Hewlett Packard Enterprise

HPE FlexNetwork 5130 EI Switch Series

Installation Guide

Part number: 5998-5492u
Document version: 6W106-20180720

Acknowledgments

Contents

Preparing for installation

Product code	HPE description	Alias
HPE FlexNetwork 5130 EI switches		
JG932A	HPE FlexNetwork 5130 24G 4SFP+ EI Switch	HPE 5130 24G 4SFP+ EI
JG933A	HPE FlexNetwork 5130 24G SFP 4SFP+ EI Switch	HPE 5130 24G SFP 4SFP+ EI
JG934A	HPE FlexNetwork 5130 48G 4SFP+ EI Switch	HPE 5130 48G 4SFP+ EI
JG936A	HPE FlexNetwork 5130 24G PoE+ 4SFP+ (370W) EI Switch	HPE 5130 24G PoE+ 4SFP+ (370W) EI
JG937A	HPE FlexNetwork 5130 48G PoE+ 4SFP+ (370W) EI Switch	HPE 5130 48G PoE+ 4SFP+ (370W) EI
JG938A	HPE FlexNetwork 5130 24G 2SFP+ 2XGT EI Switch	HPE 5130 24G 2SFP+ 2XGT EI
JG939A	HPE FlexNetwork 5130 48G 2SFP+ 2XGT EI Switch	HPE 5130 48G 2SFP+ 2XGT EI
JG940A	HPE FlexNetwork 5130 24G PoE+ 2SFP+ 2XGT (370W) EI Switch	HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI
JG941A	HPE FlexNetwork 5130 48G PoE+ 2SFP+ 2XGT (370W) EI Switch	HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI
JG975A	HPE FlexNetwork 5130 24G 4SFP+ EI Brazil Switch	HPE 5130 24G 4SFP+ EI BR
JG976A	HPE FlexNetwork 5130 48G 4SFP+ EI Brazil Switch	HPE 5130 48G 4SFP+ EI BR
JG977A	HPE FlexNetwork 5130 24G PoE+ 4SFP+ (370W) EI Brazil Switch	HPE 5130 24G PoE+ 4SFP+ (370W) EI BR
JG978A	HPE FlexNetwork 5130 48G PoE+ 4SFP+ (370W) EI Brazil Switch	HPE 5130 48G PoE+ 4SFP+ (370W) EI BR
Power supplies (applies only to the JG933A switch):		
JD362A	HPE A5800/A5500 150W AC Power Supply	PSR150-A
JD362B	HPE X361 150W AC Power Supply	PSR150-A1
JD366A	HPE A5800/A5500 150W DC Power Supply	PSR150-D
JD366B	HPE X361 150W DC Power Supply	PSR150-D1

For regulatory identification purposes, the HPE 5130 24G 4SFP+ EI, HPE 5130 24G SFP 4SFP+ EI, HPE 5130 48G 4SFP+ EI, HPE 5130 24G PoE+ 4SFP+ (370W) EI, HPE 5130 48G PoE+ 4SFP+ (370W) EI, HPE 5130 24G 2SFP+ 2XGT EI, HPE 5130 48G 2SFP+ 2XGT EI, HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI, and HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI switches are assigned Regulatory Model Numbers (RMNs). The RMNs for these switches are listed below. These RMNs should not be confused with the marketing name HPE FlexNetwork 5130 EI, or product codes JG932A, JG933A, JG934A, JG936A, JG937A, JG938A, JG939A, JG940A, and JG941A.

Product code	RMN	HPE description
JG932A	BJNGA-AD0027	HPE FlexNetwork 5130 24G 4SFP+ EI Switch
JG933A	BJNGA-AD0028	HPE FlexNetwork 5130 24G SFP 4SFP+ EI Switch

Product code	RMN	HPE description
JG934A	BJNGA-AD0029	HPE FlexNetwork 5130 48G 4SFP+ EI Switch
JG936A	BJNGA-AD0031	HPE FlexNetwork 5130 24G PoE+ 4SFP+ (370W) EI Switch
JG937A	BJNGA-AD0032	HPE FlexNetwork 5130 48G PoE+ 4SFP+ (370W) EI Switch
JG938A	BJNGA-AD0033	HPE FlexNetwork 5130 24G 2SFP+ 2XGT EI Switch
JG939A	BJNGA-AD0034	HPE FlexNetwork 5130 48G 2SFP+ 2XGT EI Switch
JG940A	BJNGA-AD0035	HPE FlexNetwork 5130 24G PoE+ 2SFP+ 2XGT (370W) EI Switch
JG941A	BJNGA-AD0036	HPE FlexNetwork 5130 48G PoE+ 2SFP+ 2XGT (370W) EI Switch
JG975A	BJNGA-AD0027	HPE FlexNetwork 5130 24G 4SFP+ EI Brazil Switch
JG976A	BJNGA-AD0029	HPE FlexNetwork 5130 48G 4SFP+ EI Brazil Switch
JG977A	BJNGA-AD0031	HPE FlexNetwork 5130 24G PoE+ 4SFP+ (370W) EI Brazil Switch
JG978A	BJNGA-AD0032	HPE FlexNetwork 5130 48G PoE+ 4SFP+ (370W) EI Brazil Switch

