H3C S5560S-EI & S5130S-HI Switch Series
Installation Guide

Preface

H3C S5560S-EI & S5130S-HI Switch Series Installation Guide describes the appearance, installation, power-on, maintenance, and troubleshooting of the H3C S5560S-EI and S5130S-HI Switch Series.

This preface includes the following topics about the documentation:

- Audience.
- Conventions.
- Documentation feedback.

Audience

This documentation is intended for:

- Network planners.
- Field technical support and servicing engineers.
- Network administrators working with the S5560S-EI and S5130S-HI switch series.

Conventions

The following information describes the conventions used in the documentation.

Command conventions

Convention	Description
Boldface	**Bold** text represents commands and keywords that you enter literally as shown.
Italic	*Italic* text represents arguments that you replace with actual values.
[ ]	Square brackets enclose syntax choices (keywords or arguments) that are optional.
{ x	y	... }	Braces enclose a set of required syntax choices separated by vertical bars, from which you select one.
[x	y	...]	Square brackets enclose a set of optional syntax choices separated by vertical bars, from which you select one or none.
{ x	y	... } *	Asterisk marked braces enclose a set of required syntax choices separated by vertical bars, from which you select a minimum of one.
[x	y	...] *	Asterisk marked square brackets enclose optional syntax choices separated by vertical bars, from which you select one choice, multiple choices, or none.
&<1-n>	The argument or keyword and argument combination before the ampersand (&) sign can be entered 1 to n times.
#	A line that starts with a pound (#) sign is comments.

GUI conventions

Convention	Description
Boldface	Window names, button names, field names, and menu items are in Boldface. For example, the **New User** window opens; click **OK**.
>	Multi-level menus are separated by angle brackets. For example, **File** > **Create** > **Folder**.

Symbols

Convention	Description
⚠ **WARNING!**	An alert that calls attention to important information that if not understood or followed can result in personal injury.
△ **CAUTION:**	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
① **IMPORTANT:**	An alert that calls attention to essential information.
NOTE:	An alert that contains additional or supplementary information.
💡 **TIP:**	An alert that provides helpful information.

Network topology icons

Convention	Description
	Represents a generic network device, such as a router, switch, or firewall.
	Represents a routing-capable device, such as a router or Layer 3 switch.
	Represents a generic switch, such as a Layer 2 or Layer 3 switch, or a router that supports Layer 2 forwarding and other Layer 2 features.
	Represents an access controller, a unified wired-WLAN module, or the access controller engine on a unified wired-WLAN switch.
	Represents an access point.
	Represents a wireless terminator unit.
	Represents a wireless terminator.
	Represents a mesh access point.
	Represents omnidirectional signals.
	Represents directional signals.
	Represents a security product, such as a firewall, UTM, multiservice security gateway, or load balancing device.

Convention	Description
	Represents a security module, such as a firewall, load balancing, NetStream, SSL VPN, IPS, or ACG module.

Examples provided in this document

Examples in this document might use devices that differ from your device in hardware model, configuration, or software version. It is normal that the port numbers, sample output, screenshots, and other information in the examples differ from what you have on your device.

Documentation feedback

You can e-mail your comments about product documentation to info@h3c.com.

We appreciate your comments.

Contents

1 Preparing for installation

This document is applicable to the S5560S-EI switch series and the S5130S-HI switch series. Table 1-1 describes models of the S5560S-EI switch series and the S5130S-HI switch series.

Table 1-1 Switch models

Switch model		Product code
S5560S-EI switch series	S5560S-28F-EI	LS-S5560S-28F-EI LS-S5560S-28F-EI-GL
	S5560S-52F-EI	LS-S5560S-52F-EI LS-S5560S-52F-EI-GL
	S5560S-28P-EI	LS-S5560S-28P-EI LS-S5560S-28P-EI-GL
	S5560S-52P-EI	LS-S5560S-52P-EI LS-S5560S-52P-EI-GL
	S5560S-28S-EI	LS-S5560S-28S-EI LS-S5560S-28S-EI-GL
	S5560S-52S-EI	LS-S5560S-52S-EI LS-S5560S-52S-EI-GL
	S5560S-28S-PWR-EI	LS-S5560S-28S-PWR-EI LS-S5560S-28S-PWR-EI-GL
	S5560S-52S-PWR-EI	LS-S5560S-52S-PWR-EI LS-S5560S-52S-PWR-EI-GL
S5130S-HI switch series	S5130S-28S-HI	LS-S5130S-28S-HI LS-S5130S-28S-HI-GL
	S5130S-52S-HI	LS-S5130S-52S-HI LS-S5130S-52S-HI-GL
	S5130S-28C-HI	LS-S5130S-28C-HI LS-S5130S-28C-HI-GL
	S5130S-52C-HI	LS-S5130S-52C-HI LS-S5130S-52C-HI-GL
	S5130S-28S-PWR-HI	LS-5130S-28S-PWR-EI LS-5130S-28S-PWR-EI-GL
	S5130S-28S-UPWR-HI	LS-5130S-28S-UPWR-HI
	S5130S-52S-PWR-HI	LS-5130S-52S-PWR-EI LS-5130S-52S-PWR-EI-GL
	S5130S-28C-PWR-HI	LS-5130S-28C-PWR-EI LS-5130S-28C-PWR-EI-GL
	S5130S-52C-PWR-HI	LS-5130S-52C-PWR-EI LS-5130S-52C-PWR-EI-GL

Safety recommendations

To avoid any equipment damage or bodily injury caused by improper use, read the following safety recommendations before installation. Note that the recommendations do not cover every possible hazardous condition.

- Before cleaning the switch, remove all power cords from the switch. Do not clean the switch with wet cloth or liquid.
- Do not place the switch near water or in a damp environment. Prevent water or moisture from entering the switch chassis.
- Do not place the switch on an unstable case or desk. The switch might be severely damaged in case of a fall.
- Ensure good ventilation of the equipment room and keep the air inlet and outlet vents of the switch free of obstruction.
- Make sure the operating voltage is in the required range.
- To avoid electrical shocks, do not open the chassis while the switch is operating or when the switch is just powered off.
- When installing the switch, wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.

Examining the installation site

The switch must be used indoors. You can mount your switch in a rack or on a workbench, but make sure:

- Adequate clearance is reserved at the air inlet and outlet vents for ventilation.
- The rack or workbench has a good ventilation system.
- Identify the hot aisle and cold aisle at the installation site, and make sure ambient air flows into the switch from the cold aisle and exhausts to the hot aisle.
- Identify the airflow designs of neighboring devices, and prevent hot air flowing out of the neighboring device from entering the device.
- The rack is sturdy enough to support the switch and its accessories.
- The rack or workbench is reliably grounded.

To ensure correct operation and long service life of your switch, install it in an environment that meets the requirements described in the following subsections.

Temperature and humidity

Maintain temperature and humidity in the equipment room at acceptable ranges.

- Lasting high relative humidity can cause poor insulation, electricity leakage, mechanical property change of materials, and metal corrosion.
- Lasting low relative humidity can cause washer contraction and ESD and cause problems including loose mounting screws and circuit failure.
- High temperature can accelerate the aging of insulation materials and significantly lower the reliability and lifespan of the switch.

For the temperature and humidity requirements of different switch models, see technical specifications in *Hardware Information and Specifications*.

Cleanliness

Dust buildup on the chassis might cause electrostatic adsorption and dust corrosion, resulting in poor contact of metal connectors and contact points. This might shorten the device's lifetime and even cause device failure in the worst case. Table 1-2 describes the dust concentration limits in the equipment room for the S5560S-EI switch series. Table 1-3 describes the dust concentration limits in the equipment room for the S5130S-HI switch series.

Table 1-2 Dust concentration limits in the equipment room for the S5560S-EI switch series

Substance	Particle diameter	Concentration limit
Dust particles	≥ 0.5 μm	≤ 3.5 × 10^6 particles/m^3
Dust particles	≥ 5 μm	≤ 3 × 10^4 particles/m^3
Dust (suspension)	≤ 75 μm	≤ 0.2 mg/m^3
Dust (sedimentation)	75 μm to 150 μm	≤ 1.5 mg/(m^2h)

Table 1-3 Dust concentration limits in the equipment room for the S5130S-HI switch series

Substance	Particle diameter	Concentration limit
Dust particles	≥ 0.5 μm	≤ 3.5 × 10^6 particles/m^3
Dust particles	≥ 5 μm	≤ 3 × 10^4 particles/m^3
Dust (suspension)	≤ 75 μm	≤ 0.4 mg/m^3
Dust (sedimentation)	75 μm to 150 μm	≤ 15 mg/(m^2h)
Sand	≥ 150 μm	≤ 300 mg/m^3

To maintain cleanliness in the equipment room, follow these guidelines:

- Keep the equipment room away from pollution sources. Do not smoke, eat, or drink in the equipment room.
- Use double-layer glass in windows and seal doors and windows with dust-proof rubber strips. Use screen doors and window screens for doors and windows open to the outside and make sure the external windows are air tight.
- Use dustproof materials for floors, walls, and ceilings and use wallpaper or matt paint that does not produce powders.
- Clean the equipment room regularly and clean the air filters of the rack each month.
- Wear ESD clothing and shoe covers before entering the equipment room, keep the ESD clothing and shoe covers clean, and change them frequently.

Corrosive gas limit

Corrosive gases can accelerate corrosion and aging of metal components. Make sure the corrosive gases in the equipment room do not exceed the concentration limits as shown in Table 1-4.

Table 1-4 Corrosive gas concentration limits in the equipment room

Gas	Average concentration (mg/m^3)	Maximum concentration (mg/m^3)
SO_2	0.3	1.0
H_2S	0.1	0.5
Cl_2	0.1	0.3

Gas	Average concentration (mg/m^3)	Maximum concentration (mg/m^3)
HCl	0.1	0.5
HF	0.01	0.03
NH$_3$	1.0	3.0
O$_3$	0.05	0.1
NO$_X$	0.5	1.0

⚠ **CAUTION:**

As a best practice, control the corrosive gas concentrations in the equipment room at their average values. Make sure the corrosive gas concentrations do not exceed 30 minutes per day at their maximum values.

To control corrosive gases, use the following guidelines:

- As a best practice, do not build the equipment room in a place with a high concentration of corrosive gases.
- Make sure the equipment room is not connected to sewer, vertical shaft, or septic tank pipelines and keep it far away from these pipelines. The air inlet of the equipment room must be away from such pollution sources.
- Use environmentally friendly materials to decorate the equipment room. Avoid using organic materials that contains harmful gases, such as sulfur or chlorine-containing insulation cottons, rubber mats, sound-proof cottons, and avoid using plasterboards with high sulfur concentration.
- Place fuel (diesel or gasoline) engines separately. Do not place them in the same equipment room with the device. Make sure the exhausted air of the engines will not flow into the equipment room or towards the air inlet of the air conditioners.
- Place batteries separately. Do not place them in the same room with the device.
- Employ a professional company to monitor and control corrosive gases in the equipment room regularly.

EMI

All electromagnetic interference (EMI) sources, from outside or inside of the switch and application system, adversely affect the switch in the following ways:

- A conduction pattern of capacitance coupling.
- Inductance coupling.
- Electromagnetic wave radiation.
- Common impedance (including the grounding system) coupling.

To prevent EMI, use the following guidelines:

- If AC power is used, use a single-phase three-wire power receptacle with protection earth (PE) to filter interference from the power grid.
- Keep the switch far away from radio transmitting stations, radar stations, and high-frequency devices.
- Use electromagnetic shielding, for example, shielded interface cables, when necessary.
- To prevent signal ports from getting damaged by overvoltage or overcurrent caused by lightning strikes, route interface cables only indoors.

Laser safety

⚠ WARNING!

Disconnected optical fibers or transceiver modules might emit invisible laser light. Do not stare into beams or view directly with optical instruments when the switch is operating.

The switch is a Class 1 laser device.

Installation tools

No installation tools are provided with the switch. Prepare installation tools yourself as required.

- ESD wrist strap
- Flat-blade screwdriver
- Phillips screwdriver
- Needle-nose pliers
- Diagonal pliers
- Crimping tool
- Marker

2 Installing the switch

△ CAUTION:

Keep the tamper-proof seal on a mounting screw on the chassis cover intact, and if you want to open the chassis, contact H3C for permission. Otherwise, H3C shall not be liable for any consequence.

Figure 2-1 Hardware installation flow

```
                    ┌──────────────────┐
                    │      Start        │
                    └──────────────────┘
                             │
                             ▼
                    ╱───────────────────╲
                    │ Install the switch  │
                    ╲───────────────────╱
                             │
                             ▼
                    ┌──────────────────┐
                    │ Ground the switch │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────┐
                    │ Install fan trays │
                    └──────────────────┘
                             │
                             ▼
                    ┌──────────────────────┐
                    │ Install power supplies │
                    └──────────────────────┘
                             │
                             ▼
                    ┌──────────────────────┐
                    │ Connect the power cords│
                    └──────────────────────┘
                             │
                             ▼
                    ┌──────────────────────┐
                    │ Verify the installation│
                    └──────────────────────┘
                             │
                             ▼
        ┌──────────────────┐         ┌──────────────────────┐
        │ Turn on the circuit│◄───────│ Troubleshoot the switch│
        │     breakers      │         └──────────────────────┘
        └──────────────────┘                     ▲
                 │                                │
                 ▼           No      ┌──────────────────────┐
          ◇ Operating correctly? ◇──────►│  Turn off the circuit │
                 │                        │       breakers       │
               Yes                        └──────────────────────┘
                 ▼
    No    ◇ Install expansion ◇◄────────────────────────┐
 ◄────────│     modules?      │                         │
          ◇──────────────────◇                          │
                 │ Yes                                   │
                 ▼                                       │
        ┌────────────────────────┐                      │
        │ Install expansion modules│                     │
        └────────────────────────┘                      │
                 │                                        │
                 ▼          No      ┌──────────────────────┐
          ◇ Operating correctly? ◇────►│ Troubleshoot the switch│
                 │                      └──────────────────────┘
               Yes
                 ▼
        ┌────────────────────────┐
        │ Connect interface cables │
        └────────────────────────┘
                 │
                 ▼
          ┌──────────────────┐
          │       End         │
          └──────────────────┘
```

Installing the switch in a 19-inch rack

Installation methods

Table 2-2 Installation methods for the S5560S-EI and the S5130S-HI switches

Chassis	Installation methods	Installation requirements	Installation procedure
S5560S-28F-EI S5560S-52F-EI S5560S-28P-EI S5560S-52P-EI S5560S-28S-EI S5560S-52S-EI S5130S-28S-HI S5130S-52S-HI S5130S-28C-HI S5130S-52C-HI	Using front mounting brackets	Install the front mounting brackets at the port side or the power supply side.	See "Rack-mounting the switch by using front mounting brackets."

S5560S-28S-PWR-EI
S5560S-52S-PWR-EI
S5130S-28S-PWR-HI
S5130S-28S-UPWR-HI
S5130S-52S-PWR-HI
S5130S-28C-PWR-HI
S5130S-52C-PWR-HI
	Using front and rear mounting brackets	• Install the front mounting brackets at the port side or power supply side.
		• Install the rear mounting brackets according to the rack depth.
		  ○ If the rack depth is in the range of 429 to 595 mm (16.89 to 23.43 in), orient the bracket with the wide flange inside the rack.
		  ○ If the rack depth is in the range of 274 to 440 mm (10.79 to 17.32 in) and the distance from the rear rack posts to the inner surface of the cabinet door is longer than 153 mm (6.02 in), orient the bracket with the wide flange outside the rack.
		• To use PSR1110-56A power supplies, do not install the switch in a rack with a depth of 600 mm (23.62 in)
			See "Rack-mounting the switch by using front and rear mounting brackets."

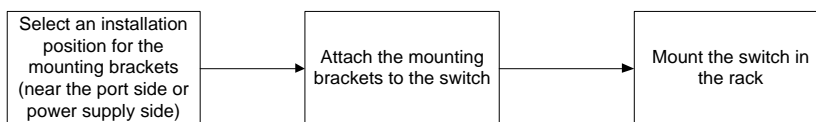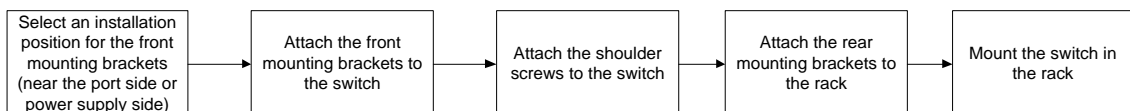**Figure 2-2 Procedure for rack-mounting the switch by using the front mounting brackets**

```
┌──────────────────────┐   ┌──────────────────────┐   ┌──────────────────────┐
│ Select an installation│   │ Attach the mounting │   │ Mount the switch in │
│ position for the   │ ───▶ │ brackets to the switch│ ───▶ │ the rack   │
│ mounting brackets   │   │   │   │   │
│ (near the port side or│   │   │   │   │
│ power supply side)   │   │   │   │   │
└──────────────────────┘   └──────────────────────┘   └──────────────────────┘
```

**Figure 2-3 Procedure for rack-mounting the switch by using the front and rear mounting brackets**

```
┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐   ┌──────────────────┐
│Select an         │   │Attach the front  │   │Attach the shoulder│   │Attach the rear   │   │Mount the switch in│
│installation      │──▶│mounting brackets │──▶│screws to the switch│──▶│mounting brackets │──▶│the rack          │
│position for the  │   │to the switch     │   │                  │   │to the rack       │   │                  │
│front mounting    │   │                  │   │                  │   │                  │   │                  │
│brackets (near the│   │                  │   │                  │   │                  │   │                  │
│port side or power│   │                  │   │                  │   │                  │   │                  │
│supply side)      │   │                  │   │                  │   │                  │   │                  │
└──────────────────┘   └──────────────────┘   └──────────────────┘   └──────────────────┘   └──────────────────┘
```

Installation accessories

Table 2-3 Installation accessories for the S5560S-EI and the S5130S-HI switches

Installation accessories	S5560S-28F-EI S5560S-52F-EI S5560S-28P-EI S5560S-52P-EI S5560S-28S-EI S5560S-52S-EI S5130S-28S-HI S5130S-52S-HI S5130S-28C-HI S5130S-52C-HI	S5560S-28S-PWR-EI S5560S-52S-PWR-EI S5130S-28S-PWR-HI S5130S-28S-UPWR-HI S5130S-52S-PWR-HI S5130S-28C-PWR-HI S5130S-52C-PWR-HI
Front mounting brackets (Figure 2-4)	Provided	Provided
Rear mounting brackets and shoulder screws (Figure 2-5)	N/A	Provided

Figure 2-4 Front mounting bracket
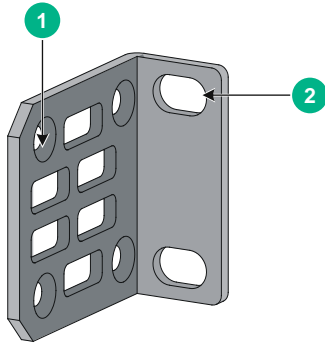
(1) Screw hole for attaching the bracket to the switch   (2) Screw hole for attaching the bracket to the rack

Figure 2-5 Rear mounting bracket and shoulder screw
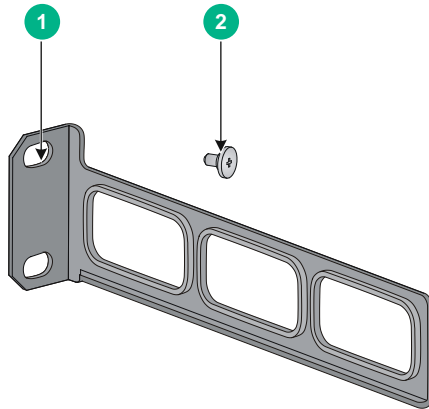
(1) Screw hole for attaching the bracket to the rack	(2) Shoulder screw

Rack-mounting the switch by using front mounting brackets

Attaching the front mounting brackets to the switch

1. Determine the mounting position for the front mounting brackets. You can install the front mounting brackets at the port side or the power supply side.
2. Attach the front mounting brackets to the chassis:
   a. Align the round holes in the wide flange of one front mounting bracket with the screw holes in the chassis. See Figure 2-6 and Figure 2-7.
   b. Use M4 screws (provided with the switch) to attach the front mounting bracket to the chassis.
   c. Repeat the proceeding two steps to attach the other front mounting bracket to the chassis.

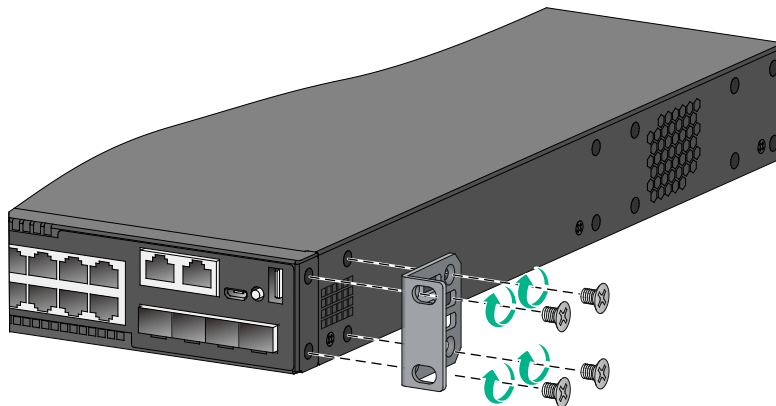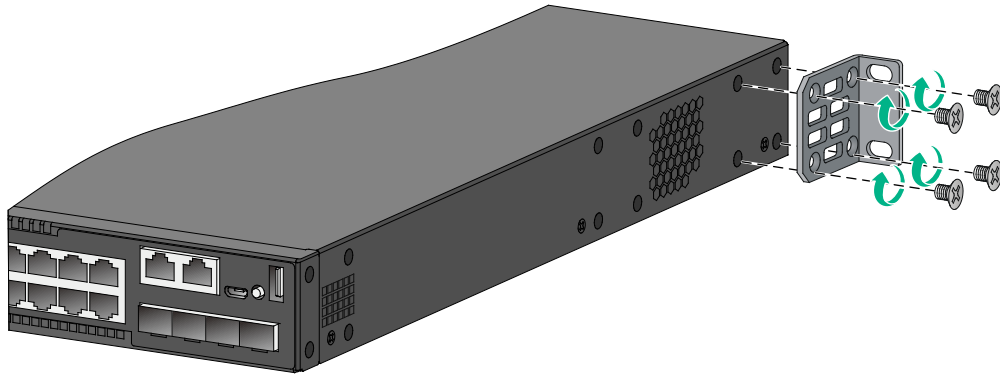**Figure 2-6 Attaching the front mounting bracket to the port side**

Figure 2-7 Attaching the front mounting bracket to the power supply side

Mounting the switch in the rack

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Make sure the front mounting brackets have been attached securely to the two sides of the switch.
3. One person supports the chassis bottom with one hand, holds the front part of the chassis with the other hand, and pushes the chassis into the rack.
4. The other person uses M6 screws and cage nuts (user supplied) to attach the switch to the rack. Make sure the switch is installed evenly and securely in the rack.

