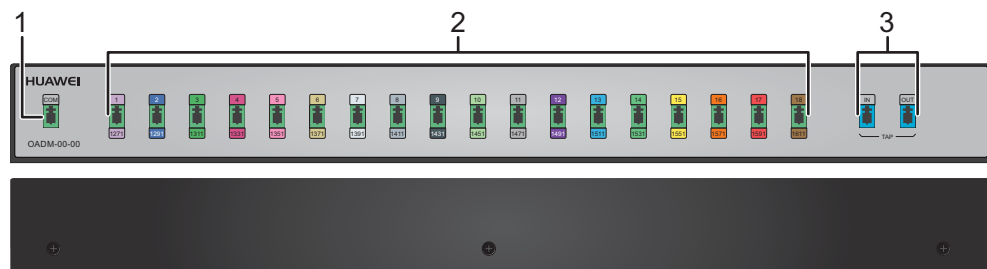
Port Description

Figure 12-11 Ports on the OADM-OC-00



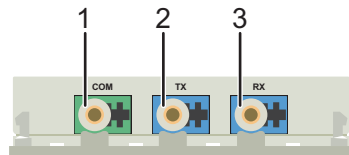
1	<p>COM port</p> <p>NOTE</p> <p>The combination port of the OADM-OC-00 is connected to that of the OADM-00-00 using the LC/APC optical fiber.</p>	<p>2</p> <p>18-channel optical ports with different wavelengths</p> <p>NOTE</p> <p>The 18-channel optical ports are connected to CWDM optical modules on the switches using the LC/PC optical fibers.</p> <p>The wavelength ID on the interface must match that of the optical module.</p> <p>The TX port is connected to the RX port on the CWDM optical module, and the RX port is connected to the TX port on the CWDM optical module.</p>
3	<p>TAP port</p> <p>NOTE</p> <p>The detection ports are connected using the LC/PC optical fibers. The IN port is used to detect 18-channel CWDM optical paths, and the OUT port is used to detect the optical path on the COM port.</p>	-

Figure 12-12 Ports on the OADM-00-00



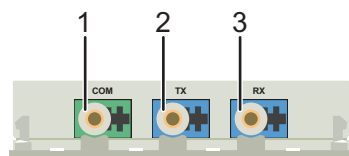
1	<p>COM port</p> <p>NOTE</p> <p>The combination port of the OADM-00-00 is connected to that of the OADM-OC-00 using the LC/APC optical fiber.</p>	2	<p>18-channel optical ports with different wavelengths</p> <p>NOTE</p> <p>The optical ports are connected to the user-side circulators using LC/APC optical fibers.</p> <p>The wavelength ID on the interface must match that of the circulator.</p>
3	<p>TAP port</p> <p>NOTE</p> <p>The detection ports are connected using the LC/PC optical fibers. The IN port is used to detect 18-channel CWDM optical paths, and the OUT port is used to detect the optical path on the COM port.</p>	-	-

Figure 12-13 Ports on the OC-1270-1380-00



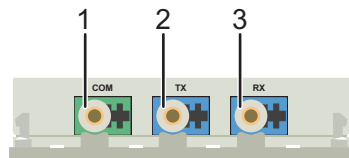
1	<p>COM port</p> <p>NOTE</p> <p>This port can be connected to the 1271, 1291, 1311, 1331, 1351, and 1371 ports of the OADM-00-00 using the LC/APC optical fibers.</p>	2	<p>TX port</p> <p>NOTE</p> <p>This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.</p>
3	<p>RX port</p> <p>NOTE</p> <p>This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.</p>	-	-

Figure 12-14 Ports on the OC-1381-1500-00



1	<p>COM port</p> <p>NOTE</p> <p>This port can be connected to the 1391, 1411, 1431, 1451, 1471, and 1491 ports of the OADM-00-00 using the LC/APC optical fibers.</p>	2	<p>TX port</p> <p>NOTE</p> <p>This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.</p>
3	<p>RX port</p> <p>NOTE</p> <p>This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.</p>	-	-

Figure 12-15 Ports on the OC-1501-1620-00



1	<p>COM port</p> <p>NOTE</p> <p>This port can be connected to the 1511, 1531, 1551, 1571, 1591, and 1611 ports of the OADM-00-00 using the LC/APC optical fibers.</p>	2	<p>TX port</p> <p>NOTE</p> <p>This port is connected to the RX port of the CWDM optical module using the LC/PC optical fiber.</p>
3	<p>RX port</p> <p>NOTE</p> <p>This port is connected to the TX port of the CWDM optical module using the LC/PC optical fiber.</p>	-	-

NOTE

If no port is used, cover ports with dust plugs.

Technical Specifications

Table 12-9 lists technical specifications of OADM combiners and circulators.

Table 12-9 Technical specifications

Item	Description
Dimensions (H x W x D)	<ul style="list-style-type: none"> ● OADM-OC-00: 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) ● OADM-00-00: 43.6 mm x 442.0 mm x 220.0 mm (1.72 in. x 17.4 in. x 8.66 in.) ● OC-1270-1380-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.) ● OC-1381-1500-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.) ● OC-1501-1620-00: 14 mm x 60.0 mm x 115.0 mm (0.55 in. x 2.36 in. x 4.53 in.)
Operating temperature	<ul style="list-style-type: none"> ● OADM-OC-00: -5°C to +55°C (23°F to 131°F) at an altitude of 0-2000 m (0-6562 ft.) ● OADM-00-00: -40°C to +70°C (-40°F to +158°F) at an altitude of 0-2000 m (0-6562 ft.) ● OC-1270-1380-00: -5°C to +55°C (23°F to 131°F) at an altitude of 0-2000 m (0-6562 ft.) ● OC-1381-1500-00: -5°C to +55°C (23°F to 131°F) at an altitude of 0-2000 m (0-6562 ft.) ● OC-1501-1620-00: -5°C to +55°C (23°F to 131°F) at an altitude of 0-2000 m (0-6562 ft.)
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Relative humidity	5% to 95%, noncondensing
Device attribute	Passive
Supported CWDM wavelength (nm)	<ul style="list-style-type: none"> ● OADM-OC-00: 1271/1291/1311/1331/1351/1371/1391/1411/1431/1451/1471/1491/1511/1531/1551/1571/1591/1611 ● OADM-00-00: 1271/1291/1311/1331/1351/1371/1391/1411/1431/1451/1471/1491/1511/1531/1551/1571/1591/1611 ● OC-1270-1380-00: 1271/1291/1311/1331/1351/1371 ● OC-1381-1500-00: 1391/1411/1431/1451/1471/1491 ● OC-1501-1620-00: 1511/1531/1551/1571/1591/1611
Part number	<ul style="list-style-type: none"> ● OADM-OC-00: 45020427 ● OADM-00-00: 45020428 ● OC-1270-1380-00: 45090008 ● OC-1381-1500-00: 45090009 ● OC-1501-1620-00: 45090010