Safety recommendations

To avoid equipment damage or bodily injury, 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.
- Ensure good ventilation at the installation site and keep the air inlet and outlet vents of the switch free of obstruction.
- Connect the yellow-green protection grounding cable before power-on.
- Make sure the power source voltage is as required.
- To avoid electrical shocks, do not open the chassis while the switch is operating or when the switch is just powered off.
- To avoid ESD damage, wear an ESD wrist strap to hot-swap a power supply.

Examining the installation site

The HPE FlexNetwork 5130 EI switches 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 exhaust vents for ventilation.
- The rack or workbench has a good ventilation system.
- 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/humidity

Maintain temperature and humidity in the equipment room as described in "Technical specifications."

- 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 "Appendix A Chassis views and technical specifications."

Cleanliness

Dust buildup on the chassis might result in electrostatic adsorption, which causes poor contact of metal components and contact points, especially when indoor relative humidity is low. In the worst case, electrostatic adsorption can cause communication failure.

Table 1 Dust concentration limit in the equipment room

Substance	Concentration limit (particles/m^3)
Dust	≤ 3 x 10^4 (no visible dust on the tabletop over three days)
NOTE: Dust diameter ≥ 5 μm	

The equipment room must also meet limits on salts, acids, and sulfides to eliminate corrosion and premature aging of components, as shown in Table 2.

Table 2 Harmful gas limits in the equipment room

Gas	Maximum concentration (mg/m^3)
SO_2	0.2
H_2S	0.006
NH_3	0.05
Cl_2	0.01

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 protective earth (PE) to filter interference from the power grid.

- Keep the switch far away from radio transmitting stations, radar stations, and high-frequency devices to make sure the EMI levels do not exceed the compliant range.
- Use electromagnetic shielding when necessary. For example, use shielded interface cables.
- To prevent signal ports from getting damaged by over-voltage or over-current caused by lightning strikes, only route interface cables indoors.

Laser safety

WARNING!

Do not stare into any fiber port when the switch has power. The laser light emitted from the optical fiber might hurt your eyes.

The HPE FlexNetwork 5130 EI switches are Class 1 laser devices.

Installation tools

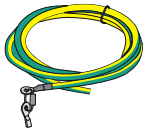
- Flat-blade screwdriver
- Phillips screwdriver
- ESD wrist strap

All these installation tools are user supplied.

Installation accessories

Table 3 Installation accessories

Product code	Description	Quantity	Applicable models
5066-0850	1 U four-hole mounting bracket kit (including one pair of mounting brackets and eight M4 countersunk screws) 	1 kit	• HPE 5130 24G PoE+ 4SFP+ (370W) EI • HPE 5130 48G 4SFP+ EI • HPE 5130 48G PoE+ 4SFP+ (370W) EI • HPE 5130 24G SFP 4SFP+ EI • HPE 5130 48G 2SFP+ 2XGT EI • HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI • HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI • HPE 5130 48G 4SFP+ EI BR • HPE 5130 24G PoE+ 4SFP+ (370W) EI BR • HPE 5130 48G PoE+ 4SFP+ (370W) EI BR
5184-6978	1 U two-hole mounting bracket kit (including one pair of mounting brackets and four M4 countersunk screws) 	1 kit	• HPE 5130 24G 4SFP+ EI • HPE 5130 24G 2SFP+ 2XGT EI • HPE 5130 24G 4SFP+ EI BR