Figure 2-8 Mounting the switch in the rack (front mounting brackets at the port side)
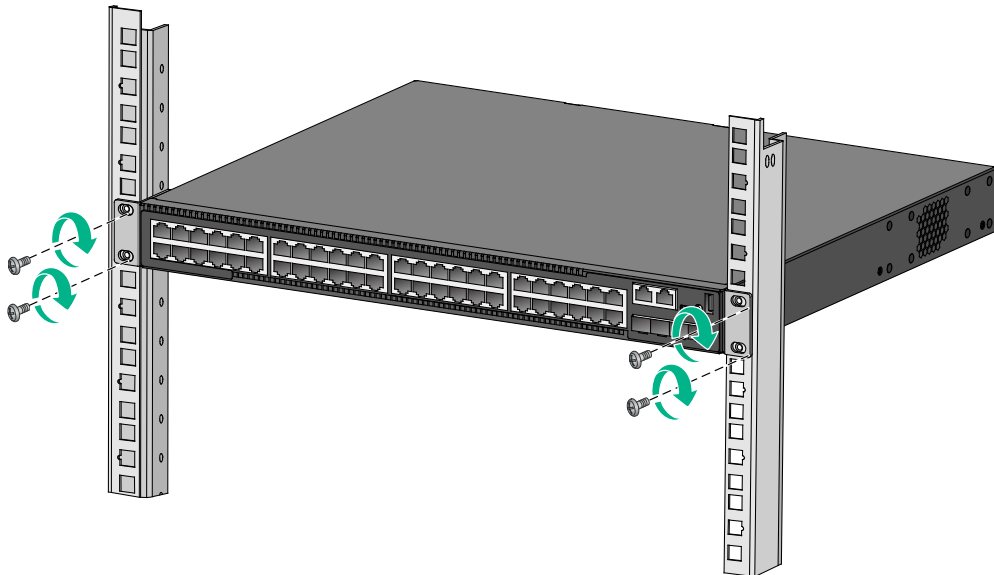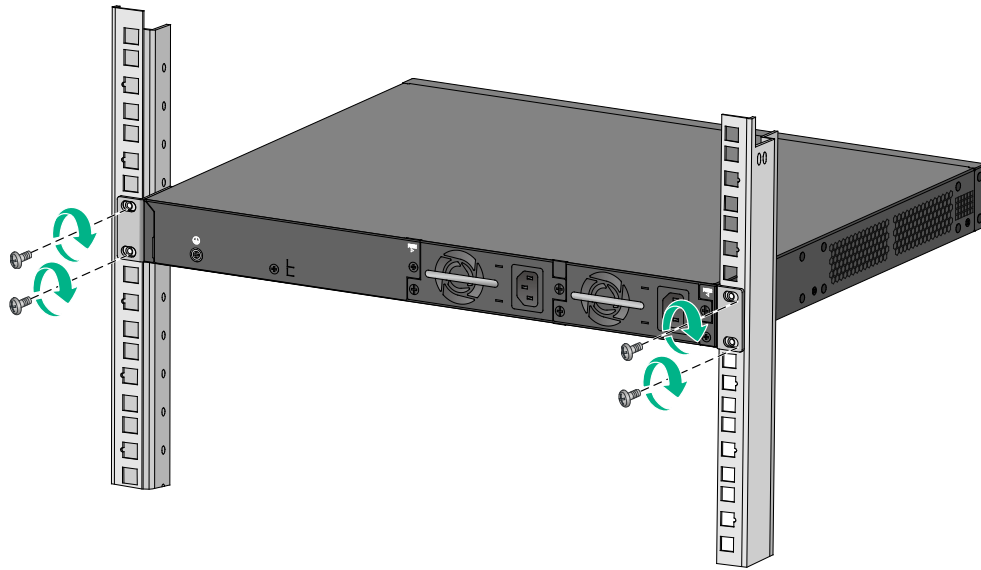
Figure 2-9 Mounting the switch in the rack (front mounting brackets at the power supply side)

Rack-mounting the switch by using front and rear mounting brackets

Attaching the front mounting brackets and shoulder screws to the switch

You can attach the front mounting brackets at the port-side or power supply-side mounting position. The following uses port-side mounting as an example. The power-side mounting is similar.

To attach the front mounting brackets and shoulder screws to the switch:

1. Align the round holes in the wide flange of one front mounting bracket with the screw holes in the port-side mounting position on one side of the chassis. See Figure 2-10.
2. Use M4 screws (supplied with the switch) to attach the front mounting bracket to the chassis.
3. Repeat the proceeding two steps to attach the other front mounting bracket to the chassis.
4. Unpack the shoulder screws. Attach a shoulder screw to one of the two installation positions as red-marked in Figure 2-10 at both sides of the chassis.

Figure 2-10 Attaching the front mounting brackets and shoulder screws to the chassis
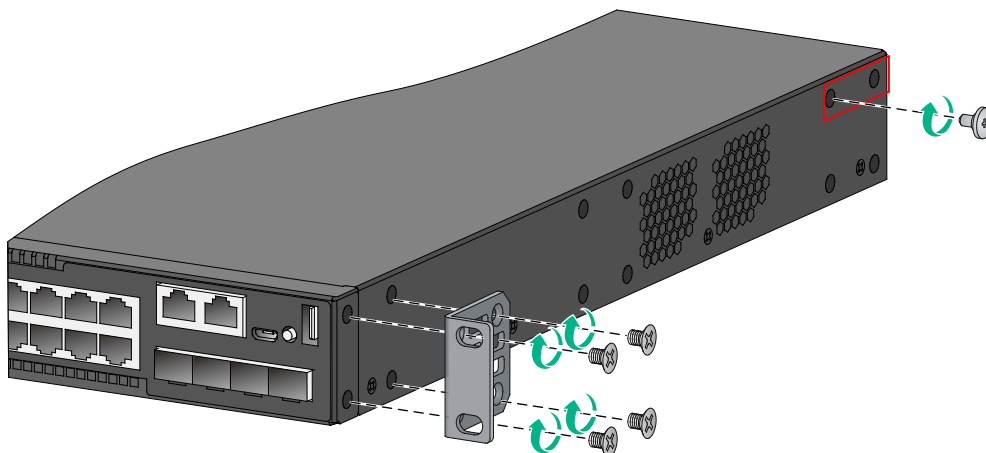
Attaching the rear mounting brackets to the rack

1. Determine the switch installation position in the rack.
2. Install cage nuts in the rack posts.
3. Orient the rear mounting brackets with the wide flange inside or outside the rack as required.
4. Use M6 screws to attach the rear mounting brackets to the rear posts, as shown in Figure 2-11.
   Do not fully tighten the M6 screws before mounting the switch in the rack.

Figure 2-11 Attaching the rear mounting brackets to a rack with the wide flange inside the rack
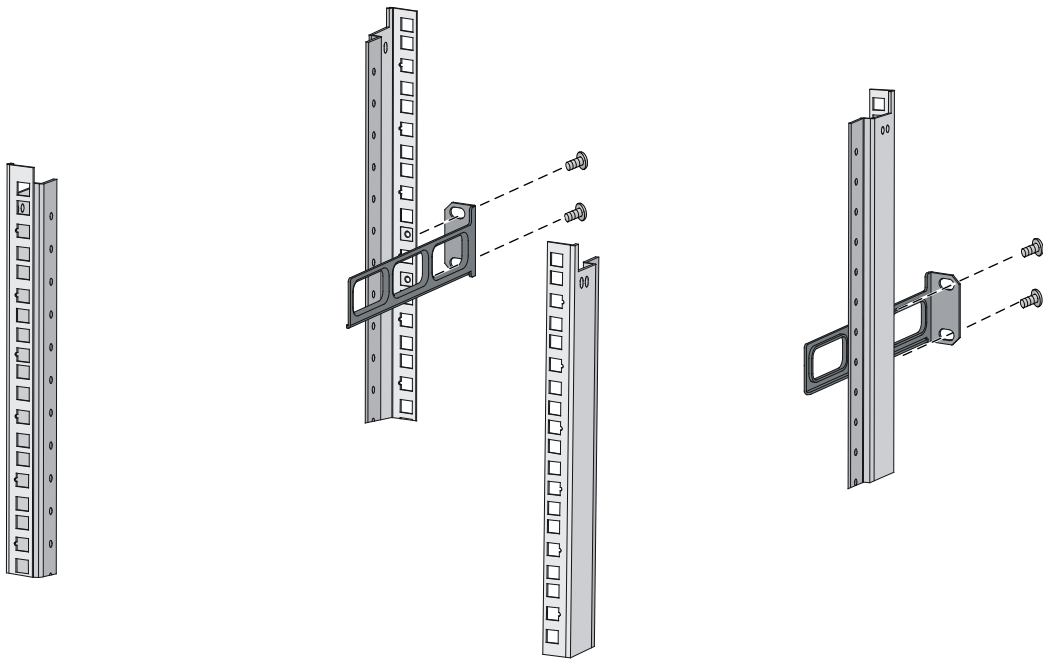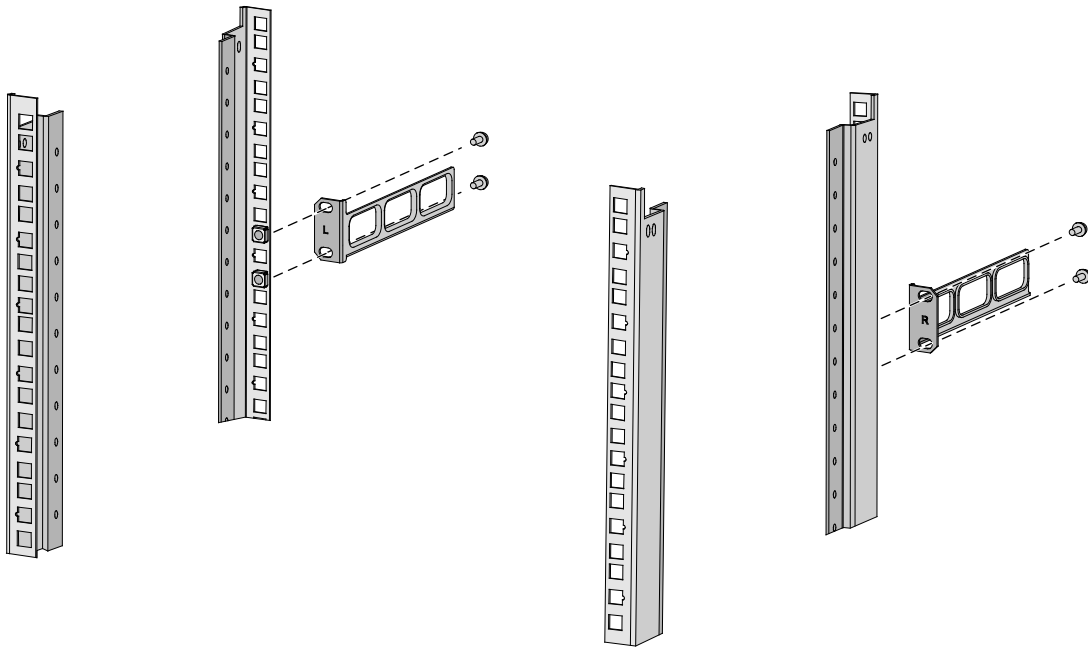
Figure 2-12 Attaching the rear mounting brackets to a rack with the wide flange outside the rack

Mounting the switch in the rack

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Make sure the front mounting brackets and shoulder screws are securely attached to the two sides of the switch.
3. Attach cage nuts to the rack posts.
4. One person supports the chassis bottom with one hand, holds the front part of the chassis with the other hand, and pushes the chassis into the rack gently.

    Make sure the shoulder screws make close contact with the upper edges of the rear mounting brackets, as shown in Figure 2-13.
5. The other person aligns the oval holes in the front brackets with the mounting holes in the front rack posts, and attaches the front mounting brackets with M6 screws to the front rack posts.

    Make sure the switch is installed securely in the rack.

Figure 2-13 Mounting the switch in the rack (with the wide flange of the rear mounting brackets inside the rack)
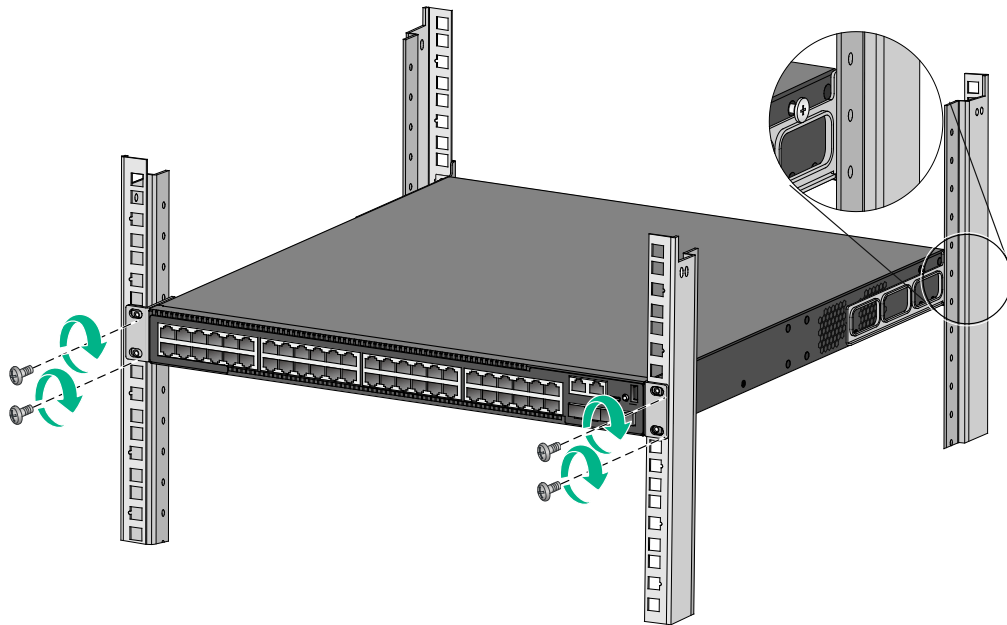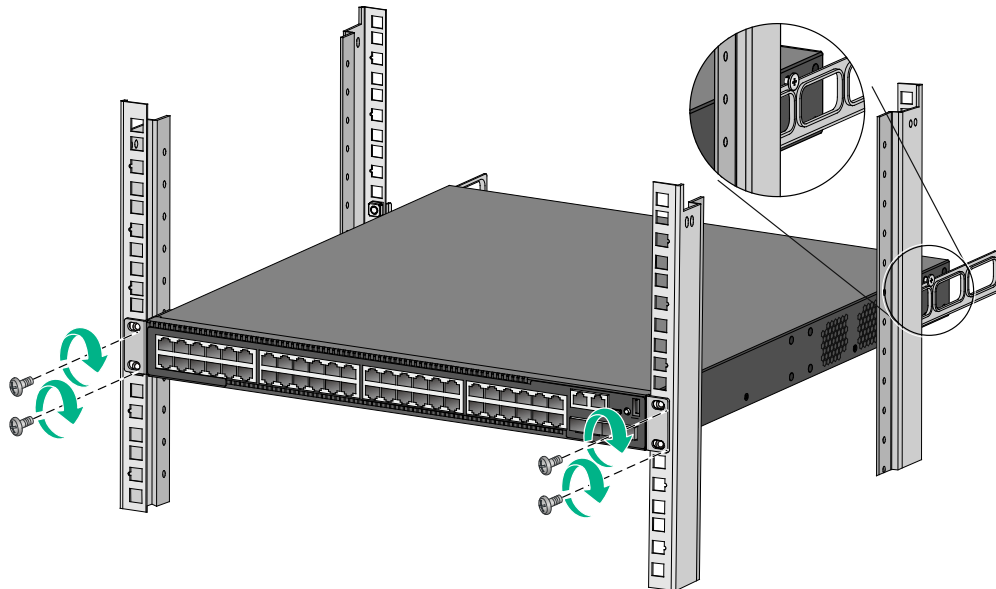

Figure 2-14 Mounting the switch in the rack (with the wide flange of the rear mounting brackets outside the rack)

Mounting the switch on a workbench

> (!) **IMPORTANT:**
> - Reserve a minimum of 10 cm (3.9 in) of clearance around the chassis for heat dissipation.
> - Do not place heavy objects on the switch.

To mount the switch on a workbench:

1. Verify that the workbench is sturdy and reliably grounded.
2. Place the switch with bottom up, and clean the round holes in the chassis bottom with dry cloth.
3. Attach the rubber feet to the four round holes in the chassis bottom.
4. Place the switch with upside up on the workbench.

Grounding the switch

⚠ **WARNING!**
- Correctly connecting the grounding cable is crucial to lightning protection and EMI protection.
- As a best practice to guarantee the grounding effect, ground the switch by connecting the grounding cable provided with the switch to the grounding strip in the equipment room.

The power input end of the switch has a noise filter, whose central ground is directly connected to the chassis to form the chassis ground (commonly known as PGND). You must securely connect this chassis ground to the earth to minimize the potential for system damage, maximize the safety at the site, and minimize EMI susceptibility of the system.

You can ground the switch in one of the following ways, depending on the grounding conditions available at the installation site:

- Grounding the switch with a grounding strip
- Grounding the switch with a grounding conductor buried in the earth ground

NOTE:
- The power and grounding terminals in this section are for illustration only.
- For more information about lightning protection, see *H3C Lightning Protection Guide*.

Grounding the switch with a grounding strip

⚠ **WARNING!**
Connect the grounding cable to the grounding strip in the equipment room. Do not connect it to a fire main or lightning rod.

If a grounding strip is available at the installation site, connect the grounding cable to the grounding strip.

Connecting the grounding cable to the chassis

1. Remove the grounding screw from the rear panel of the switch chassis.
2. Use the grounding screw to attach the ring terminal of the grounding cable to the grounding screw hole. Fasten the screw.

Figure 2-15 Connecting the grounding cable to the chassis (1)
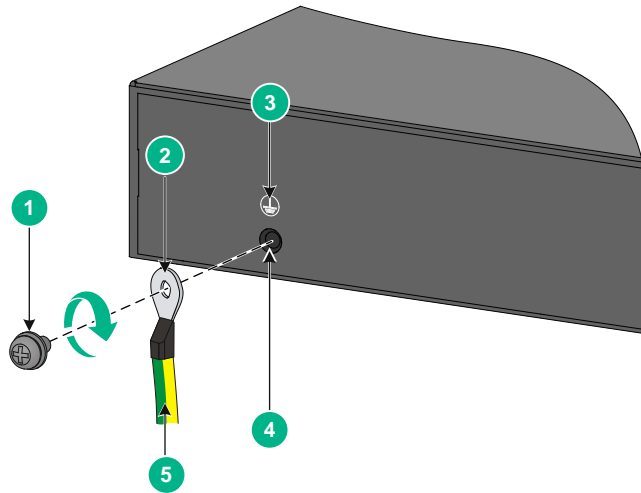
(1) Grounding screw	(2) Ring terminal
(3) Grounding sign	(4) Grounding hole
(5) Grounding cable	

Figure 2-16 Connecting the grounding cable to the chassis (2)

(1) Grounding cable	(2) Grounding sign
(3) Grounding hole	(4) Ring terminal
(5) Grounding screw	

Connecting the grounding cable to a grounding strip

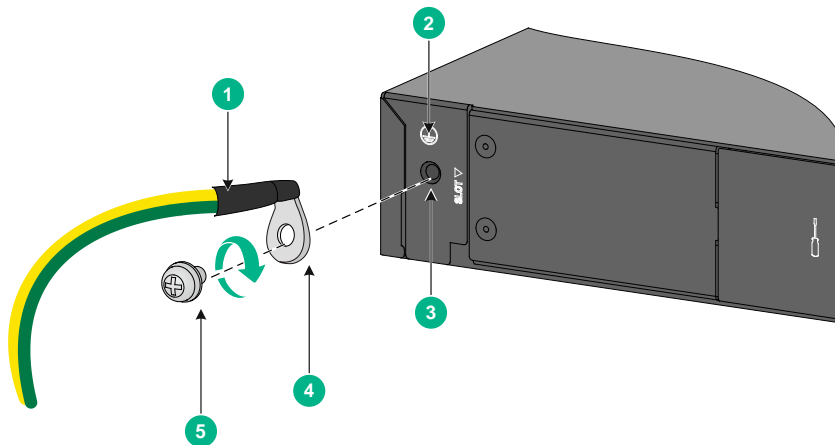1. Cut the grounding cable to a length required for connecting to the grounding strip.
2. Use a wire stripper to strip 20 mm (0.79 in) of insulation off the end of the grounding cable. Then use needle-nose pliers to bend the bare metal part to the shape as shown in Figure 2-17. Make sure the bended part can securely attached to the grounding post on the grounding strip.
3. Attach the bended part of the grounding cable to the grounding post and use the hex nut to fasten the bended part to the post.

Figure 2-17 Connecting the grounding cable to the grounding strip
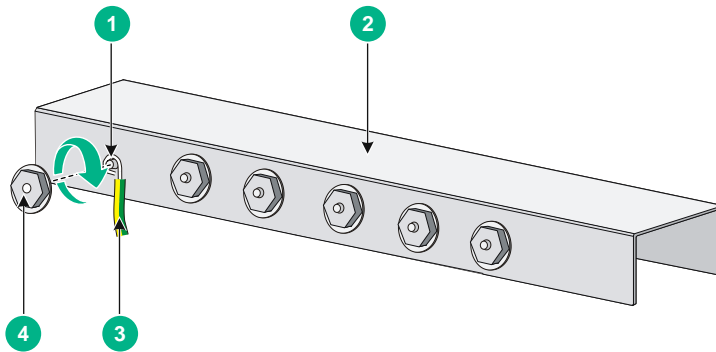
(1) Grounding post	(2) Grounding strip
(3) Grounding cable	(4) Hex nut

Grounding the switch with a grounding conductor buried in the earth ground

If the installation site does not have any grounding strips, but earth ground is available, hammer a 0.5 m (1.64 ft) or longer angle iron or steel tube into the earth ground to serve as a grounding conductor.

The dimensions of the angle iron must be a minimum of 50 × 50 × 5 mm (1.97 × 1.97 × 0.20 in). The steel tube must be zinc-coated and its wall thickness must be a minimum of 3.5 mm (0.14 in).

Weld the yellow-green grounding cable to the angel iron or steel tube and treat the joint for corrosion protection.

Figure 2-18 Grounding the switch by burying the grounding conductor into the earth ground
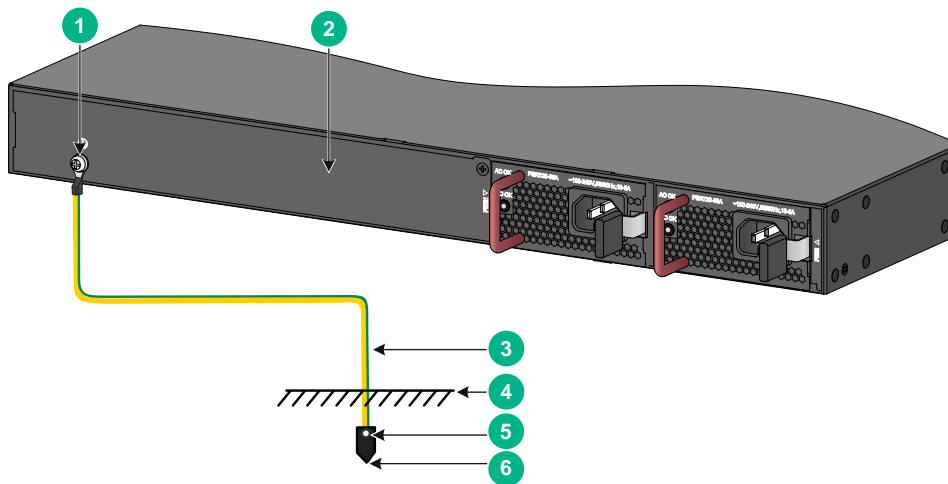
(1) Grounding screw	(2) Chassis rear panel	(3) Grounding cable
(4) Earth	(5) Joint	(6) Grounding conductor

Installing and removing a power supply

⚠ WARNING!

In power redundancy mode, you can replace a power supply without powering off the switch but you must strictly follow the installation and removal procedures in Figure 2-19 and Figure 2-20 to avoid any bodily injury or damage to the switch.

⚠ CAUTION:

Provide a circuit breaker for each power supply.

Figure 2-19 Installation procedure
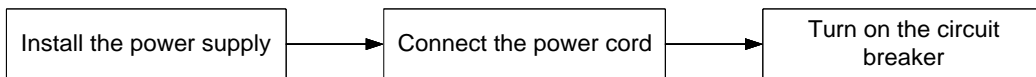
Install the power supply	→	Connect the power cord	→	Turn on the circuit breaker

Figure 2-20 Removal procedure

Turn off the circuit breaker	→	Remove the power cord	→	Remove the power supply
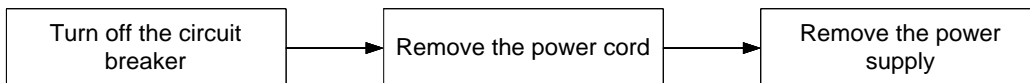
The switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required.

For the power supplies available for the switch and their specifications, see power supplies in *Hardware Information and Specifications*.

Installing a PSR75-12A/PSR150-A1/PSR150-D1 power supply

⚠ CAUTION:

To prevent damage to the power supply or the connectors on the backplane, insert the power supply gently. If you encounter a hard resistance when inserting the power supply, pull out the power supply and insert it again.

The installation procedure is the same for PSR75-12A, PSR150-A1, and PSR150-D1 power supplies. The following procedure uses the PSR150-A1 power supply as an example.

To install a PSR150-A1 power supply:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Remove the filler panel, if any, from the target power supply slot as follows:
   a. Remove the screws on the filler panel.
   b. Use a flathead screwdriver to remove the filler panel.

Figure 2-21 Removing the filler panel
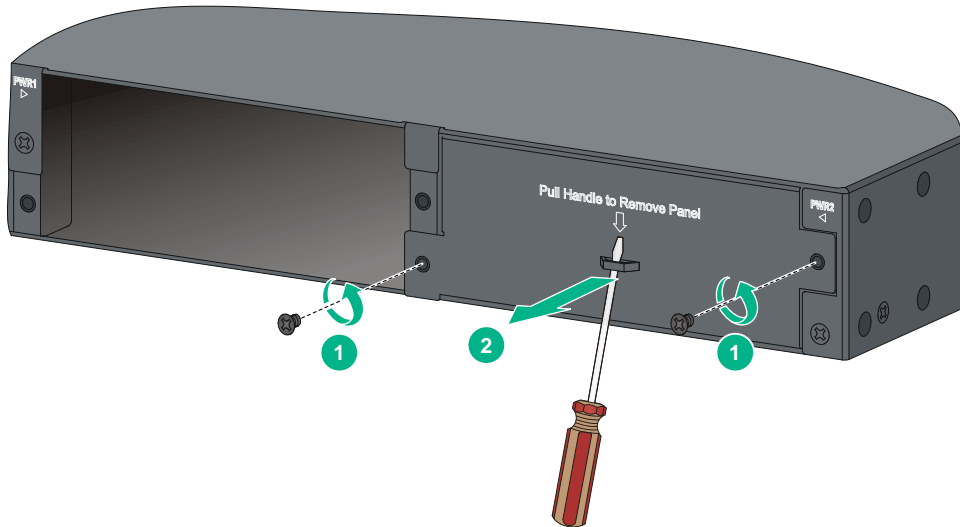
3. Unpack the power supply and verify that the power supply model is correct.
4. Orient the power supply so that the lettering on the power supply is upright.
5. Grasping the power supply handle with one hand and supporting its bottom with the other, slide the power supply slowly along the guide rails into the slot (see callout 1 in Figure 2-22).
6. Fasten the captive screws on the power supply with a Phillips screwdriver to secure the power supply in the chassis (see callout 2 in Figure 2-22).