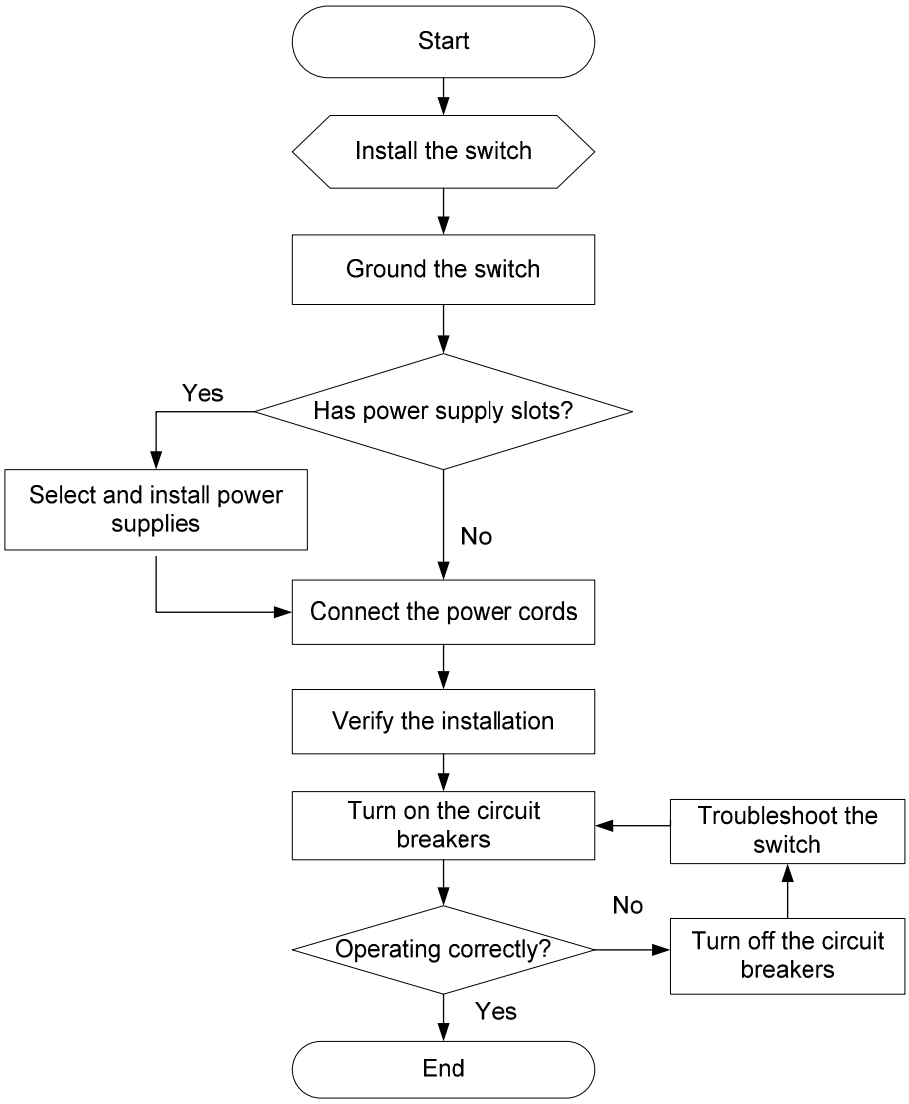
Product code	Description	Quantity	Applicable models
N/A	M6 screw and floating nut 	User supplied	All HPE 5130 EI switches
5185-9292	Grounding cable 	1	• HPE 5130 24G 4SFP+ EI • HPE 5130 24G SFP 4SFP+ EI • HPE 5130 48G 4SFP+ EI • HPE 5130 24G 2SFP+ 2XGT EI • HPE 5130 48G 2SFP+ 2XGT EI • HPE 5130 24G 4SFP+ EI BR • HPE 5130 48G 4SFP+ EI BR
5184-6729	Grounding cable 	1	• HPE 5130 24G PoE+ 4SFP+ (370W) EI • HPE 5130 48G PoE+ 4SFP+ (370W) EI • HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI • HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI • HPE 5130 24G PoE+ 4SFP+ (370W) EI BR • HPE 5130 48G PoE+ 4SFP+ (370W) EI BR
5185-9443 5080-0120	DC power cord (supplied with the PSR150-D/PSR150-D1 (JD366A/JD366B)DC power supply)  The power cord color code scheme is for illustration only. The cable delivered for your country or region might use a different color scheme.	1	PSR150-D/PSR150-D1(JD366A/JD366B) DC power supply
5184-7298	Rubber feet 	4	All HPE 5130 EI switches

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 Hewlett Packard Enterprise for permission. Otherwise, Hewlett Packard Enterprise shall not be liable for any consequence.

Figure 1 Hardware installation flow



Installing the switch in a 19-inch rack

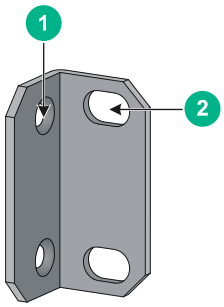
Mounting brackets

Table 4 describes the mounting brackets provided with the switch.