    If the captive screw cannot be tightly fastened, verify the installation of the power supply.
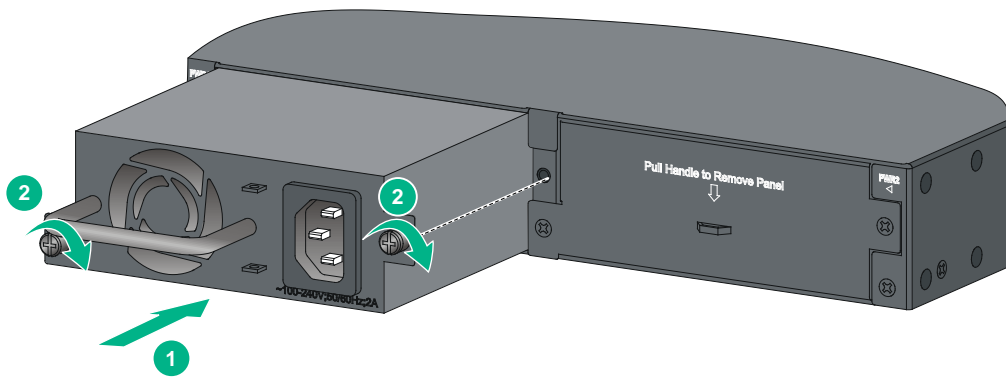
Figure 2-22 Installing a PSR150-A1 power supply

Removing a PSR75-12A/PSR150-A1/PSR150-D1 power supply

The removal procedure is the same for PSR75-12A, PSR150-A1, and PSR150-D1 power supplies. The following procedure uses the PSR150-A1 power supply as an example.

To remove a PSR150-A1 power supply:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Disconnect the power cord.
3. Loosen the captive screws of the power supply with a Phillips screwdriver until they are completely disengaged.

4. Grasp the handle of the power supply with one hand and pull it out a little, support the bottom with the other hand, and pull the power supply slowly along the guide rails out of the slot.

Put away the removed power supply in an antistatic bag or the power supply package bag for future use.

5. Install the filler panel to prevent dust and ensure good ventilation if no power supply is installed in the slot.

Installing a PSR180-56A/PSR360-56A/PSR560-56D/PSR720-56A/PSR1110-56A power supply

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△ **CAUTION:**

To prevent damage to the power supply or the connectors on the backplane, insert the power supply gently. If you encounter a hard resistance when inserting the power supply, pull out the power supply and insert it again.

The installation procedure is the same for the PSR180-56A, PSR360-56A, PSR560-56D, PSR720-56A, and PSR1110-56A power supplies. The following procedure uses the PSR720-56A power supply as an example.

To install a PSR720-56A power supply:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.

2. Put your forefinger into the hole in the filler panel, if any, in the target power supply slot, and pull out it gently.

Figure 2-23 Removing the filler panel
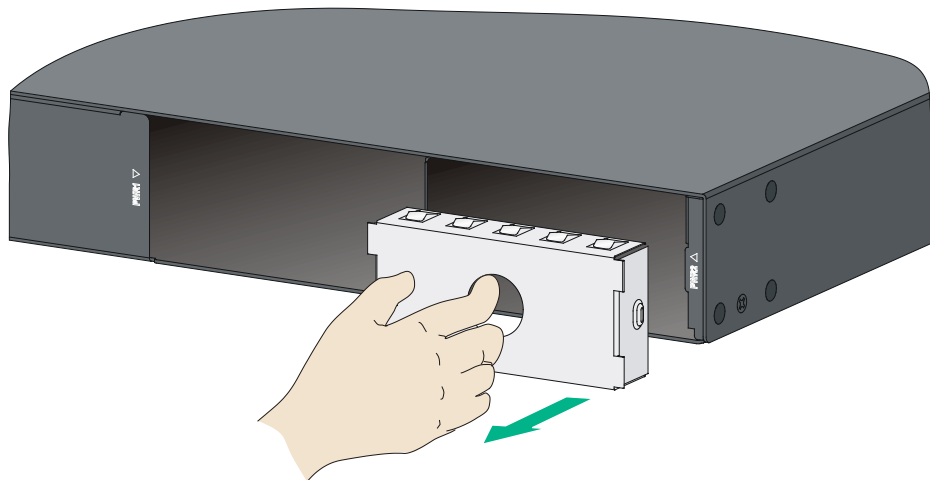
3. Unpack the power supply and verify that the power supply model is correct.

Keep the packaging box and packaging bag of the power supply for future use.

4. Orient the power supply so that the lettering on the power supply is upright.

5. Grasp the handle of the power supply with one hand and support its bottom with the other. Slide the power supply slowly along the guide rails into the slot until the latch of the power supply clicks into place.

Figure 2-24 Installing the power supply
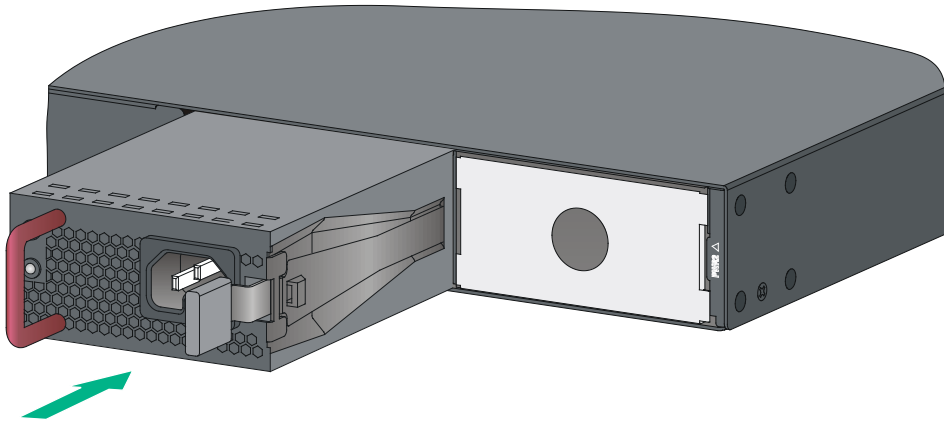
Figure 2-25 PSR1110-56A power supply installed in the chassis
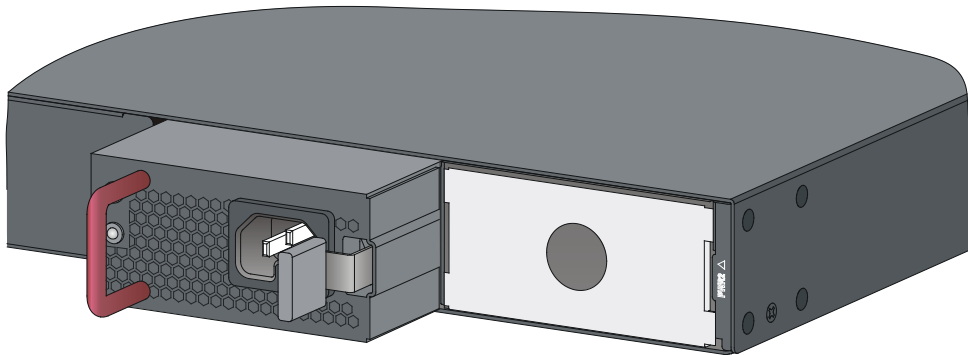
NOTE:

The PSR1110-56A power supply, including its handle, adds 64 mm (2.52 in) to chassis depth.

Removing a PSR180-56A/PSR360-56A/PSR560-56D/PSR720-56A/PSR1110-56A power supply

The removal procedure is the same for the PSR180-56A, PSR360-56A, PSR560-56D, PSR720-56A, and PSR1110-56A power supplies. The following procedure uses the PSR720-56A power supply as an example.

To remove a PSR720-56A power supply:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Disconnect the power cord.
3. Press the latch towards the handle, and pull the power supply along the guide rails until it is part-way out.
4. Grasp the handle of the power supply with one hand, support the bottom with the other hand, and pull the power supply slowly along the guide rails out of the slot.

    Keep the removed power supply in an antistatic bag or the power supply package bag for future use.

5. Install the filler panel to prevent dust and ensure good ventilation if no power supply is installed in the slot.

Figure 2-26 Removing the power supply
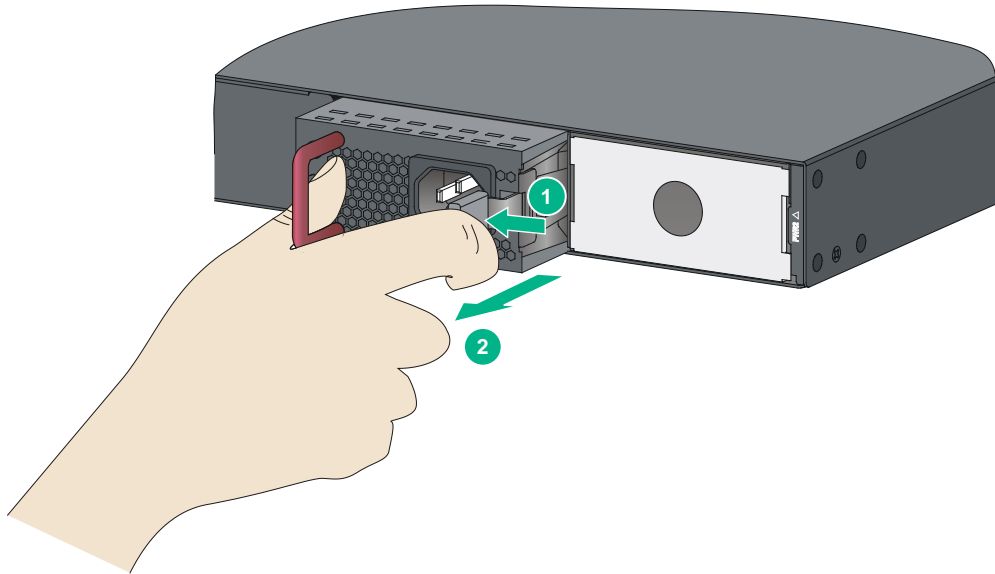
Connecting the power cord

△ **CAUTION:**

- The available power cords vary by power supply model. Do not mix power cords for different power supplies. As a best practice, use the supplied power cord.
- Provide a circuit breaker for each power supply and make sure the circuit breaker is off before installation.

Table 2-4 Power cord connection procedures at a glance

Power supply model	Available power source	Connection procedure reference
PSR75-12A	AC power source	Connecting the power cord for a PSR75-12A/PSR150-A1
	240V high-voltage DC power source	
PSR150-A1	AC power source	Connecting the power cord for a PSR75-12A/PSR150-A1
PSR150-D1	–48 VDC power source in the equipment room	Connecting the power cord for a PSR150-D1/PSR560-56D
	RPS800-A or RPS1600-A	
PSR560-56D	–48 VDC power source in the equipment room	Connecting the power cord for a PSR150-D1/PSR560-56D
	RPS1600-A	
PSR360-56A/PSR720-56A/PSR1110-56A	AC power source	Connecting the power cord for a PSR180-56A/PSR360-56A/PSR720-56A/PSR1110-56A
PSR180-56A	AC power source	Connecting the power cord for a

Power supply model	Available power source	Connection procedure reference
	240 V high-voltage DC power source	PSR180-56A/PSR360-56A/PSR720-56A/PSR1110-56A

Connecting the power cord for a PSR75-12A/PSR150-A1 power supply

The power cord connection procedure is the same for the PSR75-12A and the PSR150-A1. This section uses a PSR150-A1 power supply as an example.

To connect the power cord for a PSR150-A1 power supply:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Install the power cord retainer clip. Insert the two ends of the clip into the holes in the brackets on the left of the power receptacle.
3. Pull the power cord retainer clip leftwards (see Figure 2-27).
4. Connect the female connector of the power cord supplied with the power supply to the power receptacle (see callout 1 in Figure 2-28).
5. Pull the power cord retainer clip rightwards to secure the plug to the power receptacle (see callout 2 in Figure 2-28).
6. Connect the other end of the power cord to an external power source.

    For a PSR150-A1 power supply, connect the power cord to an AC power source. For a PSR75-12A power supply, connect the power cord to an AC power source or a 240V high-voltage DC power source.

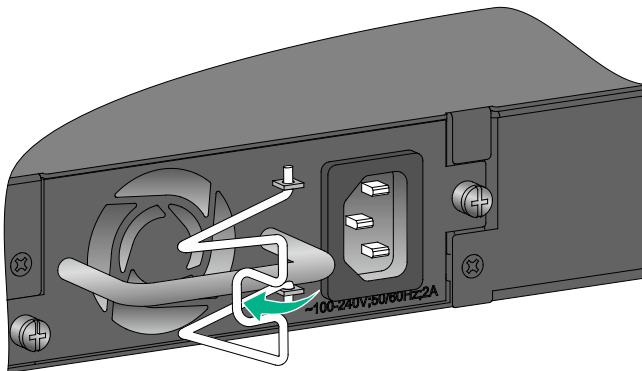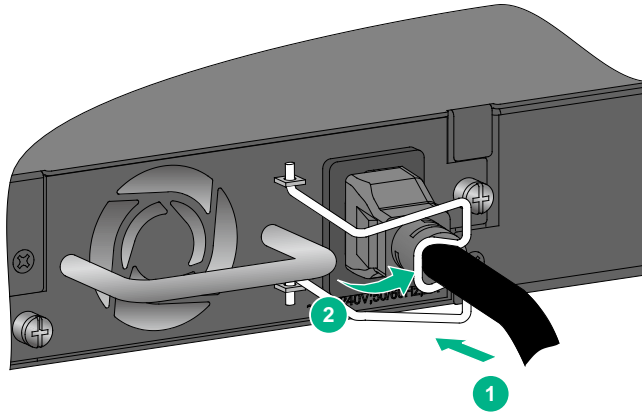**Figure 2-27 Connecting the power cord for a PSR150-A1 power supply (1)**

Figure 2-28 Connecting the power cord for a PSR150-A1 power supply (2)

Connecting the power cord for a PSR150-D1/PSR560-56D power supply

⚠ **CAUTION:**

- Connect the other ends of the wires for a PSR150-D1 power supply to a –48 VDC power source, with the negative wire (**–** or **L–**) to the negative terminal (**–**) and the positive wire (**+** or **M/N**) to the positive terminal (**+**).

- To use a –48 VDC power source to supply power to the power supply, use the DC power cord supplied with the power supply.

- To use an H3C RPS (–54 VDC) to supply power to the power supply, use a compatible RPS power cord to connect the RPS to the power supply.

- The power cord color code scheme in Figure 2-29 is for illustration only. The cable delivered for your country or region might use a different color scheme. When you connect the power cord, always identify the polarity symbol on its wires.

The power cord connection procedure is the same for the PSR150-D1 and PSR560-56D power supplies. The following procedure uses a PSR150-D1 power supply as an example.

To connect the power cord for a PSR150-D1 power supply:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Unpack the power cord, correctly orient the plug at one end of the cable with the power receptacle on the power supply, and insert the plug into the power receptacle (see callout 1 in Figure 2-29).

   The power receptacle is foolproof. If you cannot insert the plug into the receptacle, re-orient the plug rather than use excessive force to push it in.
3. Tighten the screws on the plug with a flat-blade screwdriver to secure the plug in the power receptacle (see callout 2 in Figure 2-29).
4. Connect the two wires at the other end of the power cord to a –48 VDC power source or an RPS.

Figure 2-29 Connecting the power cord for a PSR150-D1 power supply
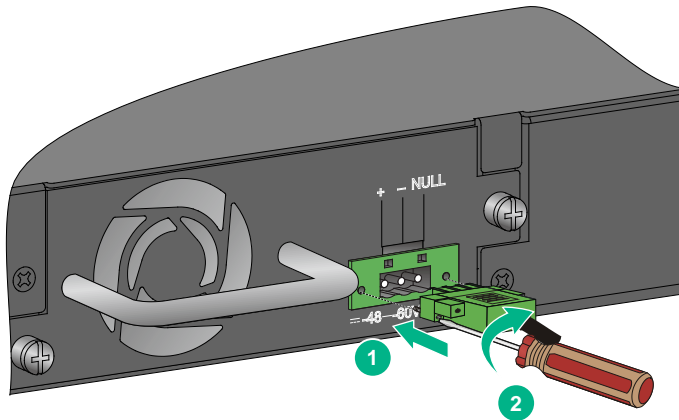
Connecting the power cord for a PSR180-56A/PSR360-56A/PSR720-56A/PSR1110-56A power supply

The power cord connection procedure is the same for the PSR180-56A, PSR360-56A, PSR720-56A, and PSR1110-56A power supplies. The following procedure uses a PSR720-56A power supply as an example.

To connect the power cord for a PSR720-56A power supply:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Plug the female connector end of the power cord into the input socket of the power supply (see callout 1 in Figure 2-30).
3. Use a cable tie to secure the power cord to the handle of the power supply (see callout 2 and callout 3 in Figure 2-30).
4. Connect the other end of the power cord to a power source.

    For a PSR360-56A, PSR720-56A, or PSR1110-56A power supply, connect the power cord to an AC power source. For a PSR180-56A power supply, connect the power cord to an AC power source or a 240V high-voltage DC power source.

Figure 2-30 Connecting the power cord for a PSR720-56A power supply
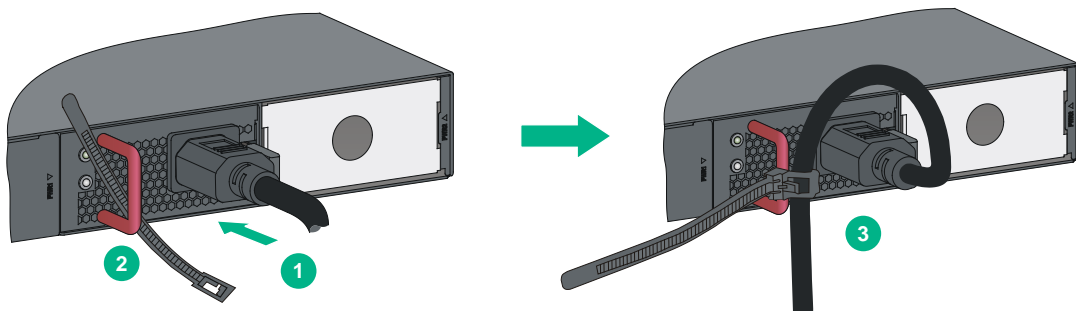
Installing and removing an expansion module

⚠ **CAUTION:**

- Do not touch any components on the expansion module.
- Do not use excessive force when installing or removing the expansion module.
- If you are not to install an expansion module after removal, install a filler panel over the empty slot to ensure good ventilation.
- Do not install or remove the expansion module during switch startup.

The S5130S-28C-HI, S5130S-52C-HI, S5130S-28C-PWR-HI, and S5130S-52C-PWR-HI switches each provide an expansion slot at the rear panel. You can install an LSWM2SP2PB interface module in the slot. For more information about the interface module, see expansion modules in *Hardware Information and Specifications*.

Installing an expansion module

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Use a Phillips screwdriver to remove the screw that secures the filler panel, and then use a flat-blade screwdriver to pry open the filler panel and remove it.

ⓘ **IMPORTANT:**

Keep the removed filler panel for future use.

Figure 2-31 Removing the filler panel
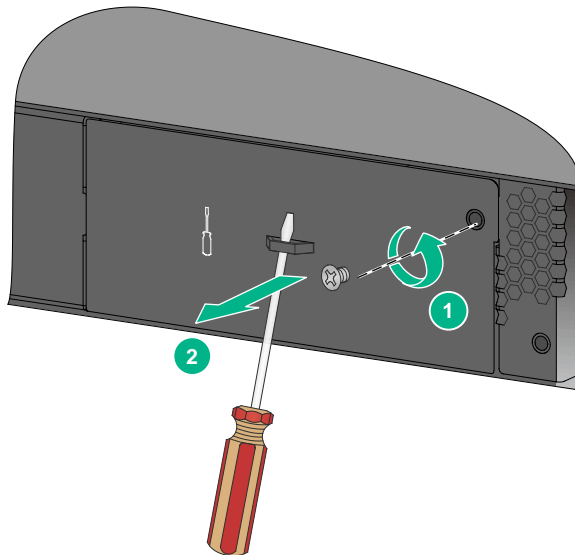
3. Take the expansion module out of the package, and then install the expansion module as shown in Figure 2-32.
   a. Open the ejector lever on the expansion module, as shown by callout 1.
   b. Slide the expansion module into the slot along the guide rails until you cannot push it further, as shown by callout 2.
   c. Close the ejector lever on the expansion module, as shown by callout 3.

d. Use a Phillips screwdriver to fasten the screw and secure the expansion module into place, as shown by callout 4.

Figure 2-32 Installing the expansion module
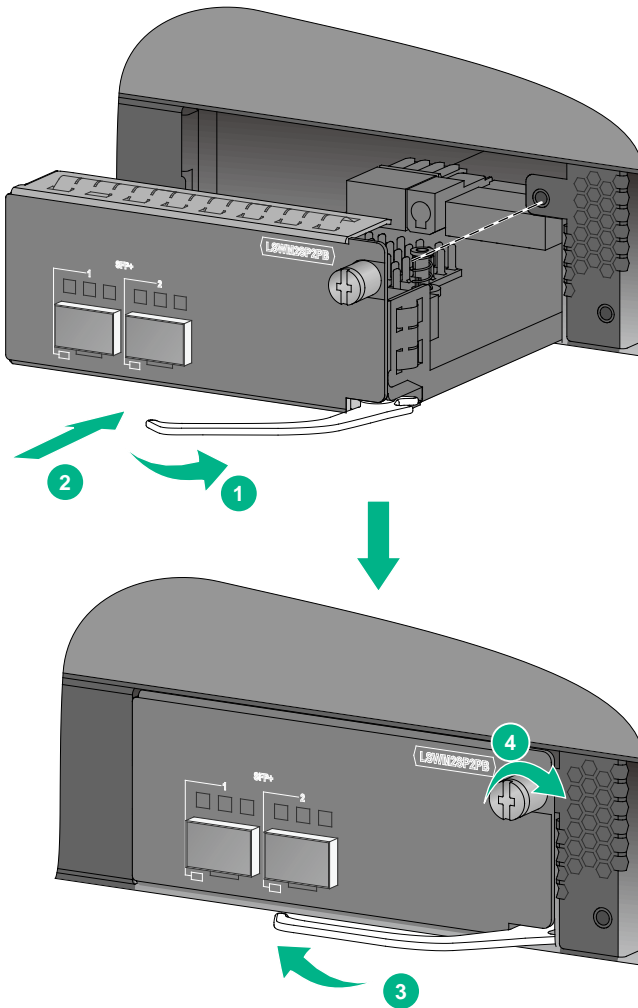
Removing an expansion module

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Use a Phillips screwdriver to remove the screw that secures the expansion module.
3. Open the ejector lever on the expansion module.
4. Pull the expansion module slowly out of the slot along the guide rails.

Verifying the installation

After you complete the installation, verify the following information:

- There is enough space for heat dissipation around the switch, and the rack or workbench is stable.
- The grounding cable is securely connected.
- The correct power source is used.

- The power cords are correctly connected.
- All the interface cables are cabled indoors. If any cable is routed outdoors, verify that the socket strip with lightning protection and lightning arresters for network ports have been correctly connected.

3 Accessing the switch for the first time

Connecting the switch to a configuration terminal

You can connect the switch to a configuration terminal by using the serial console port or the micro USB console port. Only the micro USB console port takes effect if you connect both the serial console port and micro USB console port.

In Figure 3-1, the switch is connected to a configuration terminal (PC as an example) from the serial console port.

Figure 3-1 Connecting the switch to a configuration terminal
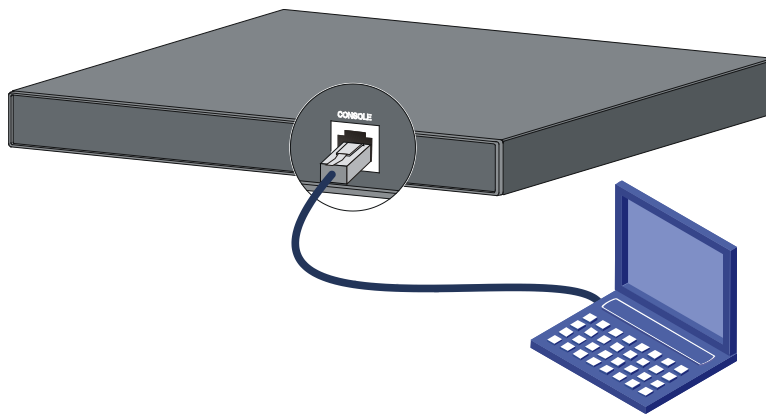
As shown in Table 3-1, three types of console cables can be used for connecting the switch to a configuration terminal. As a best practice, use a serial console cable for connection. The switch is not provided with a serial console cable or a micro USB console cable. Prepare an H3C console cable or prepare a micro USB console cable yourself.

Table 3-1 Connection methods and console cables

Connection method	Console cable type	Configuration terminal-side connector	Switch-side connector
Using the serial console port for connection	DB9-to-RJ45 console cable	DB-9 female connector	RJ-45 connector
	USB-to-RJ45 console cable	USB connector	RJ-45 connector
Using the micro USB console port for connection	Micro USB console cable	USB connector	Micro USB connector

Connecting a DB9-to-RJ45 console cable

⚠ **CAUTION:**

Follow these guidelines when you connect a DB9-to-RJ45 console cable:

- Identify the mark on the serial console port and make sure you are connecting to the correct port.
- The serial ports on PCs do not support hot swapping. To connect a PC to an operating switch, first connect the PC end. To disconnect a PC from an operating switch, first disconnect the switch end.

A DB9-to-RJ45 serial console cable is an 8-core shielded cable, with a crimped RJ-45 connector at one end for connecting to the serial console port of the switch, and a DB-9 female connector at the other end for connecting to the serial port on a configuration terminal.

Figure 3-2 DB9-to-RJ45 console cable
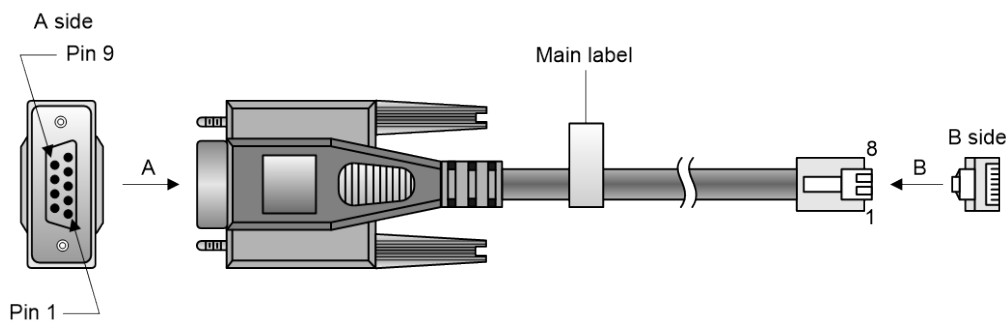
Table 3-2 DB9-to-RJ45 console cable signal pinout

RJ-45	Signal	DB-9	Signal
1	RTS	8	CTS
2	DTR	6	DSR
3	TXD	2	RXD
4	SG	5	SG
5	SG	5	SG
6	RXD	3	TXD
7	DSR	4	DTR
8	CTS	7	RTS

To connect the switch to a configuration terminal (for example, a PC) by using a DB9-to-RJ45 console cable:

1. Plug the DB-9 female connector of the DB9-to-RJ45 console cable to the serial port on the PC.
2. Connect the RJ-45 connector to the serial console port on the switch.

Connecting a USB-to-RJ45 console cable

> ⓘ **IMPORTANT:**
>
> - To use a USB-to-RJ45 console cable to connect the switch to a configuration terminal, first download and install the USB-to-RJ45 console driver on the configuration terminal and then connect the USB-to-RJ45 console cable to the configuration terminal.
> - If you have connected a USB-to-RJ45 console cable to the configuration terminal before installing the driver, remove and reconnect the USB-to-RJ45 console cable to the configuration terminal after driver installation.

Figure 3-3 USB-to-RJ45 console cable
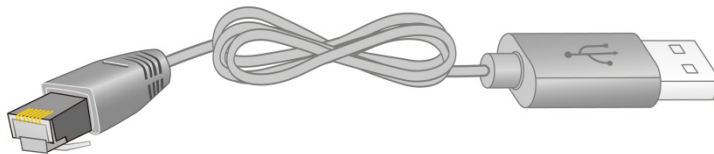
The following installs the driver on the Windows system. To install the driver on other operating systems, see the installation guide in the driver compression package named by using the corresponding operating system.

To connect the switch to a configuration terminal by using a USB-to-RJ45 console cable:

1. Click the following link, or copy it to the address bar on your browser and download the USB-to-RJ45 console driver.

   http://www.h3c.com/en/home/USB_to_RJ45_Console/

2. View the TXT file **Read me** in the Windows folder to check whether the Windows system of the configuration terminal supports the driver.

3. If the Windows system supports the driver, install **PL23XX-M_LogoDriver_Setup_v200_20190815.exe**.

4. Click **Next** on the welcome page of the driver installation wizard.

Figure 3-4 Driver installation wizard
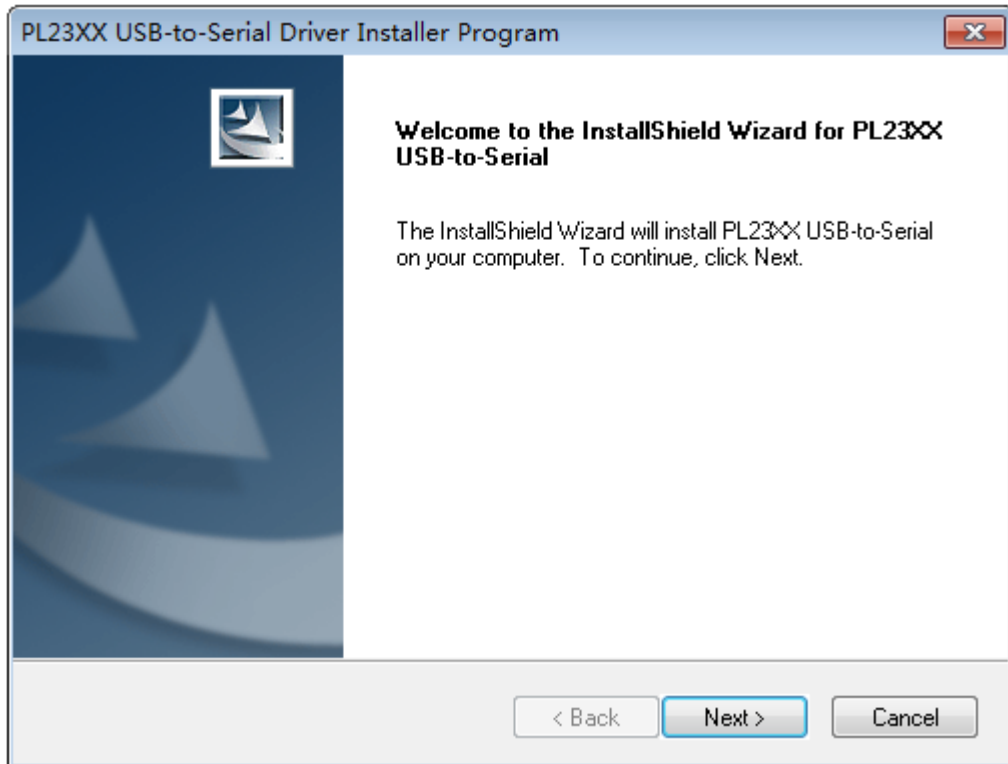
5. Click **Finish** after the drive installation is completed.

Figure 3-5 Finishing the driver installation
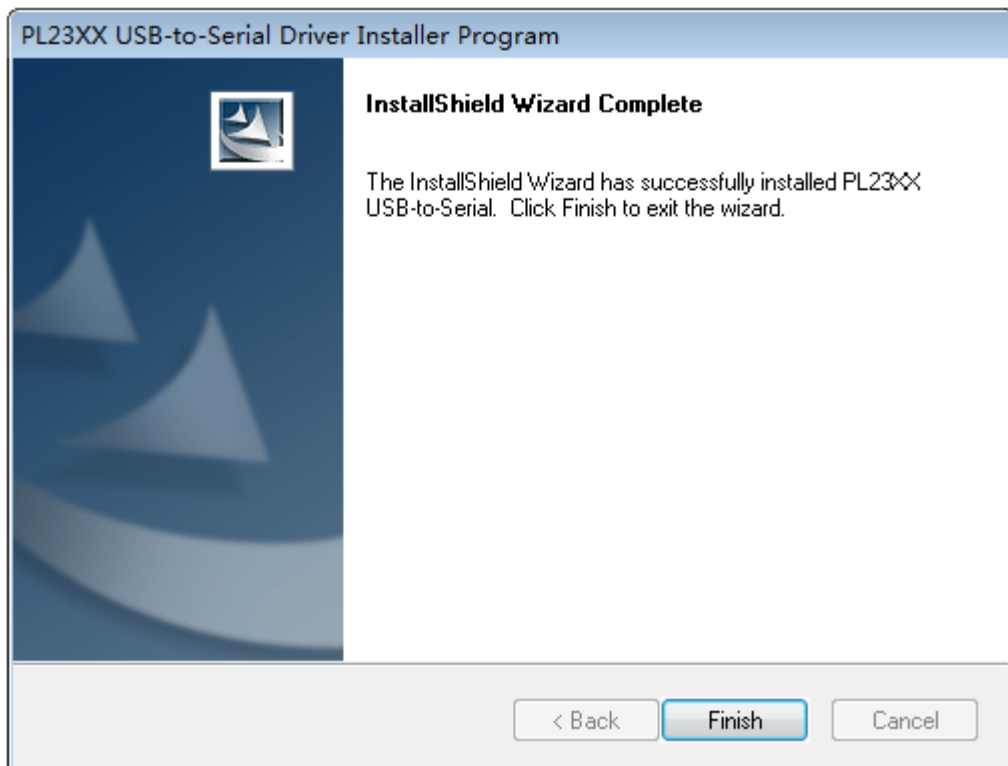
6. Connect the standard USB connector of the cable to the USB port of the configuration terminal.

7. Connect the RJ-45 connector of the cable to the console port of the switch.

Connecting a micro USB console cable

A micro USB console cable has a micro USB connector at one end to connect to the micro USB console port of the switch, and a standard USB connector at the other end to connect to the USB port on the configuration terminal.

Figure 3-6 Micro USB console cable
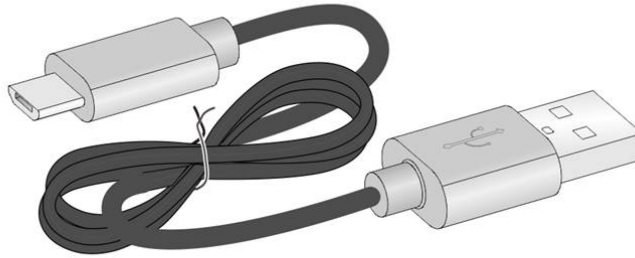
To connect the switch to a configuration terminal, for example a PC, by using a micro USB console cable:

1. Connect the standard USB connector to the USB port of the PC.

2. Connect the micro USB connector to the micro USB console port of the switch.

3. Click the following link, or copy it to the address bar on the browser to log in to download and install the USB console driver on the configuration terminal.

http://www.h3c.com/en/home/USB_Console/

4. Select a driver program according to the operating system you use:

   o **XR21V1410_XR21B1411_Windows_Ver1840_x86_Installer.EXE**—32-bit operating system.

   o **XR21V1410_XR21B1411_Windows_Ver1840_x64_Installer.EXE**—64-bit operating system.

5. Click **Next** on the installation wizard.

Figure 3-7 Device Driver Installation Wizard
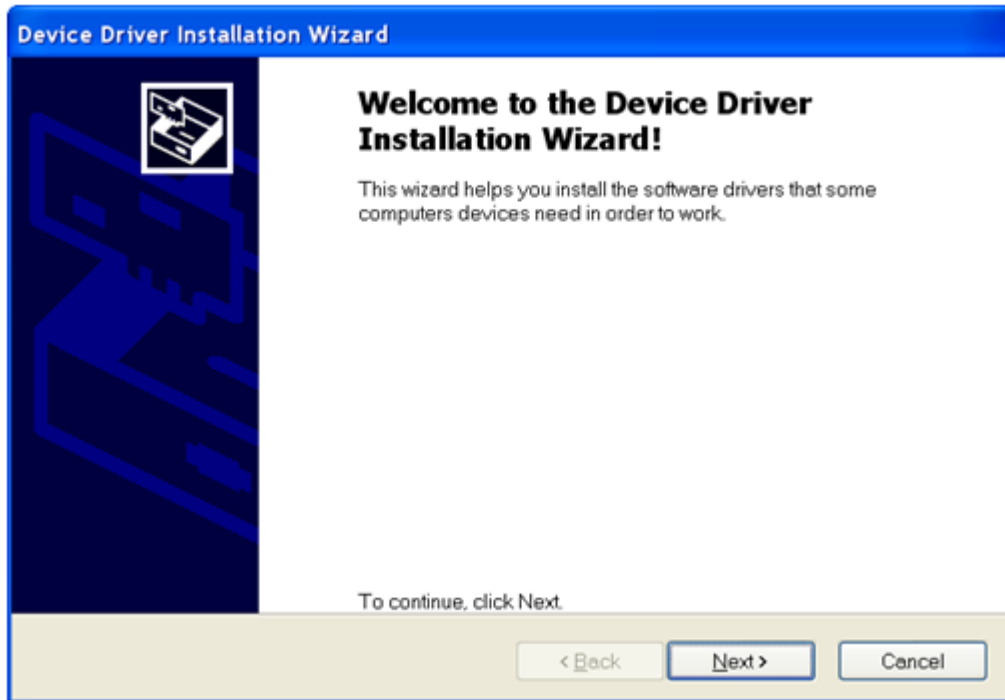
6.   Click **Continue Anyway**.

Figure 3-8 Software Installation
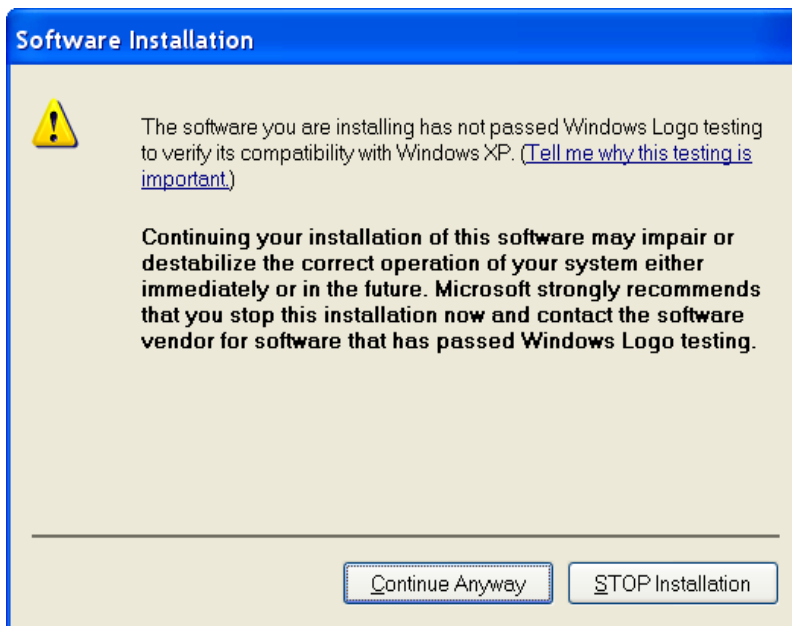
7.   Click **Finish**.

Figure 3-9 Completing the device driver installation wizard
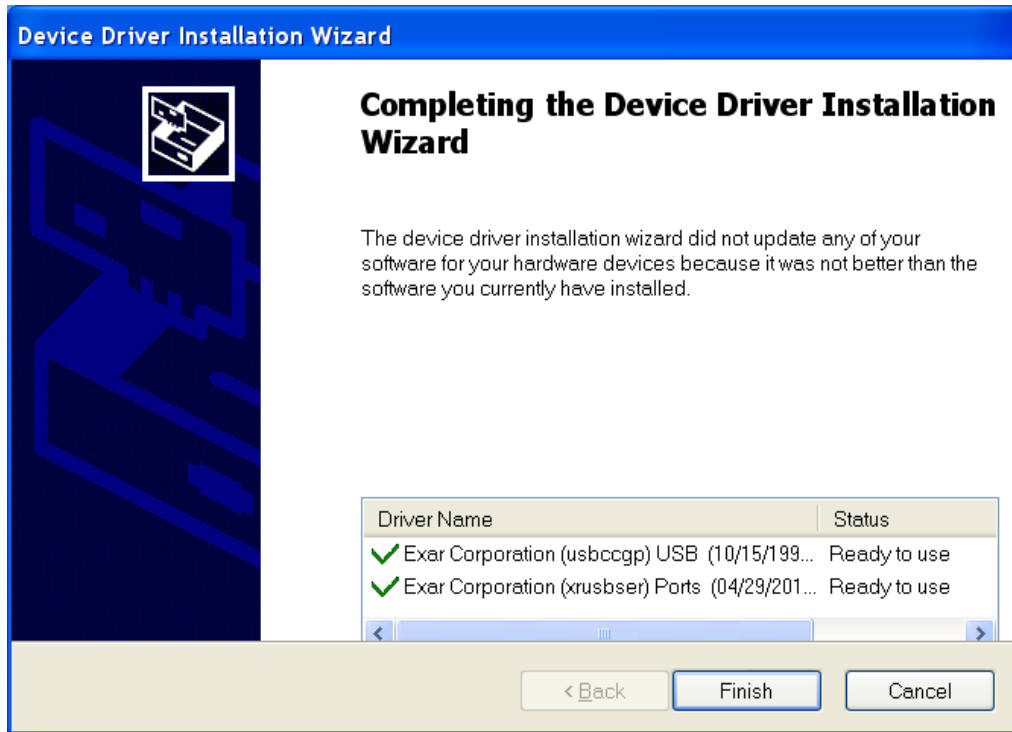
Setting terminal parameters

To configure and manage the switch through the console port, you must run a terminal emulator program, such as TeraTermPro, on your configuration terminal. You can use the emulator program to connect a network device, a Telnet site, or an SSH site. For more information about the terminal emulator programs, see the user guides for these programs.

Configure the terminal parameters as follows:

- **Bits per second**—9,600.
- **Data bits**—8.
- **Parity**—None.
- **Stop bits**—1.
- **Flow control**—None.

Powering on the switch

Before powering on the switch, verify that the following conditions are met:

- The power cord is correctly connected.
- The input power voltage meets the requirement of the switch.
- The console cable is correctly connected.
- The PC has started, and its serial port settings are consistent with the console port settings on the switch.

Power on the switch. During the startup process, you can access Boot ROM menus to perform tasks such as software upgrade and file management. The Boot ROM interface and menu options differ with software versions. For more information about Boot ROM menu options, see the software-matching release notes for the device.

After the startup completes, you can access the CLI to configure the switch.

For more information about the configuration commands and CLI, see the configuration guides and command references for the switch series.

4 Setting up an IRF fabric

You can use H3C IRF technology to connect and virtualize switches into a large virtual switch called an "IRF fabric" for flattened network topology, and high availability, scalability, and manageability.

Only switches of the same series support IRF connection.

IRF fabric setup flowchart

Figure 4-1 IRF fabric setup flowchart
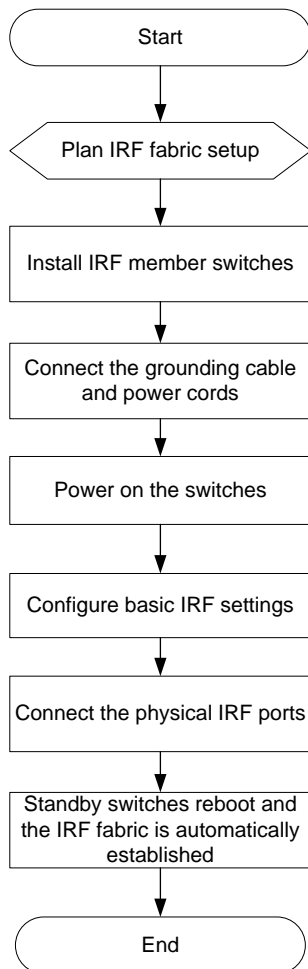
To set up an IRF fabric:

Step	Description
1. Plan IRF fabric setup	Plan the installation site and IRF fabric setup parameters: • Planning IRF fabric size and the installation site • Identifying the master switch and planning IRF member IDs • Planning IRF topology and connections • Identifying IRF physical ports on the member switches • Planning the cabling scheme

Step		Description
2.	Install IRF member switches	See "Installing the switch in a 19-inch rack" or "Mounting the switch on a workbench."
3.	Connect ground wires and power cords	See "Grounding the switch" and "Connecting the power cord."
4.	Power on the switches	N/A
5.	Configure basic IRF settings	See the IRF configuration guide or virtual technologies configuration guide for the switch series, depending on the software version.
6.	Connect the IRF physical ports	Connect IRF physical ports on switches. All switches except the master switch automatically reboot, and the IRF fabric is established.

Planning IRF fabric setup

This section describes issues that an IRF fabric setup plan must cover.

Planning IRF fabric size and the installation site

Choose switch models and identify the number of required IRF member switches, depending on the user density and upstream bandwidth requirements. The switching capacity of an IRF fabric equals the total switching capacities of all member switches.

Plan the installation site depending on your network solution, as follows:

- Place all IRF member switches in one rack for centralized high-density access.
- Distribute the IRF member switches in different racks to implement the ToR access solution for a data center.

NOTE:

For the maximum IRF member devices supported by the switch, see the release notes that come with the switch.

Identifying the master switch and planning IRF member IDs

Determine which switch you want to use as the master for managing all member switches in the IRF fabric.

An IRF fabric has only one master switch. You configure and manage all member switches in the IRF fabric at the CLI of the master switch. IRF member switches automatically elect a master.

You can affect the election result by assigning a high member priority to the intended master switch. For more information about master election, see the IRF configuration guide or virtual technologies configuration guide for the switch series, depending on the software version.

Prepare an IRF member ID assignment scheme. An IRF fabric uses member IDs to uniquely identify and manage its members, and you must assign each IRF member switch a unique member ID.

Planning IRF topology and connections

You can create an IRF fabric in daisy chain topology or more reliable ring topology. In ring topology, the failure of one IRF link does not cause the IRF fabric to split as in daisy chain topology. Instead, the IRF fabric changes to a daisy chain topology without interrupting network services.

You connect the IRF member switches through IRF ports, the logical interfaces for the connections between IRF member switches. Each IRF member switch has two IRF ports: IRF-port 1 and IRF-port 2. To use an IRF port, you must bind a minimum of one physical port to it.

When connecting two neighboring IRF member switches, you must connect the physical ports of IRF-port 1 on one switch to the physical ports of IRF-port 2 on the other switch.

The switch can form an IRF fabric only with switches from the same switch series. For the physical ports that can be used for IRF connections on each switch model and the restrictions for using the ports, see Table 4-1. The IRF physical ports can set up IRF connections only when operating at their highest speeds. For example, a 10-GE port must operate at 10 Gbps. A GE port must operate at 1 Gbps.

Figure 4-2 and Figure 4-3 show the topologies of an IRF fabric made up of three S5130S-52S-HI switches. The IRF port connections in the two figures are for illustration only, and more connection methods are available.

Figure 4-2 IRF fabric in daisy chain topology
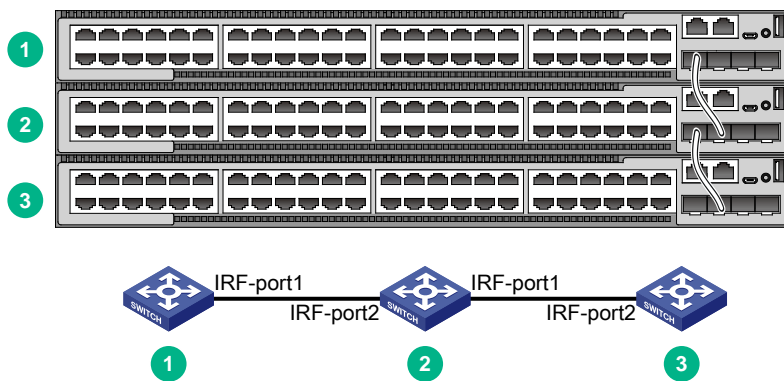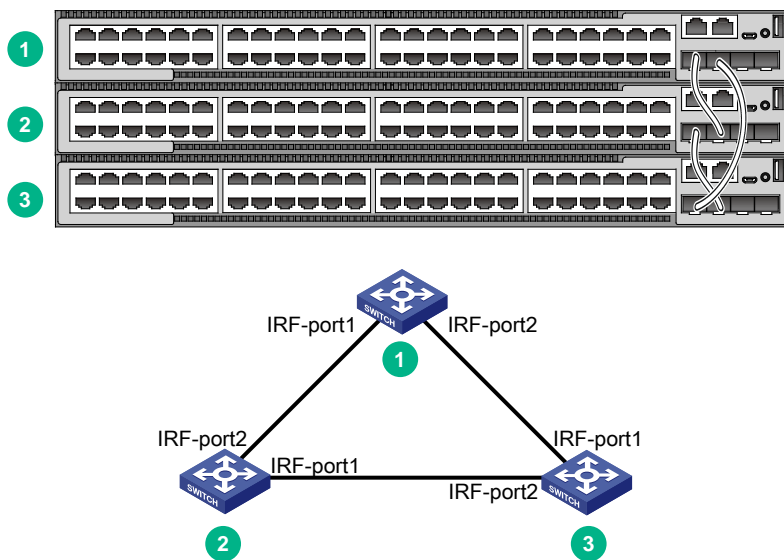

Figure 4-3 IRF fabric in ring topology

Identifying IRF physical ports on the member switches

Identify the IRF physical ports on the member switches according to your topology and connection scheme.

Table 4-1 shows the physical ports that can be used for IRF connection and the port use restrictions.

Table 4-1 IRF physical ports and use restrictions

Device model	Candidate IRF physical ports	Restrictions for using the ports for IRF connections
S5560S-28F-EI S5560S-28S-EI S5560S-28S-PWR-EI S5130S-28S-HI S5130S-28S-PWR-HI S5130S-28S-UPWR-HI S5560S-52F-EI S5560S-52S-EI S5560S-52S-PWR-EI S5130S-52S-HI S5130S-52S-PWR-HI	The following ports on the front panel: • Four SFP+ ports • 10/100/1000BASE-T autosensing ports (supported only in F630x and later) • SFP ports (supported only in F630x and later)	The port must operate at its highest speed. • **SFP+ port**—10 Gbps • **10/100/1000BASE-T autosensing port**—1 Gbps • **SFP port**—1 Gbps All physical ports to be bound to an IRF port must have the same data rate. For a 52-port switch model, the 52 ports are divided into two groups: ports 1 to 24, port 51, and port 52 in one group and ports 25 to 50 in the other group. To bind multiple ports to an IRF port, make sure the ports are in the same group. The ports in one group can be bound to different IRF ports.
S5560S-28P-EI S5560S-52P-EI	The following ports on the front panel: • 10/100/1000BASE-T autosensing Ethernet ports • SFP ports	The ports must operate at 1 Gbps. For a 52-port switch model, the 52 ports are divided into two groups: ports 1 to 24, port 51, and port 52 in one group and ports 25 to 50 in the other group. To bind multiple ports to an IRF port, make sure the ports are in the same group. The ports in one group can be bound to different IRF ports.
S5130S-28C-HI S5130S-28C-PWR-HI S5130S-52C-HI S5130S-52C-PWR-HI	The following ports on the front panel and the expansion module: • 10/100/1000BASE-T autosensing Ethernet ports • SFP ports • SFP+ ports	The port must operate at its highest speed. • **SFP+ port**—10 Gbps • **10/100/1000BASE-T autosensing port**—1 Gbps • **SFP port**—1 Gbps All physical ports to be bound to an IRF port must have the same data rate. For a 52-port switch model, the 52 ports are divided into two groups: ports 1 to 24, port 51, and port 52 in one group and ports 25 to 48 and ports on the expansion module in the other group. To bind multiple ports to an IRF port, make sure the ports are in the same group. The ports in one group can be bound to different IRF ports.

Planning the cabling scheme

Use the following cables to connect the IRF physical ports on the switches:

- **10/100/1000BASE-T autosensing Ethernet port**—Category 5 or above twisted-pair cable.
- **SFP port**—GE SFP fiber transceiver module and optical fiber, GE SFP copper transceiver module and twisted pair cable or GE SFP cable. For the available transceiver models and cables, see ports in *Hardware Information and Specifications*.

- **SFP+ port**—SFP+ fiber transceiver module and optical fiber or SFP+ cable. For the available transceiver models and cables, see ports in *Hardware Information and Specifications*.

If the IRF member switches are far away from one another, use SFP/SFP+ transceiver modules and optical fibers. If the IRF member switches are all in one equipment room, use twisted pair cables or SFP/SFP+ cables.

As a best practice, use ring topology to connect the switches. The following describes cabling schemes in ring topology by using SFP+ cables and SFP+ transceiver modules and fibers to connect four switches.

Connecting the IRF member switches in one rack

Use SFP+ cables to connect the IRF member switches in a rack as shown in Figure 4-4. The switches in the ring topology (see Figure 4-5) are in the same order as connected in the rack.

Figure 4-4 Connecting the switches in one rack

Figure 4-5 IRF fabric topology
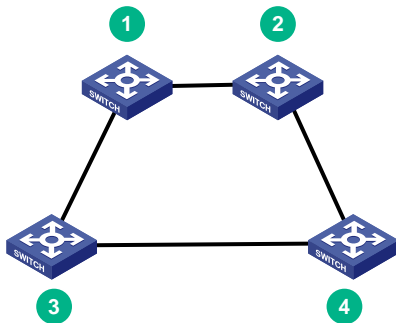
Connecting the IRF member switches in a ToR solution

You can install IRF member switches in different racks side by side to deploy a top of rack (ToR) solution.

Figure 4-6 shows an example for connecting 4 top of rack IRF member switches by using SFP+ transceiver modules and optical fibers. The topology is the same as Figure 4-5.

Figure 4-6 ToR cabling
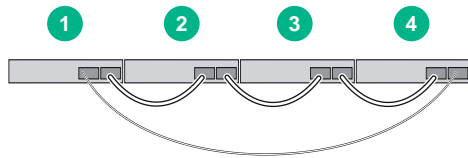
Configuring basic IRF settings

After you install the IRF member switches, power on the switches, and log in to each IRF member switch (see the fundamentals configuration guide for the switch series) to configure their member IDs, member priorities, and IRF port bindings.

Follow these guidelines when you configure the switches:

- Assign the master switch higher member priority than any other switch.

- Bind physical ports to IRF port 1 on one switch and to IRF port 2 on the other switch. You perform IRF port binding before or after connecting IRF physical ports depending on the software release.

- Execute the **display irf configuration** command to verify the basic IRF settings.

For more information about configuring basic IRF settings, see the IRF configuration guide or virtual technologies configuration guide for the switch series, depending on the software version.

Connecting the IRF physical ports

Use twisted pair cables, SFP/SFP+ cables, or SFP/SFP+ transceiver modules and fibers to connect the IRF member switches as planned.

Wear an ESD wrist strap when you connect IRF physical ports. For how to connect SFP/SFP+ cables or SFP/SFP+ transceiver modules and fibers, see *H3C SFP/SFP+/XFP/SFP28 Transceiver Modules and Network Cables Installation Guide*.

Verifying the IRF fabric setup

To verify the basic functionality of the IRF fabric after you finish configuring basic IRF settings and connecting IRF ports:

1. Log in to the IRF fabric through the console port of any member switch.
2. Create a Layer 3 interface, assign it an IP address, and make sure the IRF fabric and the remote network management station can reach each other.
3. Use Telnet, web, or SNMP to access the IRF fabric from the network management station. (See the fundamentals configuration guide for the switch series.)
4. Verify that you can manage all member switches as if they were one node.
5. Display the running status of the IRF fabric by using the commands in Table 4-2.

Table 4-2 Displaying and maintaining IRF configuration and running status

Task	Command
Display information about the IRF fabric.	**display irf**
Display all members' IRF configurations that take effect at a reboot.	**display irf configuration**
Display IRF fabric topology information.	**display irf topology**

NOTE:

To avoid IP address collision and network problems, configure a minimum of one multi-active detection (MAD) mechanism to detect the presence of multiple identical IRF fabrics and handle collisions. For more information about MAD detection, see the IRF configuration guide or virtual technologies configuration guide for the switch series, depending on the software version.

5 Maintenance and troubleshooting

Power supply failure

Symptom

The power supply status LED on the front panel of the switch or the LEDs on the power supply indicate that the power supply is not operating correctly.

- To identify the operating status of a power supply on the non-PoE switches of the S5560S-EI or S5130S-HI series, observe the PWR LED on the front panel of the switch. For descriptions about the PWR LEDs, see LEDs in *Hardware Information and Specifications*.

- To identify the operating status of a power supply on the PoE switches of the S5560S-EI or S5130S-HI series, observe the LEDs on the power supply and the PWR LED on the front panel of the switch. For more information about the LEDs on a power supply, see *H3C PSR180-56A Power supply User Manual*, *H3C PSR360-56A Power supply User Manual, H3C PSR560-56D Power supply User Manual, H3C PSR720-56A Power supply User Manual*, or *H3C PSR1110-56A Power supply User Manual*.

Solution

To resolve the issue:

1. Verify that the power cord is correctly connected.
2. Verify that the power source meets the requirement.
3. Verify that the operating temperature of the switch is in an acceptable range and the power supply has good ventilation.
4. If the issue persists, contact H3C Support.

   To replace a power supply, see "Installing and removing a ."

Fan tray failure

Symptom

The system status LED indicates that the fan tray is not operating correctly.

Solution

The switch uses fixed fan trays. If a fan tray issue occurs, contact H3C Support.

Configuration terminal display issues

If the configuration environment setup is correct, the configuration terminal displays booting information when the switch is powered on. If the setup is incorrect, the configuration terminal displays nothing or garbled text.

No display

Symptom

The PC displays nothing when the switch is powered on.

Solution

To resolve the issue:

1. Verify that the power supply is supplying power to the switch.
2. Verify that the console cable is correctly connected.
3. Verify that the console cable does not have any problems and the PC settings are correct.
4. If the issue persists, contact H3C Support.

Garbled display

Symptom

The display on the PC is garbled.

Solution

To resolve the issue:

1. Verify that the following settings are configured for the terminal:
   o **Baud rate**—9,600.
   o **Data bits**—8.
   o **Stop bits**—1.
   o **Parity**—None.
   o **Flow control**—None.
2. If the issue persists, contact H3C Support.

Contents

1 Product models and technical specifications

Product models

This document is applicable to the S5560S-EI switch series and the S5130S-HI switch series. Table1-1 describes models of the S5560S-EI switch series and the S5130S-HI switch series.

Table1-1 Switch models

Switch model		Product code
S5560S-EI switch series	S5560S-28F-EI	LS-S5560S-28F-EI LS-S5560S-28F-EI-GL
	S5560S-52F-EI	LS-S5560S-52F-EI LS-S5560S-52F-EI-GL
	S5560S-28P-EI	LS-S5560S-28P-EI LS-S5560S-28P-EI-GL
	S5560S-52P-EI	LS-S5560S-52P-EI LS-S5560S-52P-EI-GL
	S5560S-28S-EI	LS-S5560S-28S-EI LS-S5560S-28S-EI-GL
	S5560S-52S-EI	LS-S5560S-52S-EI LS-S5560S-52S-EI-GL
	S5560S-28S-PWR-EI	LS-S5560S-28S-PWR-EI LS-S5560S-28S-PWR-EI-GL
	S5560S-52S-PWR-EI	LS-S5560S-52S-PWR-EI LS-S5560S-52S-PWR-EI-GL
S5130S-HI switch series	S5130S-28S-HI	LS-S5130S-28S-HI LS-S5130S-28S-HI-GL
	S5130S-52S-HI	LS-S5130S-52S-HI LS-S5130S-52S-HI-GL
	S5130S-28C-HI	LS-S5130S-28C-HI LS-S5130S-28C-HI-GL
	S5130S-52C-HI	LS-S5130S-52C-HI LS-S5130S-52C-HI-GL
	S5130S-28S-PWR-HI	LS-5130S-28S-PWR-EI LS-5130S-28S-PWR-EI-GL
	S5130S-28S-UPWR-HI	LS-5130S-28S-UPWR-HI
	S5130S-52S-PWR-HI	LS-5130S-52S-PWR-EI LS-5130S-52S-PWR-EI-GL
	S5130S-28C-PWR-HI	LS-5130S-28C-PWR-EI

Switch model		Product code
		LS-5130S-28C-PWR-EI-GL
	S5130S-52C-PWR-HI	LS-5130S-52C-PWR-EI
		LS-5130S-52C-PWR-EI-GL

Technical specifications

S5560S-EI series

Table1-2 Technical specifications for non-PoE switches of the S5560S-EI series (1)

Item	S5560S-28P-EI	S5560S-52P-EI	S5560S-28S-EI	S5560S-52S-EI
Dimensions (H × W × D)	43.6 × 440 × 360 mm (1.72 × 17.32 × 14.17 in)			
Weight	≤ 8 kg (17.64 lb)	≤ 8.5 kg (18.74 lb)	≤ 8 kg (17.64 lb)	≤ 8.5 kg (18.74 lb)
Console port	• 1 × Micro USB console port • 1 × serial console port Only the Micro USB console port is available when you connect both ports.			
USB port	1	1	1	1
Management Ethernet port	1	1	1	1
10/100/1000 BASE-T autosensing Ethernet port	24 (The rightmost eight ports and their corresponding SFP ports form combo interfaces.)	48	24 (The rightmost eight ports and their corresponding SFP ports form combo interfaces.)	48
SFP port	12 (The leftmost eight ports and their corresponding 10/100/1000BASE-T autosensing Ethernet ports form combo interfaces.)	4	8 (Each and its corresponding 10/100/1000BASE-T autosensing Ethernet port form a combo interface.)	N/A
SFP+ port	N/A	N/A	4	4
Power supply slot	2, on the rear panel			

Input voltage	PSR75-12A:
	 • Rated voltage:
	  ○ 100 VAC to 240 VAC @ 50 or 60 Hz
	  ○ 240 VDC
	 • Max voltage:
	  ○ 90 VAC to 290 VAC @ 47 to 63 Hz
	  ○ 180 VDC to 320 VDC
	 PSR150-A1:
	 • Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz
	 • Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz
	 PSR150-D1:
	 • Rated voltage: –48 VDC to –60 VDC			

Item	S5560S-28P-EI	S5560S-52P-EI	S5560S-28S-EI	S5560S-52S-EI
	• Max voltage: –36 VDC to –72 VDC DC power source for the PSR150-D1 power supply: –48 VDC power source in the equipment room or an RPS (H3C RPS800-A or RPS1600-A)			
Minimum power consumption	• Single PSR75-12A input: 12 W • Single PSR150-A1 input: 15 W • Single PSR150-D1 input: 15 W • Dual PSR75-12A inputs: 13 W • Dual PSR150-A1 inputs: 20 W • Dual PSR150-D1 inputs: 21 W	• Single PSR75-12A input: 21 W • Single PSR150-A1 input: 24 W • Single PSR150-D1 input: 25 W • Dual PSR75-12A inputs: 23 W • Dual PSR150-A1 inputs: 29 W • Dual PSR150-D1 inputs: 30 W	• Single PSR75-12A input: 12 W • Single PSR150-A1 input: 16 W • Single PSR150-D1 input: 15 W • Dual PSR75-12A inputs: 14 W • Dual PSR150-A1 inputs: 22 W • Dual PSR150-D1 inputs: 21 W	• Single PSR75-12A input: 21 W • Single PSR150-A1 input: 25 W • Single PSR150-D1 input: 26 W • Dual PSR75-12A inputs: 24 W • Dual PSR150-A1 inputs: 30 W • Dual PSR150-D1 inputs: 32 W
Maximum power consumption	• Single PSR75-12A input: 29 W • Single PSR150-A1 input: 32 W • Single PSR150-D1 input: 35 W • Dual PSR75-12A inputs: 32 W • Dual PSR150-A1 inputs: 39 W • Dual PSR150-D1 inputs: 44 W	• Single PSR75-12A input: 44 W • Single PSR150-A1 input: 46 W • Single PSR150-D1 input: 57 W • Dual PSR75-12A inputs: 46 W • Dual PSR150-A1 inputs: 52 W • Dual PSR150-D1 inputs: 59 W	• Single PSR75-12A input: 33 W • Single PSR150-A1 input: 35 W • Single PSR150-D1 input: 40 W • Dual PSR75-12A inputs: 36 W • Dual PSR150-A1 inputs: 42 W • Dual PSR150-D1 inputs: 47 W	• Single PSR75-12A input: 47 W • Single PSR150-A1 input: 49 W • Single PSR150-D1 input: 58 W • Dual PSR75-12A inputs: 49 W • Dual PSR150-A1 inputs: 56 W • Dual PSR150-D1 inputs: 60 W
Chassis leakage current compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1			
Melting current of power supply fuse	• PSR75-12A: 3.15 A, 250 V • PSR150-A1: 6.3 A, 250 V • PSR150-D1: 8 A, 250 V			
Operating temperature	–5°C to +45°C (23°F to 113°F)			
Relative humidity	5% to 95%, noncondensing			
Fire resistance compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1			

Table1-3 Technical specifications for non-PoE switches of the S5560S-EI series (2)

Item	S5560S-28F-EI	S5560S-52F-EI
Dimensions (H × W × D)	43.6 × 440 × 360 mm (1.72 × 17.32 × 14.17 in)	
Weight	≤ 6 kg (13.23 lb)	≤ 6.5 kg (14.33 lb)
Console port	1 × Micro USB console port 1 × serial console port Only the Micro USB console port is available when you connect both ports.	
Management Ethernet port	1	N/A
10/100/1000BASE-T autosensing Ethernet port	8 (Each and its corresponding SFP port form a combo interface.)	2 (Each and its corresponding SFP port form a combo interface.)
SFP port	24 (The rightmost eight SFP ports and their corresponding 10/100/1000BASE-T autosensing Ethernet ports form combo interfaces.)	48 (The rightmost two SFP ports and their corresponding 10/100/1000BASE-T autosensing Ethernet ports form combo interfaces.)
SFP+ port	4	
Power supply slot	2, on the rear panel	

Input voltage	PSR75-12A:
	• Rated voltage:
	  ○ 100 VAC to 240 VAC @ 50 or 60 Hz
	  ○ 240 VDC
	• Max voltage:
	  ○ 90 VAC to 290 VAC @ 47 to 63 Hz
	  ○ 180 VDC to 320 VDC
	PSR150-A1:
	• Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz
	• Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz
	PSR150-D1:
	You can use a –48 VDC power source in the equipment room or an H3C RPS (RPS800-A or RPS1600-A)
	• Rated voltage: –48 VDC to –60 VDC
	• Max voltage: –36 VDC to –72 VDC	

Minimum power consumption	• Single PSR75-12A input: 15 W • Single PSR150-A1 input: 18 W • Single PSR150-D1 input: 18 W • Dual PSR75-12A inputs: 17 W • Dual PSR150-A1 inputs: 23 W • Dual PSR150-D1 inputs: 22 W	• Single PSR75-12A input: 26 W • Single PSR150-A1 input: 27 W • Single PSR150-D1 input: 27 W • Dual PSR75-12A inputs: 29 W • Dual PSR150-A1 inputs: 32 W • Dual PSR150-D1 inputs: 33 W
Maximum power consumption	• Single PSR75-12A input: 45 W • Single PSR150-A1 input: 48 W • Single PSR150-D1 input: 51 W • Dual PSR75-12A inputs: 48 W • Dual PSR150-A1 inputs: 55 W • Dual PSR150-D1 inputs: 57 W	• Single PSR75-12A input: 69 W • Single PSR150-A1 input: 74 W • Single PSR150-D1 input: 84 W • Dual PSR75-12A inputs: 72 W • Dual PSR150-A1 inputs: 95 W • Dual PSR150-D1 inputs: 95 W
Chassis leakage current compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1	

Item	S5560S-28F-EI	S5560S-52F-EI
Melting current of power supply fuse	• PSR75-12A: 3.15 A, 250 V • PSR150-A1: 6.3 A, 250 V • PSR150-D1: 8 A, 250 V	
Operating temperature	−5°C to +45°C (23°F to 113°F)	
Relative humidity	5% to 95%, noncondensing	
Fire resistance compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1	

Table1-4 Technical specifications for PoE switches of the S5560S-EI series

Item	S5560S-28S-PWR-EI	S5560S-52S-PWR-EI
Dimensions (H × W × D)	43.6 × 440 × 460 mm (1.72 × 17.32 × 18.11 in)	
Weight	≤ 8.5 kg (18.74 lb)	≤ 9.5 kg (20.94 lb)
Console port	• 1 × Micro USB console port • 1 × serial console port Only the Micro USB console port is available when you connect both ports.	
USB port	1	1
Management Ethernet port	1	1
10/100/1000 BASE-T autosensing Ethernet port	24 (The rightmost four ports and their corresponding SFP ports form combo interfaces.)	48
SFP port	4 (The four ports and their corresponding 10/100/1000BASE-T autosensing Ethernet ports form combo interfaces.)	N/A
SFP+ port	4	
Power supply slot	2, on the rear panel	

Input voltage	PSR180-56A:
	• Rated voltage:
	  ○ 100 VAC to 240 VAC @ 50 or 60 Hz
	  ○ 240 VDC
	• Max voltage:
	  ○ 85 VAC to 290 VAC @ 47 to 63 Hz
	  ○ 180 VDC to 320 VDC
	PSR360-56A/PSR720-56A:
	• Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz
	• Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz
	PSR1110-56A:
	• Rated voltage: 115 VAC to 240 VAC @ 50 or 60 Hz
	• Max voltage: 102.5 VAC to 264 VAC @ 47 to 63 Hz
	PSR560-56D:
	• Rated voltage: −48 VDC to −60 VDC
	• Max voltage: −36 VDC to −72 VDC
	DC power source: −48 VDC power source in the equipment room or an RPS (H3C	

Item	S5560S-28S-PWR-EI	S5560S-52S-PWR-EI
	RPS1600-A)	
PoE power capacity	Depends on the power supply configurations. For more information, see Table1-5.	
Power consumption (static)	27 W	37 W
Power consumption (max)	920 W	1854 W
Chassis leakage current compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1	

Melting current of power supply fuse	• PSR180-56A:
	  ○ AC: 6.3 A, 500 V
	  ○ DC: 6.3 A, 400 V
	• PSR360-56A: 6.3 A, 250 V
	• PSR560-56D: 30 A, 75 V
	• PSR720-56A/PSR1110-56A: 15 A, 250 V	

Operating temperature	–5°C to +45°C (23°F to 113°F)	
Relative humidity	5% to 95%, noncondensing	
Fire resistance compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1	

Table1-5 PoE power capacity of the S5560S-28S-PWR-EI and S5560S-52S-PWR-EI switches

Power supply configuration	S5560S-28S-PWR-EI		S5560S-52S-PWR-EI	
	Total PoE power capacity	Max PoE power capacity per port	Total PoE power capacity	Max PoE power capacity per port
2 × PSR1110-56A	810 W	30 W	1680 W	30 W
1 × PSR1110-56A and 1 × PSR720-56A	810 W	30 W	1680 W	30 W
1 × PSR1110-56A and 1 × PSR560-56D	810 W	30 W	1560 W	30 W
1 × PSR1110-56A and 1 × PSR360-56A	810 W	30 W	1320 W	30 W
2 × PSR720-56A	810 W	30 W	1320 W	30 W
1 × PSR720-56A and 1 × PSR560-56D	810 W	30 W	1140 W	30 W
2 × PSR560-56D	810 W	30 W	900 W	30 W

Power supply configuration	S5560S-28S-PWR-EI		S5560S-52S-PWR-EI	
	Total PoE power capacity	Max PoE power capacity per port	Total PoE power capacity	Max PoE power capacity per port
1 × PSR720-56A and 1 × PSR360-56A	810 W	30 W	900 W	30 W
1 × PSR1110-56A	810 W	30 W	900 W	30 W
1 × PSR560-56D and 1 × PSR360-56A	810 W	30 W	810 W	30 W
1 × PSR720-56A	630 W	30 W	630 W	30 W
2 × PSR360-56A	630 W	30 W	630 W	30 W
1 × PSR560-56D	480 W	30 W	480 W	30 W
1 × PSR360-56A	280 W	30 W	280 W	30 W
2 × PSR180-56A	185 W	30 W	185 W	30 W
1 × PSR180-56A	90 W	30 W	90 W	30 W

S5130S-HI series

Table1-6 Technical specifications for non-PoE switch models of the S5130S-HI series

Item	S5130S-28S-HI	S5130S-52S-HI	S5130S-28C-HI	S5130S-52C-HI
Dimensions (H × W × D)	43.6 × 440 × 360 mm (1.72 × 17.32 × 14.17 in)			
Weight	≤ 6 kg (13.23 lb)	≤ 6.5 kg (14.33 lb)	≤ 5 kg (11.02 lb)	≤ 5 kg (11.02 lb)
Console port	• 1 × Micro USB console port • 1 × serial console port • Only the Micro USB console port is available when you connect both ports.			
USB port	1	1	1	1
Management Ethernet port	1	1	1	1
10/100/1000BASE-T autosensing Ethernet port	24 (The rightmost eight 10/100/1000BASE-T autosensing Ethernet ports and their corresponding SFP ports form combo interfaces.)	48	24 (The rightmost eight 10/100/1000BASE-T autosensing Ethernet ports and their corresponding SFP ports form combo interfaces.)	48 (The rightmost two 10/100/1000BASE-T autosensing Ethernet ports and their corresponding SFP ports form combo interfaces.)
SFP port	8 (Each and its corresponding 10/100/1000BASE-T autosensing Ethernet port form a combo interface.)	N/A	8 (Each and its corresponding 10/100/1000BASE-T autosensing Ethernet port form a combo interface.)	2 (Each and its corresponding 10/100/1000BASE-T autosensing Ethernet port form a combo interface.)
SFP+ port	4	4	4	2

Item	S5130S-28S-HI	S5130S-52S-HI	S5130S-28C-HI	S5130S-52C-HI
Power supply slot	2, on the rear panel	2, on the rear panel	2, on the rear panel	2, on the rear panel
Expansion slot	N/A	N/A	1, on the rear panel	1, on the rear panel

Input voltage	PSR75-12A:
	• Rated voltage:
	  ○ 100 VAC to 240 VAC @ 50 or 60 Hz
	  ○ 240 VDC
	• Max voltage:
	  ○ 90 VAC to 290 VAC @ 47 to 63 Hz
	  ○ 180 VDC to 320 VDC
	PSR150-A1:
	• Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz
	• Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz
	PSR150-D1:
	• Rated voltage: –48 VDC to –60 VDC
	• Max voltage: –36 VDC to –72 VDC
	DC power source for the PSR150-D1 power supply: –48 VDC power source in the equipment room or an RPS (H3C RPS800-A or RPS1600-A)
			PSR75-12A:
			• Rated voltage:
			  ○ 100 VAC to 240 VAC @ 50 or 60 Hz
			  ○ 240 VDC
			• Max voltage:
			  ○ 90 VAC to 290 VAC @ 47 to 63 Hz
			  ○ 180 VDC to 320 VDC
			PSR150-D1:
			• Rated voltage: –48 VDC to –60 VDC
			• Max voltage: –36 VDC to –72 VDC
			DC power source for the PSR150-D1 power supply: –48 VDC power source in the equipment room or an RPS (H3C RPS800-A or RPS1600-A)	

Minimum power consumption	• Single PSR75-12A input: 15 W • Single PSR150-A1 input: 18 W • Single PSR150-D1 input: 18 W • Dual PSR75-12A inputs: 17 W • Dual PSR150-A1 inputs: 20 W • Dual PSR150-D1 inputs: 23 W	• Single PSR75-12A input: 24 W • Single PSR150-A1 input: 25 W • Single PSR150-D1 input: 25 W • Dual PSR75-12A inputs: 27 W • Dual PSR150-A1 inputs: 28 W • Dual PSR150-D1 inputs: 30 W	• Single PSR75-12A input: 12 W • Single PSR150-D1 input: 15 W • Dual PSR75-12A inputs: 14 W • Dual PSR150-D1 inputs: 21 W	• Single PSR75-12A input: 21 W • Single PSR150-D1 input: 26 W • Dual PSR75-12A inputs: 23 W • Dual PSR150-D1 inputs: 31 W
Maximum power consumption	• Single PSR75-12A input: 32 W • Single PSR150-A1 input: 34 W • Single PSR150-D1 input: 36 W • Dual PSR75-12A inputs: 35 W • Dual	• Single PSR75-12A input: 51 W • Single PSR150-A1 input: 52 W • Single PSR150-D1 input: 53 W • Dual PSR75-12A inputs: 54 W • Dual	• Single PSR75-12A input: 31 W • Single PSR150-D1 input: 33 W • Dual PSR75-12A inputs: 33 W • Dual PSR150-D1 inputs: 38 W	• Single PSR75-12A input: 50 W • Single PSR150-D1 input: 53 W • Dual PSR75-12A inputs: 52 W • Dual PSR150-D1 inputs: 57 W

Item	S5130S-28S-HI	S5130S-52S-HI	S5130S-28C-HI	S5130S-52C-HI
	PSR150-A1 inputs: 39 W • Dual PSR150-D1 inputs: 44 W	PSR150-A1 inputs: 55 W • Dual PSR150-D1 inputs: 57 W		
Chassis leakage current compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1			
Melting current of power supply fuse	• PSR75-12A: 3.15 A, 250 V • PSR150-A1: 6.3 A, 250 V • PSR150-D1: 8 A, 250 V		• PSR75-12A: 3.15 A, 250 V • PSR150-D1: 8 A, 250 V	
Operating temperature	−5°C to +45°C (23°F to 113°F)			
Relative humidity	5% to 95%, noncondensing			
Fire resistance compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1			

Table1-7 Technical specifications for PoE switch models of the S5130S-HI series

Item	S5130S-28S-UPWR-HI	S5130S-28S-PWR-HI	S5130S-52S-PWR-HI	S5130S-28C-PWR-HI	S5130S-52C-PWR-HI
Dimensions (H × W × D)	43.6 × 440 × 460 mm (1.72 × 17.32 × 18.11 in)				
Weight	≤ 8.5 kg (18.74 lb)	≤ 8.5 kg (18.74 lb)	≤ 9.5 kg (20.94 lb)	≤ 9 kg (19.84 lb)	≤ 9.5 kg (20.94 lb)
Console port	• 1 × Micro USB console port • 1 × serial console port • Only the Micro USB console port is available when you connect both ports.				
USB port	1	1	1	1	1
Management Ethernet port	1	1	1	1	1
10/100/1000BASE-T autosensing Ethernet port	24	24 (The rightmost four 10/100/1000BASE-T autosensing Ethernet ports and their corresponding SFP ports form combo interfaces.)	48	24 (The rightmost four 10/100/1000BASE-T autosensing Ethernet ports and their corresponding SFP ports form combo interfaces.)	24 (The rightmost two 10/100/1000BASE-T autosensing Ethernet ports and their corresponding SFP ports form combo interfaces.)
SFP port	N/A	4 (Each and its corresponding 10/100/1000BASE-T port form a	N/A	4 (Each and its corresponding 10/100/1000BASE-T port form a	2 (Each and its corresponding 10/100/1000B

Item	S5130S-28S-UPWR-HI	S5130S-28S-PWR-HI	S5130S-52S-PWR-HI	S5130S-28C-PWR-HI	S5130S-52C-PWR-HI
		combo interface.)		combo interface.)	ASE-T port form a combo interface.)
SFP+ port	4	4	4	4	2
Power supply slot	2, on the rear panel	2, on the rear panel	2, on the rear panel	2, on the rear panel	2, on the rear panel
Expansion slot	N/A	N/A	N/A	1, on the rear panel	1, on the rear panel
Input voltage	- PSR180-56A (not supported on the S5130S-28S-UPWR-HI switch): - Rated voltage range: 100 VAC to 240 VAC @ 50 Hz or 60 Hz or 240 VDC - Max voltage range: 85 VAC to 290 VAC @ 47 Hz to 63 Hz or 180 VDC to 320 VDC - PSR360-56A/PSR720-56A: - Rated voltage range: 100 VAC to 240 VAC @ 50 Hz or 60 Hz - Max voltage range: 90 VAC to 264 VAC @ 47 Hz to 63 Hz - PSR1110-56A: - Rated voltage range: 115 VAC to 240 VAC @ 50 Hz or 60 Hz - Max voltage range: 102.5 VAC to 264 VAC @ 47 Hz to 63 Hz - PSR560-56D: - Rated voltage range: –48 VDC to –60 VDC - Max voltage range: –36 VDC to –72 VDC - For PSR560-56D DC input, you can use the –48 VDC power source at the installation site or an H3C RPS1600-A RPS.				
PoE power capacity	Depends on the power supply configurations. For more information, see Table1-8.				
Minimum power consumption	30 W	27 W	37 W	38 W	47 W
Maximum power consumption (including PoE power consumption)	2490 W	920 W	1854 W	965 W	1980 W
Chassis leakage current compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1				
Melting current of power supply fuse	- PSR180-56A (not supported on the S5130S-28S-UPWR-HI switch): - AC: 6.3 A, 500 V - DC: 6.3 A, 400 V - PSR360-56A: 6.3 A, 250 V - PSR560-56D: 30 A, 75 V - PSR720-56A/PSR1110-56A: 15 A, 250 V				
Operating temperature	–5°C to +45°C (23°F to 113°F)				
Relative humidity	5% to 95%, noncondensing				

Item	S5130S-28S-UPWR-HI	S5130S-28S-PWR-HI	S5130S-52S-PWR-HI	S5130S-28C-PWR-HI	S5130S-52C-PWR-HI
Fire resistance compliance	UL 62368-1/EN 62368-1/IEC 62368-1/UL 60950-1/EN 60950-1/IEC 60950-1/GB4943.1				

Table1-8 PoE power capacity of the S5130S-28S-UPWR-HI

Power supply configuration	S5130S-28S-UPWR-HI	
	Total PoE power capacity	Max PoE power capacity per port
2 × PSR1110-56A	2160 W	90 W
1 × PSR1110-56A and 1 × PSR720-56A	1760 W	90 W
1 × PSR1110-56A and 1 × PSR560-56D	1600 W	90 W
1 × PSR1110-56A and 1 × PSR360-56A	1400 W	90 W
2 × PSR720-56A	1370 W	90 W
1 × PSR720-56A and 1 × PSR560-56D	1210 W	90 W
2 × PSR560-56D	1050 W	90 W
1 × PSR720-56A and 1 × PSR360-56A	1010 W	90 W
1 × PSR1110-56A	1040 W	90 W
1 × PSR560-56D and 1 × PSR360-56A	850 W	90 W
1 × PSR720-56A	650 W	90 W
2 × PSR360-56A	650 W	90 W
1 × PSR560-56D	490 W	90 W
1 × PSR360-56A	290 W	90 W
2 × PSR180-56A	N/A	N/A
1 × PSR180-56A	N/A	N/A

Table1-9 PoE power capacity of the S5130S-28S-PWR-HI and S5130S-52S-PWR-HI switches

Power supply configuration	S5130S-28S-PWR-HI		S5130S-52S-PWR-HI	
	Total PoE power capacity	Max PoE power capacity per port	Total PoE power capacity	Max PoE power capacity per port
2 × PSR1110-56A	810 W	30 W	1680 W	30 W
1 × PSR1110-56A and 1 × PSR720-56A	810 W	30 W	1680 W	30 W
1 × PSR1110-56A and 1 × PSR560-56D	810 W	30 W	1560 W	30 W
1 × PSR1110-56A and 1 × PSR360-56A	810 W	30 W	1320 W	30 W

Power supply configuration	S5130S-28S-PWR-HI		S5130S-52S-PWR-HI	
	Total PoE power capacity	Max PoE power capacity per port	Total PoE power capacity	Max PoE power capacity per port
2 × PSR720-56A	810 W	30 W	1320 W	30 W
1 × PSR720-56A and 1 × PSR560-56D	810 W	30 W	1140 W	30 W
2 × PSR560-56D	810 W	30 W	900 W	30 W
1 × PSR720-56A and 1 × PSR360-56A	810 W	30 W	900 W	30 W
1 × PSR1110-56A	810 W	30 W	900 W	30 W
1 × PSR560-56D and 1 × PSR360-56A	810 W	30 W	810 W	30 W
1 × PSR720-56A	600 W	30 W	600 W	30 W
2 × PSR360-56A	600 W	30 W	600 W	30 W
1 × PSR560-56D	480 W	30 W	480 W	30 W
1 × PSR360-56A	280 W	30 W	280 W	30 W
2 × PSR180-56A	185 W	30 W	185 W	30 W
1 × PSR180-56A	90 W	30 W	90 W	30 W

Table1-10 PoE power capacity of the S5130S-28C-PWR-HI and S5130S-52C-PWR-HI switches

Power supply configuration	S5130S-28C-PWR-HI		S5130S-52C-PWR-HI	
	Total PoE power capacity	Max PoE power capacity per port	Total PoE power capacity	Max PoE power capacity per port
2 × PSR1110-56A	810 W	30 W	1680 W	30 W
1 × PSR1110-56A and 1 × PSR720-56A	810 W	30 W	1680 W	30 W
1 × PSR1110-56A and 1 × PSR560-56D	810 W	30 W	1560 W	30 W
1 × PSR1110-56A and 1 × PSR360-56A	810 W	30 W	1320 W	30 W
2 × PSR720-56A	810 W	30 W	1320 W	30 W
1 × PSR720-56A and 1 × PSR560-56D	810 W	30 W	1140 W	30 W
2 × PSR560-56D	810 W	30 W	900 W	30 W
1 × PSR720-56A and 1 ×	810 W	30 W	900 W	30 W

Power supply configuration	S5130S-28C-PWR-HI		S5130S-52C-PWR-HI	
	Total PoE power capacity	Max PoE power capacity per port	Total PoE power capacity	Max PoE power capacity per port
PSR360-56A				
1 × PSR1110-56A	810 W	30 W	900 W	30 W
1 × PSR560-56D and 1 × PSR360-56A	810 W	30 W	810 W	30 W
1 × PSR720-56A	600 W	30 W	600 W	30 W
2 × PSR360-56A	600 W	30 W	600 W	30 W
1 × PSR560-56D	480 W	30 W	480 W	30 W
1 × PSR360-56A	280 W	30 W	280 W	30 W
2 × PSR180-56A	185 W	30 W	185 W	30 W
1 × PSR180-56A	90 W	30 W	90 W	30 W

2 Chassis views

S5560S-28F-EI

Figure2-1 Front panel
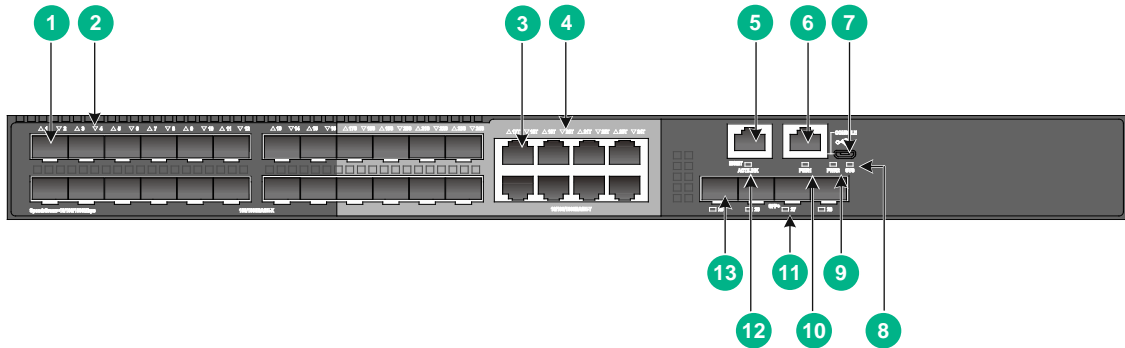
(1) SFP port	(2) SFP port LED
(3) 10/100/1000BASE-T autosensing Ethernet port	
(4) 10/100/1000BASE-T autosensing Ethernet port LED	
(5) Management Ethernet port	(6) Console port (CONSOLE)
(7) Micro USB console port	(8) System status LED (SYS)
(9) Power supply 2 status LED (PWR2)	(10) Power supply 1 status LED (PWR1)
(11) SFP+ port LED	(12) Management Ethernet port LED (ACT/LINK)
(13) SFP+ port	

Figure2-2 Rear panel
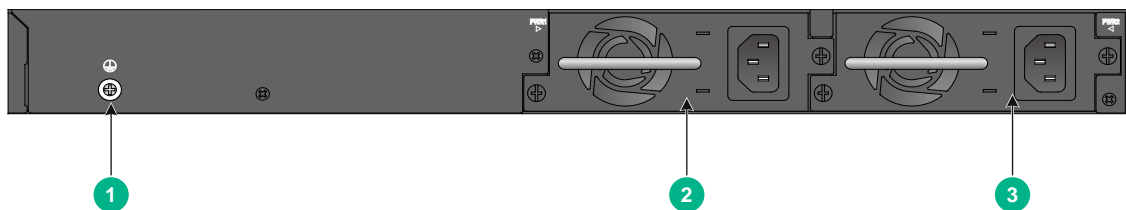
(1) Grounding screw	(2) Power supply 1 (PWR1)
(3) Power supply 2 (PWR2)	

The S5560S-28F-EI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR150-A1 AC power supplies are installed in the power supply slots.

S5560S-52F-EI

Figure2-3 Front panel

(1) SFP port	(2) SFP port LED
(3) 10/100/1000BASE-T autosensing Ethernet port	
(4) 10/100/1000BASE-T autosensing Ethernet port LED	
(5) Console port (CONSOLE)	(6) Micro USB console port
(7) System status LED (SYS)	(8) Power supply 2 status LED (PWR2)
(9) Power supply 1 status LED (PWR1)	(10) SFP+ port
(11) SFP+ port LED	

Figure2-4 Rear panel
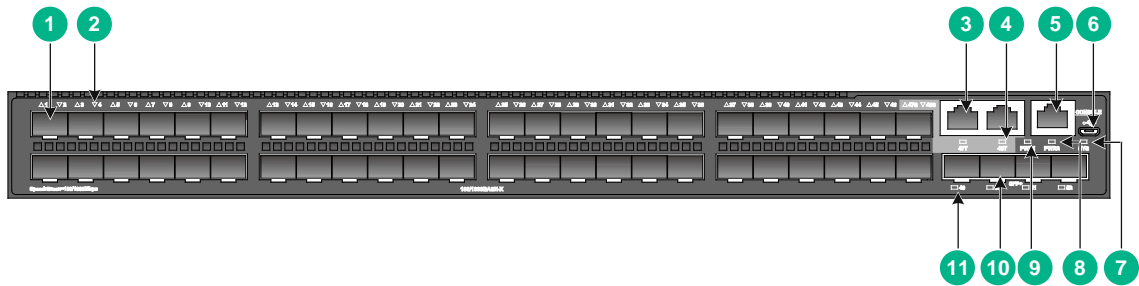

(1) Grounding screw	(2) Power supply 1 (PWR1)
(3) Power supply 2 (PWR2)	

The S5560S-52F-EI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR150-A1 AC power supplies are installed in the power supply slots.
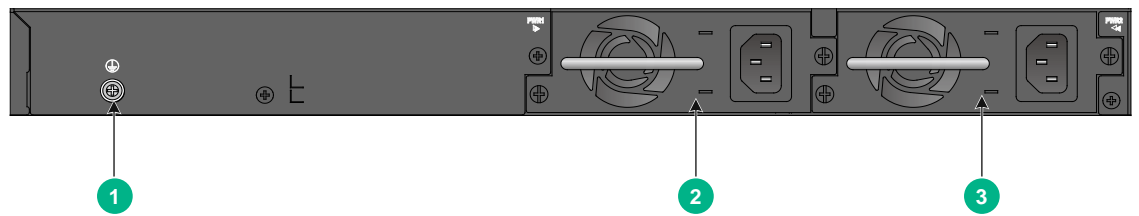
S5560S-28P-EI

Figure2-5 Front panel

(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP port
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) Management Ethernet port LED (ACT/LINK)	(14) SFP port LED

Figure2-6 Rear panel

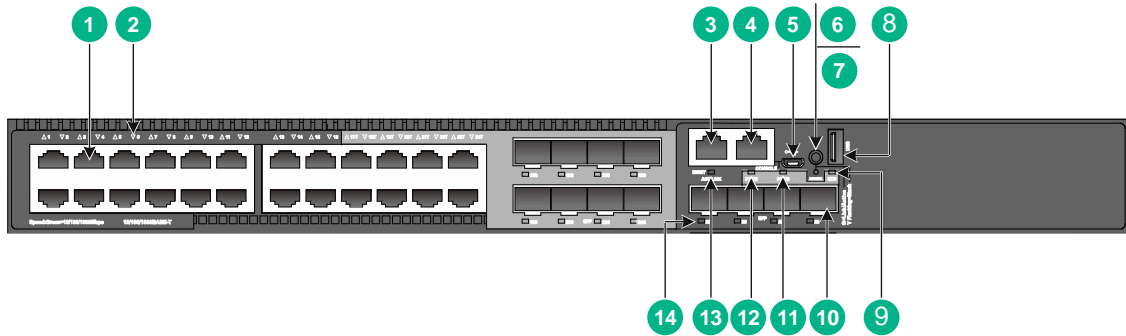|	
(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5560S-28P-EI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR150-A1 AC power supplies are installed in the power supply slots.
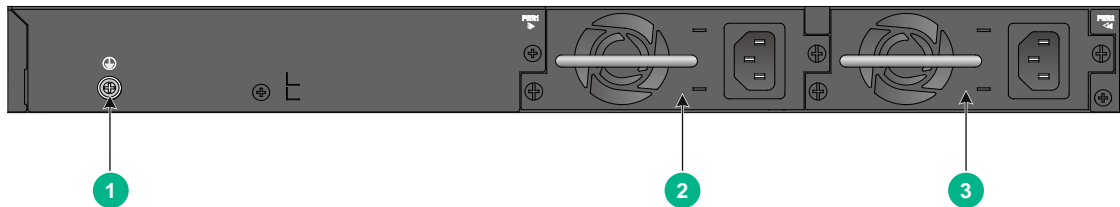
S5560S-52P-EI

Figure2-7 Front panel

(1) 10/100/1000BASE-T autosensing Ethernet port

(2) 10/100/1000BASE-T autosensing Ethernet port LED

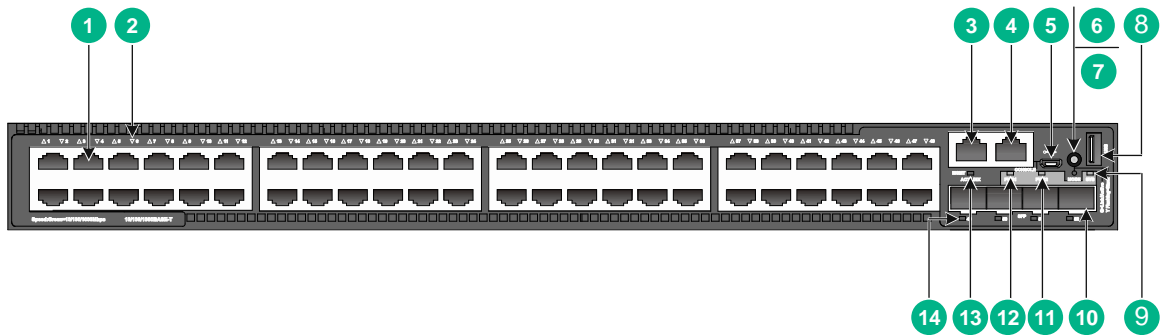|	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP port
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) Management Ethernet port LED (ACT/LINK)	(14) SFP port LED

Figure2-8 Rear panel

(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5560S-52P-EI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR150-A1 AC power supplies are installed in the power supply slots.
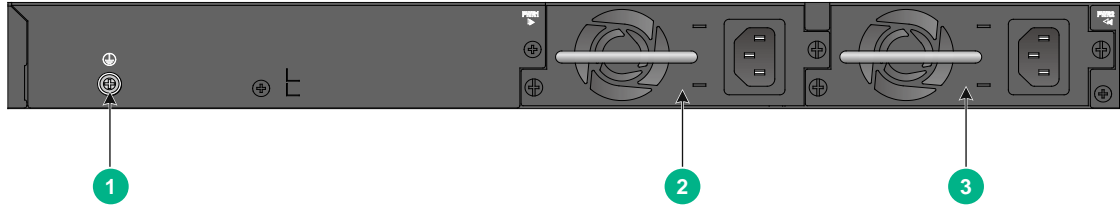
S5560S-28S-EI

Figure2-9 Front panel

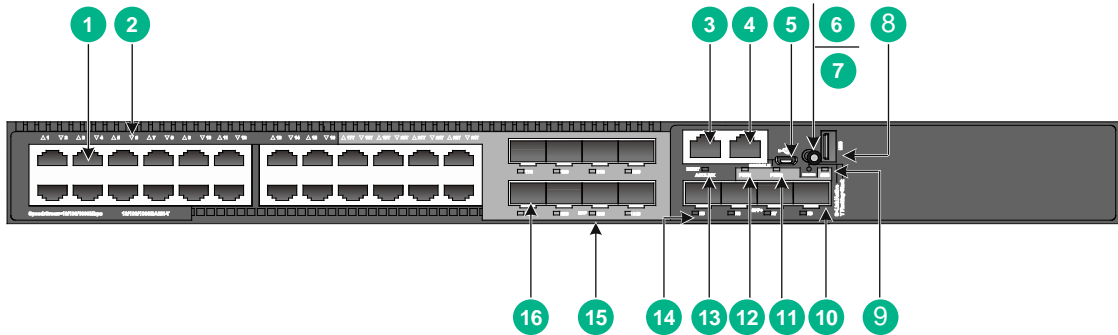|	
(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) Management Ethernet port LED (ACT/LINK)	(14) SFP+ port LED
(15) SFP port LED	(16) SFP port

Figure2-10 Rear panel
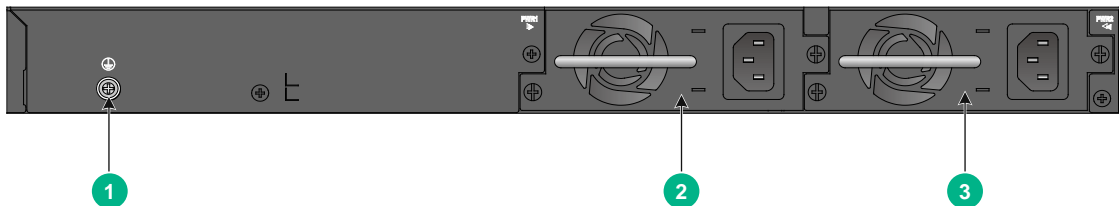
(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5560S-28S-EI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR150-A1 AC power supplies are installed in the power supply slots.

S5560S-52S-EI

Figure2-11 Front panel

(1) 10/100/1000BASE-T autosensing Ethernet port

(2) 10/100/1000BASE-T autosensing Ethernet port LED

(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) Management Ethernet port LED (ACT/LINK)	(14) SFP+ port LED

Figure2-12 Rear panel
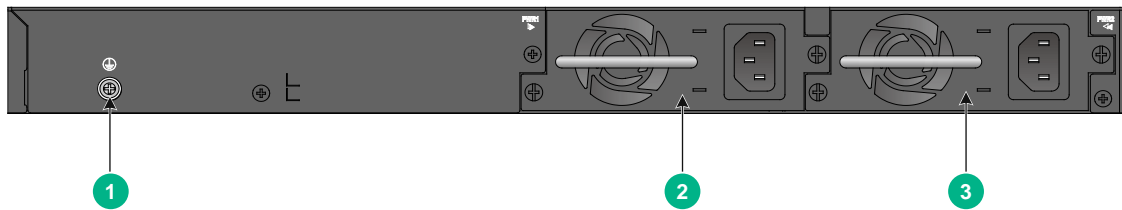
(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5560S-52S-EI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR150-A1 AC power supplies are installed in the power supply slots.

S5560S-28S-PWR-EI

Figure2-13 Front panel

(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) SFP port	(4) SFP port LED
(5) Management Ethernet port	(6) Console port (CONSOLE)
(7) Micro USB console port	(8) Port LED mode switching button
(9) Mode LED (MODE)	(10) USB port
(11) System status LED (SYS)	(12) SFP+ port
(13) Power supply 2 status LED (PWR2)	(14) Power supply 1 status LED (PWR1)
(15) Management Ethernet port LED (ACT/LINK)	(16) SFP+ port LED

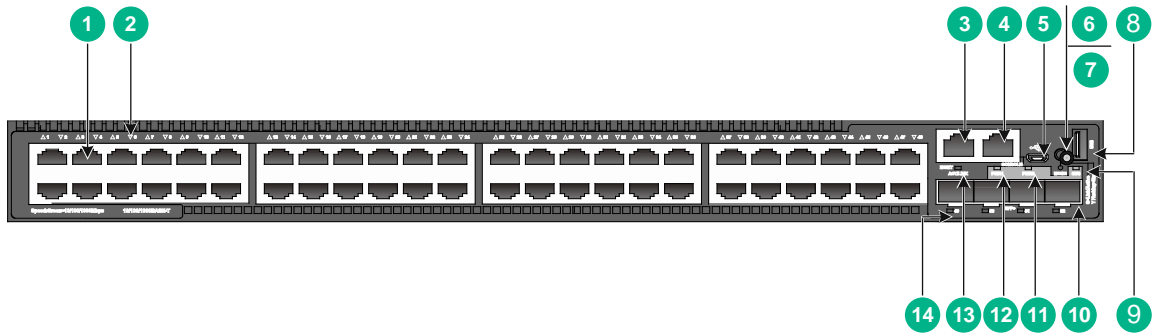**Figure2-14 Rear panel**

(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5560S-28S-PWR-EI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR720-56A AC power supplies are installed in the power supply slots.

S5560S-52S-PWR-EI

Figure2-15 Front panel

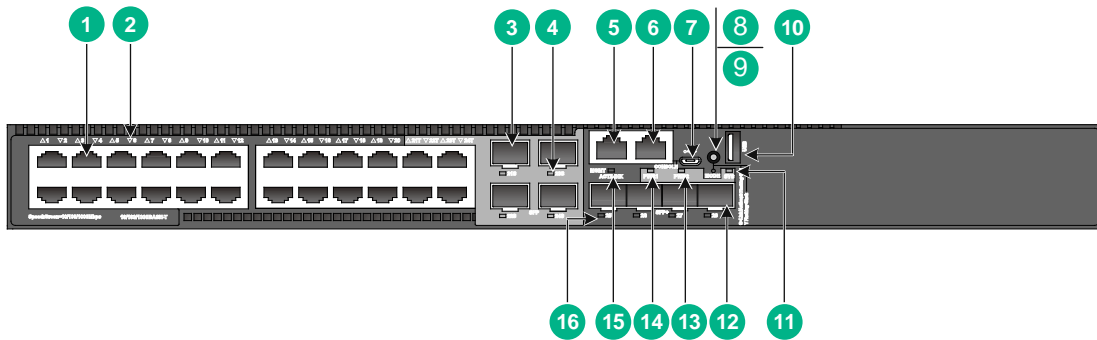| (1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) Management Ethernet port LED (ACT/LINK)	(14) SFP+ port LED

Figure2-16 Rear panel

(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5560S-52S-PWR-EI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR720-56A AC power supplies are installed in the power supply slots.

S5130S-28C-HI

Figure2-17 Front panel

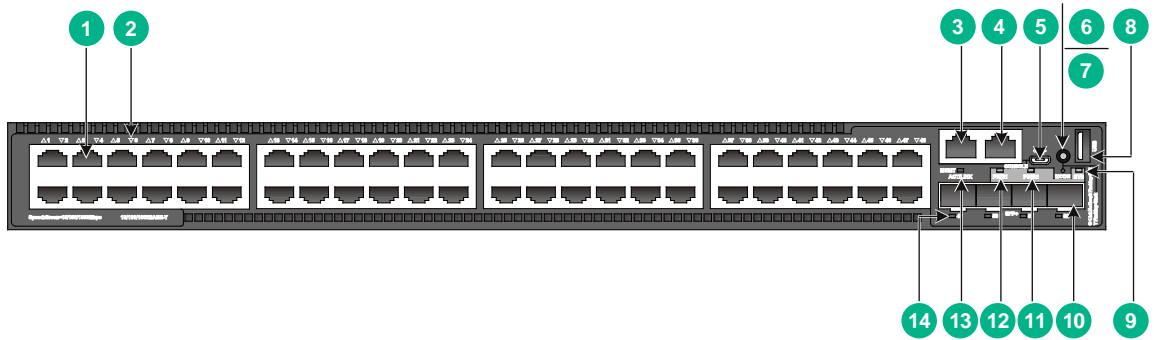|	
(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) Expansion slot LED (SLOT)	(12) Power supply 2 status LED (PWR2)
(13) Power supply 1 status LED (PWR1)	(14) Management Ethernet port LED (ACT/LINK)
(15) SFP+ port LED	(16) SFP port LED
(17) SFP port	

Figure2-18 Rear panel
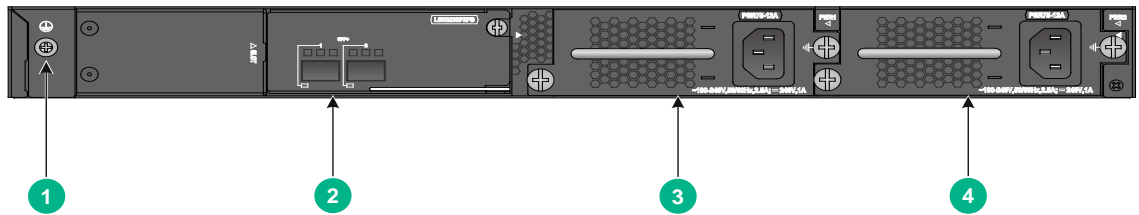
(1) Grounding screw	(2) Expansion module
(3) Power supply 1 (PWR1)	(4) Power supply 2 (PWR2)

The S5130S-28C-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR75-12A AC power supplies are installed in the power supply slots.

The S5130S-28C-HI switch provides an expansion slot at the rear panel. It comes with a filler panel installed in this expansion slot. You can install one expansion module as needed. In this figure, an LSWM2SP2PB interface module is installed.

S5130S-28S-HI

Figure2-19 Front panel

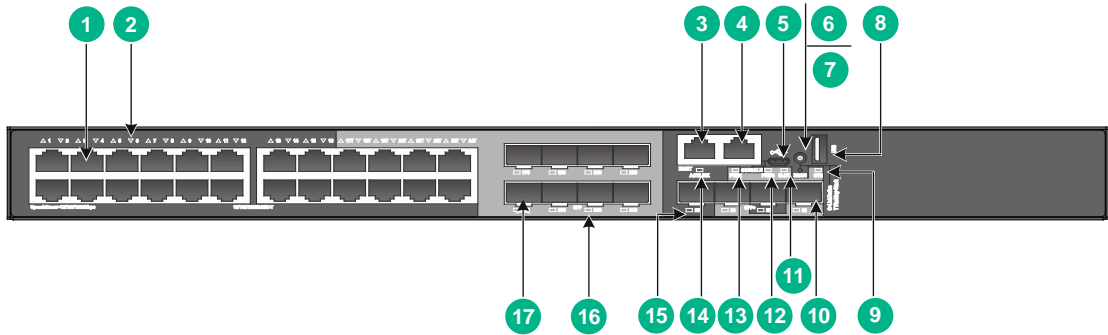|	
(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) Management Ethernet port LED (ACT/LINK)	(14) SFP+ port LED
(15) SFP port LED	(16) SFP port

Figure2-20 Rear panel
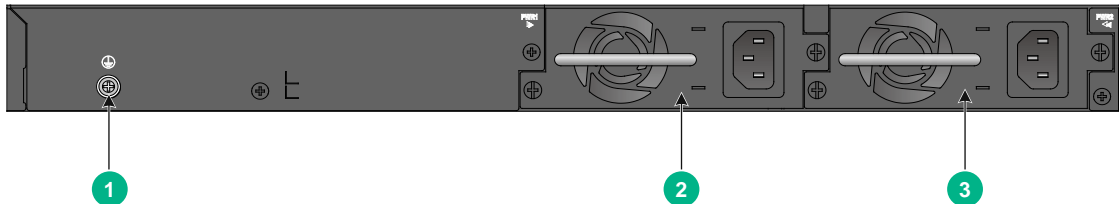
(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5130S-28S-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR150-A1 AC power supplies are installed in the power supply slots.

S5130S-52C-HI

Figure2-21 Front panel

(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) SFP+ port LED	(12) Expansion slot LED (SLOT)
(13) Power supply 2 status LED (PWR2)	(14) Power supply 1 status LED (PWR1)
(15) SFP port	(16) Management Ethernet port LED (ACT/LINK)
(17) SFP port LED	

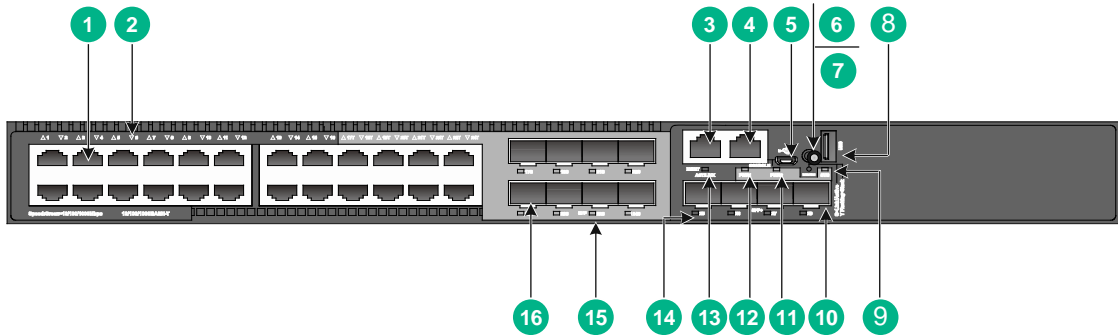**Figure2-22 Rear panel**

(1) Grounding screw	(2) Expansion module
(3) Power supply 1 (PWR1)	(4) Power supply 2 (PWR2)

The S5130S-52C-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR75-12A AC power supplies are installed in the power supply slots.

The S5130S-52C-HI switch provides an expansion slot at the rear panel. It comes with this expansion slot installed with a filler panel. You can install one expansion module as needed. In this figure, an LSWM2SP2PB interface module is installed.

S5130S-52S-HI

Figure2-23 Front panel

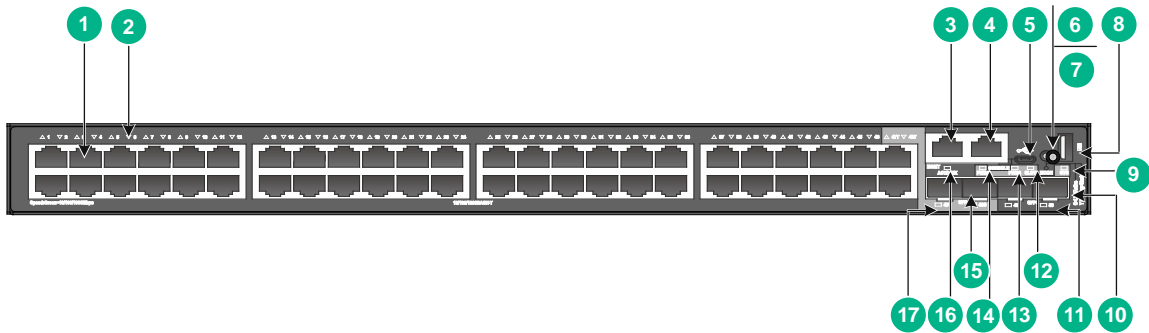| (1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) Management Ethernet port LED (ACT/LINK)	(14) SFP+ port LED

Figure2-24 Rear panel
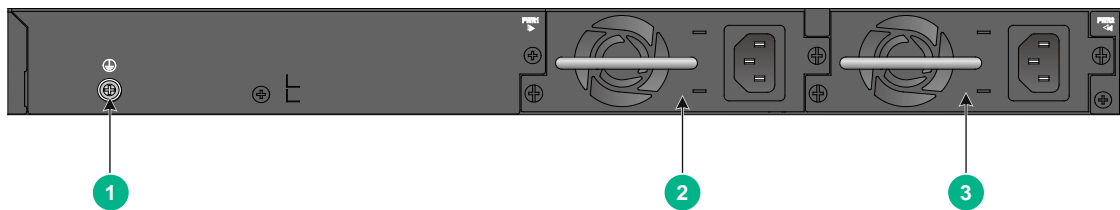
(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5130S-52S-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR150-A1 AC power supplies are installed in the power supply slots.
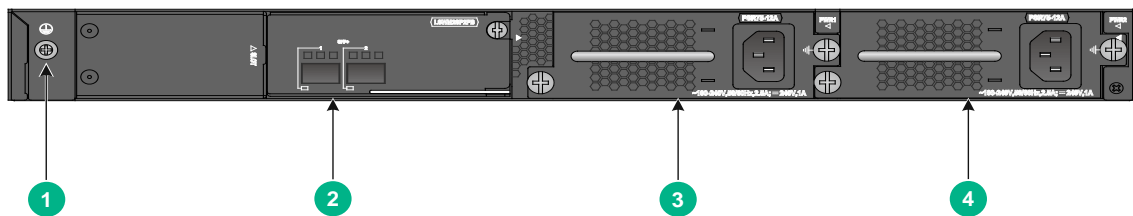
S5130S-28S-PWR-HI

Figure2-25 Front panel

(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) SFP port	(4) SFP port LED
(5) Management Ethernet port	(6) Console port (CONSOLE)
(7) Micro USB console port	(8) Port LED mode switching button
(9) Mode LED (MODE)	(10) USB port
(11) System status LED (SYS)	(12) SFP+ port
(13) Power supply 2 status LED (PWR2)	(14) Power supply 1 status LED (PWR1)
(15) Management Ethernet port LED (ACT/LINK)	(16) SFP+ port LED

Figure2-26 Rear panel

(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5130S-28S-PWR-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR720-56A AC power supplies are installed in the power supply slots.

S5130S-28S-UPWR-HI

Figure2-27 Front panel

(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port LED (ACT/LINK)	(4) Management Ethernet port
(5) Console port (CONSOLE)	(6) Micro USB console port
(7) Port LED mode switching button	(8) Mode LED (MODE)
(9) USB port	(10) System status LED (SYS)
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) SFP+ port	(14) SFP+ port LED

Figure2-28 Rear panel

(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5130S-28S-UPWR-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR720-56A AC power supplies are installed in the power supply slots.

S5130S-52S-PWR-HI

Figure2-29 Front panel

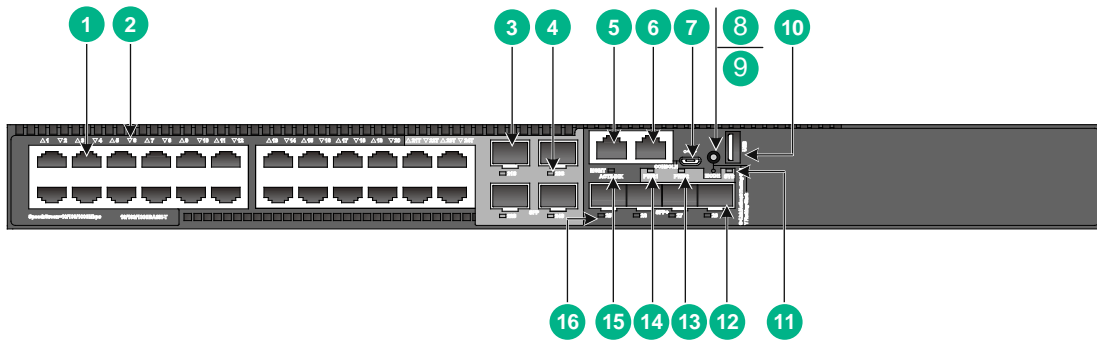|	
(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) Power supply 2 status LED (PWR2)	(12) Power supply 1 status LED (PWR1)
(13) Management Ethernet port LED (ACT/LINK)	(14) SFP+ port LED

Figure2-30 Rear panel

(1) Grounding screw	(2) Power supply 1
(3) Power supply 2	

The S5130S-52S-PWR-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR720-56A AC power supplies are installed in the power supply slots.

S5130S-28C-PWR-HI

Figure2-31 Front panel

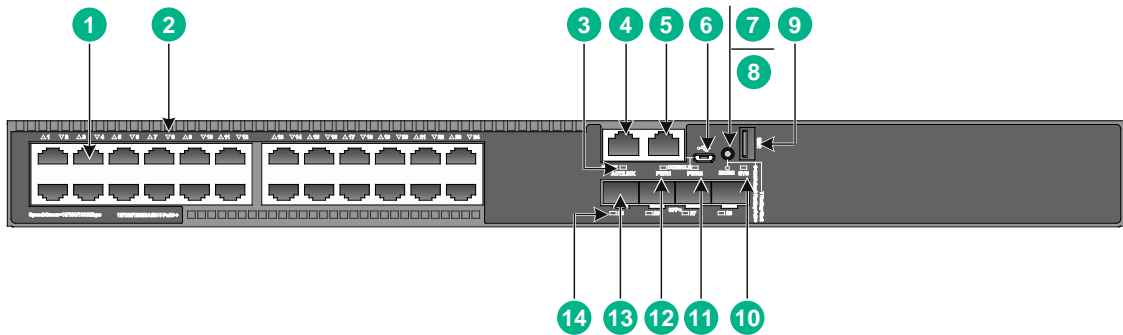| (1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) SFP port	(4) SFP port LED
(5) Management Ethernet port	(6) Console port (CONSOLE)
(7) Micro USB console port	(8) Port LED mode switching button
(9) Mode LED (MODE)	(10) USB port
(11) System status LED (SYS)	(12) SFP+ port
(13) Expansion slot LED (SLOT)	(14) Power supply 2 status LED (PWR2)
(15) Power supply 1 status LED (PWR1)	(16) Management Ethernet port LED (ACT/LINK)
(17) SFP+ port LED	

Figure2-32 Rear panel

(1) Grounding screw	(2) Expansion module
(3) Power supply 1 (PWR1)	(4) Power supply 2 (PWR2)

The S5130S-28C-PWR-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR720-56A AC power supplies are installed in the power supply slots.

The S5130S-28C-PWR-HI switch provides an expansion slot at the rear panel. It comes with this expansion slot installed with a filler panel. You can install one expansion module as needed. In this figure, an LSWM2SP2PB interface module is installed.

S5130S-52C-PWR-HI

Figure2-33 Front panel

(1) 10/100/1000BASE-T autosensing Ethernet port	
(2) 10/100/1000BASE-T autosensing Ethernet port LED	
(3) Management Ethernet port	(4) Console port (CONSOLE)
(5) Micro USB console port	(6) Port LED mode switching button
(7) Mode LED (MODE)	(8) USB port
(9) System status LED (SYS)	(10) SFP+ port
(11) SFP+ port LED	(12) Expansion slot LED (SLOT)
(13) Power supply 2 status LED (PWR2)	(14) Power supply 1 status LED (PWR1)
(15) SFP port	(16) Management Ethernet port LED (ACT/LINK)
(17) SFP port LED	

Figure2-34 Rear panel
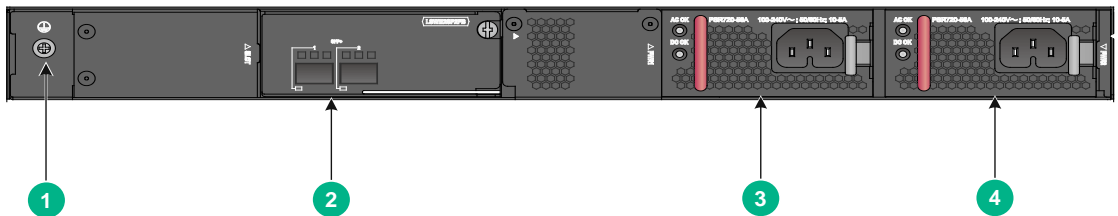
(1) Grounding screw	(2) Expansion module
(3) Power supply 1 (PWR1)	(4) Power supply 2 (PWR2)

The S5130S-52C-PWR-HI switch comes with power supply slot 1 empty and power supply slot 2 installed with a filler panel. You can install one or two power supplies for the switch as required. In this figure, two PSR720-56A AC power supplies are installed in the power supply slots.

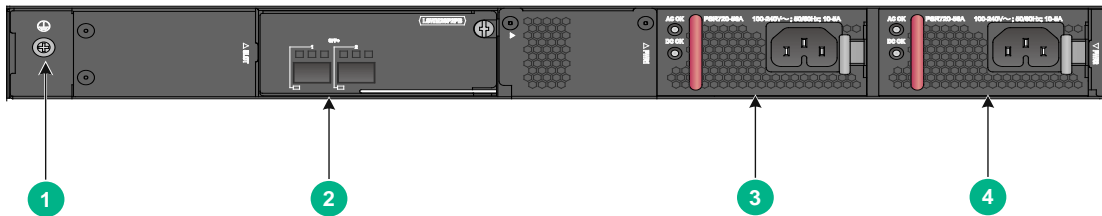The S5130S-52C-PWR-HI switch provides an expansion slot at the rear panel. It comes with this expansion slot installed with a filler panel. You can install one expansion module as needed. In this figure, an LSWM2SP2PB interface module is installed.

3 Removable components and compatibility matrixes

Removable components and their compatibility with the device

Table3-1 Removable components and their compatibility with the S5560S-EI series

Removable component	Non-PoE switches of the S5560S-EI series	PoE switches of the S5560S-EI series
Removable power supplies		
PSR75-12A	Supported	Not supported
PSR150-A1	Supported	Not supported
PSR150-D1	Supported	Not supported
PSR180-56A	Not supported	Supported
PSR360-56A	Not supported	Supported
PSR560-56D	Not supported	Supported
PSR720-56A	Not supported	Supported
PSR1110-56A	Not supported	Supported

Table3-2 Removable components and their compatibility with the S5130S-HI series

| Removable components	S5130S-28S-HI S5130S-52S-HI	S5130S-28C-HI S5130S-52C-HI	S5130S-28S-UPWR-HI	S5130S-28S-PWR-HI S5130S-52S-PWR-HI	S5130S-28C-PWR-HI S5130S-52C-PWR-HI
Removable power supplies					
PSR75-12A	Supported	Supported	Not supported	Not supported	Not supported
PSR150-A1	Supported	Not supported	Not supported	Not supported	Not supported
PSR150-D1	Supported	Supported	Not supported	Not supported	Not supported
PSR180-56A	Not supported	Not supported	Not supported	Supported	Supported
PSR360-56A	Not supported	Not supported	Supported	Supported	Supported
PSR560-56D	Not supported	Not supported	Supported	Supported	Supported
PSR720-56A	Not supported	Not supported	Supported	Supported	Supported
PSR1110-56A	Not supported	Not supported	Supported	Supported	Supported
Removable expansion modules					
LSWM2SP2	Not supported	Supported	Not supported	Not supported	Supported

Removable components	S5130S-28S-HI S5130S-52S-HI	S5130S-28C-HI S5130S-52C-HI	S5130S-28S-UPWR-HI	S5130S-28S-PWR-HI S5130S-52S-PWR-HI	S5130S-28C-PWR-HI S5130S-52C-PWR-HI
PB					

You can install one power supply, or two power supplies for redundancy on a non-PoE switch. These switches support mix of an AC power supply and a DC power supply.

You can install one power supply, or two power supplies for redundancy on the S5130S-28S-PWR-HI and S5130S-52S-PWR-HI PoE switches. The PoE capabilities of these switches vary by power supply configuration. For more information, see .

If the PSR180-56A is used together with a PSR360-56A, PSR560-56D, PSR720-56A, or PSR1110-56A, the total power output equals the output of two PSR180-56A power supplies.

Power supplies

Table3-3 Power supplies

Power supply	Specifications	Reference

PSR75-12A	• Rated input voltage range:
	  ○ AC: 100 VAC to 240 VAC @ 50 Hz or 60 Hz
	  ○ DC: 240 VDC
	• Max input voltage range:
	  ○ AC: 90 VAC to 290 VAC @ 47 Hz to 63 Hz
	  ○ DC: 180 VDC to 320 VDC
	• Max output power: 75 W
		H3C PSR75-12A Power Module User Manual

PSR150-A1	• Rated input voltage range: 100 VAC to 240 VAC @ 50 Hz or 60 Hz • Max input voltage range: 90 VAC to 264 VAC @ 47 Hz to 63 Hz • Max output power: 150 W	*H3C PSR150-A & PSR150-D Series Power Supplies User Manual*
PSR150-D1	• Rated input voltage range: –48 VDC to –60 VDC • Max input voltage range: –36 VDC to –72 VDC • Max output power: 150 W	*H3C PSR150-A & PSR150-D Series Power Supplies User Manual*

PSR180-56A	• Rated input voltage range:
	  ○ AC: 100 VAC to 240 VAC @ 50 or 60 Hz
	  ○ DC: 240 VDC
	• Max input voltage range:
	  ○ AC: 85 VAC to 290 VAC @ 47 Hz to 63 Hz
	  ○ DC: 180 VDC to 320 VDC
	• Max output power: 180 W
		H3C PSR180-56A Power Module User Manual

PSR360-56A	• Rated input voltage range: 100 VAC to 240 VAC @ 50 Hz or 60 Hz • Max input voltage range: 90 VAC to 264 VAC @ 47 Hz to 63 Hz • Max output power: 360 W	*H3C PSR360-56A Power Module User Manual*
PSR560-56D	• Rated input voltage range: –48 VDC to –60 VDC • Max input voltage range: –36 VDC to –72 VDC • Max output power: 560 W	*H3C PSR560-56D Power Module User Manual*
PSR720-56A	• Rated input voltage range: 100 VAC to 240 VAC	*H3C PSR720-56A Power*

Power supply	Specifications	Reference
	@ 50 Hz or 60 Hz • Max input voltage range: 90 VAC to 264 VAC @ 47 Hz to 63 Hz • Max output power: 720 W	*Module User Manual*
PSR1110-56A	• Rated input voltage range: 115 VAC to 240 VAC @ 50 Hz or 60 Hz • Max input voltage range: 102.5 VAC to 264 VAC @ 47 Hz to 63 Hz • Max output power: 1110 W	*H3C PSR1110-56A Power Module User Manual*

NOTE:

The PSR1110-56A power supply adds 64 mm (2.52 in) to the total depth of the switch, which includes the power supply handle.

Expansion modules

Table3-4 Expansion modules

Model	Description	Port quantity	Available transceiver modules and cables	Reference
LSWM2SP2PB	2-port 10-Gigabit SPF+ fiber Ethernet interface module	2	• 10-GE SFP+ module • 10-GE SFP+ cable • GE SFP module • GE SFP cable	*H3C LSWM2SP2PB & LSWM2SP4PB Interface Cards User Manual.*

(!) **IMPORTANT:**

By default, the operating mode is 0 for the expansion module on an S5130S-28C-HI or S5130S-28C-PWR-HI switch. In this mode, ports 26 and 28 on the front panel are available, and none of the ports on the expansion module is available. To use ports on the expansion module, execute the **port-configuration-mode** command to set the operating mode to 1 and then reboot the switch. After the configuration, ports 26 and 28 on the front panel become unavailable. For more information, see the Layer 2—LAN switching configuration guide of the device.

4 Ports and LEDs

Ports

Console port

The switch has two console ports: a serial console port and a Micro USB console port.

Table4-1 Console port specifications

Item	Serial console port	Micro USB console port
Connector type	RJ-45	Micro USB Type B
Compliant standard	EIA/TIA-232	USB 2.0
Transmission baud rate	9600 bps (default) to 115200 bps	
Services	• Provides connection to an ASCII terminal. • Provides connection to the serial port of a local PC running terminal emulation program.	Provides connection to the USB port of a local PC running terminal emulation program.

Management Ethernet port

All S5560S-EI and S5130S-HI switches except the S5560S-52F-EI switch each provide a management Ethernet port on the front panel. You can connect this port to a PC or management station for loading and debugging software or remote management.

Table4-2 Management Ethernet port specifications

Item	Specification
Connector type	RJ-45
Connector quantity	1
Port transmission rate	10/100 Mbps, half/full duplex MDI/MDI-X, autosensing
Transmission medium and max transmission distance	100 m (328.08 ft) over category-5 twisted pair cable
Functions and services	Switch software and Boot ROM upgrade, network management

USB port

All S5560S-EI and S5130S-HI switches except the S5560S-28F-EI and S5560S-52F-EI switches each have one OHC-compliant USB2.0 port that can upload and download data at a rate up to 480 Mbps. You can use this USB port to access the file system on the flash of the switch, for example, to upload or download application and configuration files.

10/100/1000BASE-T autosensing Ethernet port

Table4-3 10/100/1000BASE-T autosensing Ethernet port specifications

Item	Specification
Connector type	RJ-45
Interface attributes	• 10 Mbps, full duplex • 100 Mbps, full duplex • 1000 Mbps, full duplex • MDI/MDI-X, auto-sensing
Max transmission distance	100 m (328.08 ft)
Transmission medium	Category-5 (or above) twisted pair cable
Standards	IEEE 802.3i, 802.3u, 802.3ab

SFP port

△ **CAUTION:**

Make sure the ambient temperature for an operating S5560S-28F-EI does not exceed 40°C (104°F) if the following conditions exist:

• The switch uses one or two PSR75-12A power supplies for power supply.

• The switch uses transceiver modules with a maximum transmission distance greater than or equal to 80 km (49.71 miles).

△ **CAUTION:**

Make sure the ambient temperature for an operating S5560S-52F-EI does not exceed 40°C (104°F) if the following conditions exist:

• The switch uses one or two PSR75-12A power supplies for power supply.

• The switch uses transceiver modules.

The following switches provide fixed SFP ports on the front panel. You can install the FE SFP modules in Table4-4 or GE SFP transceiver modules and cables in Table4-5 in the SFP ports:

• S5560S-28F-EI

• S5560S-52F-EI

• S5560S-28S-EI

• S5560S-28P-EI

• S5560S-52P-EI

• S5560S-28S-PWR-EI

• S5130S-28S-HI

• S5130S-28S-PWR-HI

• S5130S-28C-HI

- S5130S-52C-HI
- S5130S-28C-PWR-HI
- S5130S-52C-PWR-HI

The following SFP ports support only GE SFP transceiver modules and cables in Table4-5:

- SFP ports 25 to 28 on the S5560S-28P-EI.
- All SFP ports on the S5560S-52P-EI.

Table4-4 FE SFP transceiver modules available for the SFP ports

FE SFP module	Central wavelength (nm)	Connector	Fiber diameter (μm)	Max transmission distance
SFP-FE-SX-MM1310-A	1310	LC	Multi-mode, 50/125	2 km (1.24 miles)
			Multi-mode, 62.5/125	
SFP-FE-LX-SM1310-A	1310	LC	Single-mode, 9/125	15 km (9.32 miles)
SFP-FE-LX-SM1310-D	1310	LC	Single-mode, 9/125	15 km (9.32 miles)
SFP-FE-LH40-SM1310	1310	LC	Single-mode, 9/125	40 km (24.86 miles)
SFP-FE-LH80-SM1550	1550	LC	Single-mode, 9/125	80 km (49.71 miles)
SFP-FE-LX-SM1310-BIDI	TX: 1310 RX: 1550	LC	Single-mode, 9/125	15 km (9.32 miles)
SFP-FE-LX-SM1550-BIDI	TX: 1550 RX: 1310			

(!) **IMPORTANT:**

The SFP-FE-LX-SM1310-BIDI and SFP-FE-LX-SM1550-BIDI modules must be used in pairs.

Table4-5 GE SFP transceiver modules and cables available for the SFP ports

GE SFP transceiver module and cable	Central wavelength (nm)	Connector	Cable/Fiber type and diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
SFP copper transceiver module					
SFP-GE-T	N/A	RJ-45	Twisted pair cable	N/A	100 m (328.08 ft)
SFP-GE-T-D	N/A	RJ-45	Twisted pair cable	N/A	100 m (328.08 ft)
SFP fiber transceiver module					
SFP-GE-SX-MM850-A	850	LC	Multi-mode, 50/125	500	550 m (1804.46 ft)
				400	500 m (1640.42 ft)
			Multi-mode, 62.5/125	200	275 m (902.23 ft)
				160	220 m (721.78 ft)

GE SFP transceiver module and cable	Central wavelength (nm)	Connector	Cable/Fiber type and diameter (µm)	Modal bandwidth (MHz × km)	Max transmission distance
SFP-GE-SX-MM850-D	850	LC	Multi-mode, 50/125	500	550 m (1804.46 ft)
				400	500 m (1640.42 ft)
			Multi-mode, 62.5/125	200	275 m (902.23 ft)
				160	220 m (721.78 ft)
SFP-GE-SX-MM850-S	850	LC	Multi-mode, 50/125	500	550 m (1804.46 ft)
				400	500 m (1640.42 ft)
			Multi-mode, 62.5/125	200	275 m (902.23 ft)
				160	220 m (721.78 ft)
SFP-GE-LX-SM1310-A	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
			Multi-mode, 50/125	500 or 400	550 m (1804.46 ft)
			Multi-mode, 62.5/125	500	550 m (1804.46 ft)
SFP-GE-LX-SM1310-D	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-GE-LX-SM1310-S	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-GE-LH40-SM1310	1310	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-GE-LH40-SM1310-D	1310	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-GE-LH40-SM1550	1550	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-GE-LH80-SM1550	1550	LC	Single-mode, 9/125	N/A	80 km (49.71 miles)
SFP-GE-LH80-SM1550-D	1550	LC	Single-mode, 9/125	N/A	80 km (49.71 miles)
SFP-GE-LH100-SM1550	1550	LC	Single-mode, 9/125	N/A	100 km (62.14 miles)
SFP-GE-LX-SM1310-BIDI	TX: 1310 nm RX: 1490 nm	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-GE-LX-SM1490-BIDI	TX: 1490 nm RX: 1310 nm	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-GE-LH40-SM1310-BIDI	TX: 1310 nm RX: 1550 nm	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-GE-LH40-SM1550-BIDI	TX: 1550 nm RX: 1310 nm	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-GE-LH70-SM1490-BIDI	TX: 1490 nm RX: 1550 nm	LC	Single-mode, 9/125	N/A	70 km (43.49 miles)

GE SFP transceiver module and cable	Central wavelength (nm)	Connector	Cable/Fiber type and diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
SFP-GE-LH70-SM1550-BIDI	TX: 1550 nm RX: 149 nm	LC	Single-mode, 9/125	N/A	70 km (43.49 miles)
SFP cable					
SFP-STACK-Kit	N/A				1.5 m (4.92 ft)

(!) **IMPORTANT:**

The SFP-GE-LX-SM1310-BIDI and SFP-GE-LX-SM1490-BIDI transceiver modules, the SFP-GE-LH40-SM1310-BIDI and SFP-GE-LH40-SM1550-BIDI transceiver modules, and the SFP-GE-LH70-SM1490-BIDI and SFP-GE-LH70-SM1550-BIDI transceiver modules must be used in pairs. For example, if one end uses an SFP-GE-LX-SM1310-BIDI transceiver module, the other end must use an SFP-GE-LX-SM1490-BIDI transceiver module.

NOTE:

- As a best practice, use only H3C SFP transceiver modules and cables for the SFP ports.
- The H3C SFP transceiver modules and cables available for the SFP ports are subject to change over time. For the most recent list of SFP transceiver modules and cables available for the SFP port, contact your H3C Support or marketing staff.
- For the specifications of H3C SFP transceiver modules and cables, see *H3C Transceiver Modules User Guide*.

SFP+ port

The following switches each provide four fixed SFP+ ports on the front panel:

- S5560S-28F-EI
- S5560S-52F-EI
- S5560S-28S-EI
- S5560S-52S-EI
- S5560S-28S-PWR-EI
- S5560S-52S-PWR-EI
- S5130S-28C-HI
- S5130S-28S-HI
- S5130S-52S-HI
- S5130S-28C-PWR-HI
- S5130S-28S-PWR-HI
- S5130S-28S-UPWR-HI
- S5130S-52S-PWR-HI

The S5130S-52C-HI and S5130S-52C-PWR-HI switches each provide two fixed SFP+ ports on the front panel.

To connect peer SFP+ ports over a long distance, use SFP/SFP+ transceiver modules and fibers. To connect peer SFP+ ports over a short distance, use SFP+ cables. You can install the GE SFP transceiver module in Table4-5, 10-GE SFP+ transceiver modules in Table4-6, and 10-GE SFP+ cables in Table4-7 in the SFP+ ports.

Table4-6 10-GE SFP+ transceiver modules available for the SFP+ ports

10-GE SFP+ module	Central wavelength (nm)	Connector	Fiber diameter (µm)	Multimode fiber modal bandwidth (MHz × km)	Max transmission distance
SFP-XG-SX-MM850-D	850	LC	Multi-mode, 50/125	2000	300 m (984.25 ft)
				500	82 m (269.03 ft)
				400	66 m (216.54 ft)
			Multi-mode, 62.5/125	200	33 m (108.27 ft)
				160	26 m (85.30 ft)
SFP-XG-SX-MM850-E	850	LC	Multi-mode, 50/125	2000	300 m (984.25 ft)
				500	82 m (269.03 ft)
				400	66 m (216.54 ft)
			Multi-mode, 62.5/125	200	33 m (108.27 ft)
				160	26 m (85.30 ft)
SFP-XG-SX-MM850-S	850	LC	Multi-mode, 50/125	2000	300 m (984.25 ft)
				500	82 m (269.03 ft)
				400	66 m (216.54 ft)
			Multi-mode, 62.5/125	200	33 m (108.27 ft)
				160	26 m (85.30 ft)
SFP-XG-LX-SM1310-D	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-XG-LX-SM1310-E	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-XG-LX-SM1310-S	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
SFP-XG-LH40-SM1550	1550	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-XG-LH40-SM1550-D	1550	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
SFP-XG-LH80-SM1550	1550	LC	Single-mode, 9/125	N/A	80 km (49.71 miles)
SFP-XG-LH80-SM1550-D	1550	LC	Single-mode, 9/125	N/A	80 km (49.71 miles)
SFP-XG-LX-SM1270-BIDI	• TX:1270 nm • RX:1330 nm	LC	9/125 µm single-mode optical fiber	N/A	10 km (6.21 miles)
SFP-XG-LX-SM1330-BIDI	• TX:1330 nm • RX:1270 nm	LC	9/125 µm single-mode optical fiber	N/A	10 km (6.21 miles)
SFP-XG-LH40	• TX:1270	LC	Single-mode,	N/A	40 km (24.86

10-GE SFP+ module	Central wavelength (nm)	Connector	Fiber diameter (µm)	Multimode fiber modal bandwidth (MHz × km)	Max transmission distance
-SM1270-BIDI	nm • RX:1330 nm		9/125		miles)
SFP-XG-LH40 -SM1330-BIDI	• TX:1330 nm • RX:1270 nm	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)

> (!) **IMPORTANT:**
>
> The SFP-XG-LX-SM1270-BIDI and SFP-XG-LX-SM1330-BIDI transceiver modules and the SFP-XG-LH40-SM1270-BIDI and SFP-XG-LH40-SM1330-BIDI transceiver modules must be used in pairs. For example, if one ends uses an SFP-XG-LX-SM1270-BIDI transceiver module, the other end must use an SFP-XG-LX-SM1330-BIDI transceiver module.

Table4-7 SFP+ copper cables available for the SFP+ ports

SFP+ copper cable	Cable length
LSWM1STK	0.65 m (2.13 ft)
LSWM2STK	1.2 m (3.94 ft)
LSWM3STK	3 m (9.84 ft)
LSTM1STK	5 m (16.40 ft)

Table4-8 SFP+ fiber cables available for the SFP+ ports

SFP+ fiber cable	Max transmission distance
SFP-XG-D-AOC-7M	7 m (22.97 ft)
SFP-XG-D-AOC-10M	10 m (32.81 ft)
SFP-XG-D-AOC-20M	20 m (65.62 ft)

Figure4-1 SFP+ cable

(1) Connector	(2) Pull latch

NOTE:

- As a best practice, use only H3C SFP/SFP+ transceiver modules and SFP+ cables for the SFP+ ports.
- The H3C SFP/SFP+ transceiver modules and SFP+ cables available for the SFP+ ports are subject to change over time. For the most recent list of SFP/SFP+ transceiver modules and SFP+ cables, contact your H3C Support or marketing staff.
- For the specifications of H3C SFP/SFP+ transceiver modules and SFP+ cables, see *H3C Transceiver Modules User Guide*.

Combo interface

The S5560S-28F-EI, S5560S-28S-EI, S5560S-28P-EI, S5130S-28S-HI, and S5130S-28C-HI switches each provide eight combo interfaces on the front panel. The S5560S-28S-PWR-EI, S5130S-28S-PWR-HI, and S5130S-28C-PWR-HI switches each provide four combo interfaces on the front panel. The S5560S-52F-EI, S5130S-52C-HI, and S5130S-52C-PWR-HI switches each provide two combo interfaces on the front panel. A combo interface contains an SFP port and a 10/100/1000BASE-T autosensing Ethernet port. Only one of these two ports can operate at a time.

LEDs

System status LED

The system status LED shows the operating state of the switch.

Table4-9 System status LED description

LED mark	Status	Description
SYS	Steady green	The switch is operating correctly.
	Flashing green (1 Hz)	The switch is performing power-on self test (POST).
	Steady red	The switch has failed the POST or is faulty.
	Off	The switch is powered off.

Power supply status LED

The switch provides two power supply slots at the rear. For each power supply, the switch provides a power supply status LED on the front panel.

Table4-10 Power supply status LED description

LED mark	Status	Description
PWR1/PWR1	Steady green	A power supply is installed in the power supply slot, and the power supply is outputting power correctly.
	Steady yellow	A power supply is installed in the power supply slot, but the power supply has failed or no power is input to the power supply.
	Off	No power supply is installed in the power supply slot.

Mode LED (MODE)

All S5560S-EI and S5130S-HI series switches except the S5560S-28F-EI and S5560S-52F-EI switches each provide a mode LED (MODE) to indicate the type of information that the 10/100/1000BASE-T autosensing Ethernet port LEDs are showing.

You can use the LED mode switching button to change the indication of the mode LED.

Table4-11 Description for the mode LED

LED mark	Status	Description
MODE	Steady green	The 10/100/1000BASE-T autosensing Ethernet port LEDs indicate the link and operating status of the port.
	Flashing green (available only for the S5560S-28S-PWR-EI, S5560S-52S-PWR-EI, S5130S-28S-PWR-HI, S5130S-28S-UPWR-HI, S5130S-52S-PWR-HI, S5130S-28C-PWR-HI, and S5130S-52C-PWR-HI switches)	The 10/100/1000BASE-T autosensing Ethernet port LEDs indicates the PoE power supply status of the ports.
	Flashing yellow	The 10/100/1000BASE-T autosensing Ethernet port LEDs indicates the IRF member ID of the switch. For example, if the LED for port 5 is steady green and the other LEDs are off, the IRF member ID of the switch is 5.

10/100/1000BASE-T autosensing Ethernet port LED

The switch provides a status LED for each 10/100/1000BASE-T autosensing Ethernet port. The port LED and the MODE LED work in conjunction to indicate the operating status of the 10/100/1000BASE-T autosensing Ethernet port.

Table4-12 10/100/1000BASE-T autosensing Ethernet port LED description

MODE LED status	10/100/1000BASE-T autosensing Ethernet port LED status	Description

MODE LED status	10/100/1000BASE-T autosensing Ethernet port LED status	Description
Steady green (Link/Active mode)	Steady green	A link is present on the port.
	Flashing green	The port is sending or receiving data.
	Off	No link is present on the port.
Flashing green (PoE mode, available only for the S5560S-28S-PWR-EI, S5560S-52S-PWR-EI, S5130S-28S-PWR-HI, S5130S-28S-UPWR-HI, S5130S-52S-PWR-H, S5130S-28C-PWR-HI, and S5130S-52C-PWR-HI switches)	Steady green	PoE power supply is normal.
	Flashing green (1 Hz)	• The PoE power provided by the port fails to meet the power requirement of the PD. • PoE power supply overcurrent, overvoltage, or short-circuit occurs. • The remaining power of the switch fails to meet the power supply requirement of the port.
	Off	The port is not connected to a PD or PoE is not enabled on the port.
Flashing yellow (IRF mode)	Steady green	The 10/100/1000BASE-T autosensing Ethernet port LEDs on the switch work in conjunction to indicate the IRF member ID of the switch. For example, if the LED for port 5 is steady green and the other port LEDs are off, the IRF member ID of the switch is 5.

SFP/SFP+ port LED

Table4-13 SFP/SFP+ port LED description

SFP/SFP+ port LED status	Description
Steady green	A link is present on the port.
Flashing green	The port is sending or receiving data.
Off	• No link is present on the port. • The mode LED is operating in IRF mode. • The mode LED is operating in PoE mode (only for PoE switches).

Management Ethernet port LED

Table4-14 Management Ethernet port LED description

Management Ethernet port LED (ACT/LINK) status	Description
Steady green	A link is present on the port.
Flashing green	The port is sending or receiving data.
Off	No link is present on the port.

Input status LED and output status LED on the power supply

The PSR180-56A, PSR360-56A, PSR560-56D, PSR720-56A, and PSR1110-56A power supplies each have an input status LED and an output status LED. For more information about the LEDs, see the manuals for the power supplies.

Expansion slot LED

The S5130S-28C-HI, S5130S-52C-HI, S5130S-28C-PWR-HI, and S5130S-52C-PWR-HI switches each provide an expansion slot at the rear panel. You can view the expansion slot LED on the front panel to identify the status of the installed expansion module.

Table4-15 Expansion slot status LED description

Expansion slot LED (SLOT) status	Description
Steady on	An expansion module is present and is operating correctly.
Flashing amber	The expansion module is incompatible with the switch or the expansion module is faulty.
Off	No expansion module is present.

Port status LED on the expansion module

The expansion module provides a port status LED for each port on the module. For more information about the LED, see the user guide for the expansion module.

5 Cooling system

To dissipate heat timely and ensure system stability, the switch uses a high-performance cooling system. Consider the site ventilation design when you plan the installation site for the switch.

On the S5130S-28C-HI, S5130S-52C-HI, S5130S-28C-PWR-HI, S5130S-28S-UPWR-HI, and S5130S-52C-PWR-HI switches, the fan trays draw in ambient air from the left side panel and exhaust the air from the right side panel, as shown in Figure5-1.

On the other S5560S-EI & S5130S-HI series switches, the fan trays draw in ambient air from the left side and port side panels and exhaust the air from the right side panel, as shown in Figure5-2.

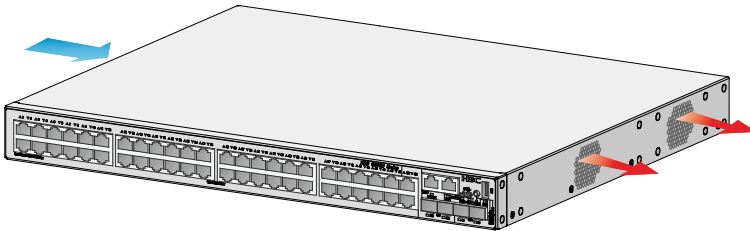**Figure5-1 Airflow through the S5130S-52C-HI switch**

Figure5-2 Airflow through the S5130S-52S-PWR-HI switch