Table 4 Mounting brackets provided with the switch

Switch model	Mounting brackets	Views
• HPE 5130 24G 4SFP+ EI • HPE 5130 24G 2SFP+ 2XGT EI • HPE 5130 24G 4SFP+ EI BR	One pair of 1U two-hole mounting brackets	See Figure 2.
• HPE 5130 24G PoE+ 4SFP+ (370W) EI • HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI • HPE 5130 48G 4SFP+ EI • HPE 5130 48G PoE+ 4SFP+ (370W) EI • HPE 5130 24G SFP 4SFP+ EI • HPE 5130 48G 4SFP+ EI BR • HPE 5130 48G 2SFP+ 2XGT EI • HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI • HPE 5130 24G PoE+ 4SFP+ (370W) EI BR • HPE 5130 48G PoE+ 4SFP+ (370W) EI BR	One pair of 1U four-hole mounting brackets	See Figure 3.

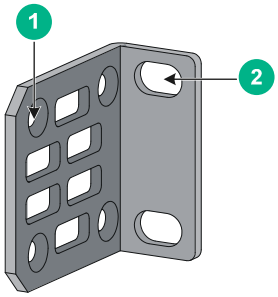
Figure 2 1U two-hole mounting bracket



(1) Screw hole for attaching the bracket to the switch

(2) Screw hole for attaching the bracket to the rack post

Figure 3 1U four-hole mounting bracket



(1) Screw hole for attaching the bracket to the switch

(2) Screw hole for attaching the bracket to the rack post

Attaching the mounting brackets to the switch

The HPE 5130 24G 4SFP+ EI, HPE 5130 24G 4SFP+ EI BR, HPE 5130 48G 4SFP+ EI BR, HPE 5130 24G PoE+ 4SFP+ (370W) EI BR, HPE 5130 24G PoE+ 4SFP+ (370W) EI, HPE 5130 24G 2SFP+ 2XGT EI, HPE 5130 48G 2SFP+ 2XGT EI, and HPE 5130 48G 4SFP+ EI switches provide two mounting positions: one front mounting position (near the network ports) and one rear mounting position (near the power supplies).

The HPE 5130 48G PoE+ 4SFP+ (370W) EI, HPE 5130 48G PoE+ 4SFP+ (370W) EI BR, HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI, and HPE 5130 24G SFP 4SFP+ EI switches provide three mounting positions: one front mounting position (near the network ports), one mid-mounting position, and one rear mounting position (near the power supplies).

To attach the mounting brackets to the switch:

1. Determine the mounting position.
2. Align one mounting bracket with the screw holes at the mounting position. Use M4 screws provided with the switch to attach the mounting bracket to the chassis.
3. Repeat step 2 to attach the other mounting bracket to the chassis.

Figure 4 Attaching a two-hole mounting bracket to the front mounting position on an HPE 5130 24G 4SFP+ EI switch

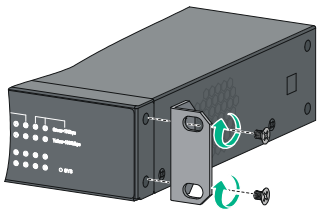


Figure 5 Attaching a two-hole mounting bracket to the rear mounting position on an HPE 5130 24G 4SFP+ EI switch

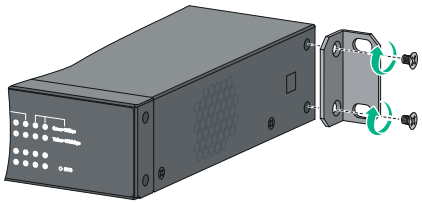


Figure 6 Attaching a four-hole mounting bracket to the front mounting position on an HPE 5130 24G SFP 4SFP+ EI switch

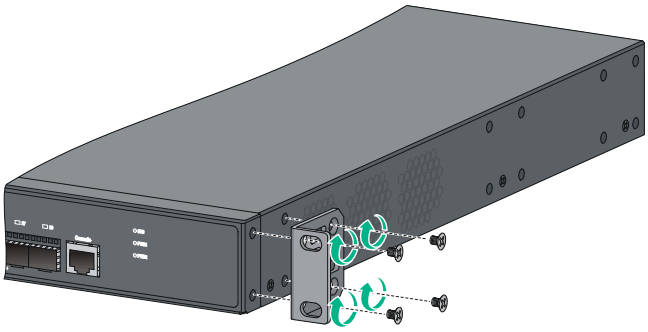


Figure 7 Attaching a four-hole mounting bracket to the rear mounting position on an HPE 5130 24G SFP 4SFP+ EI switch

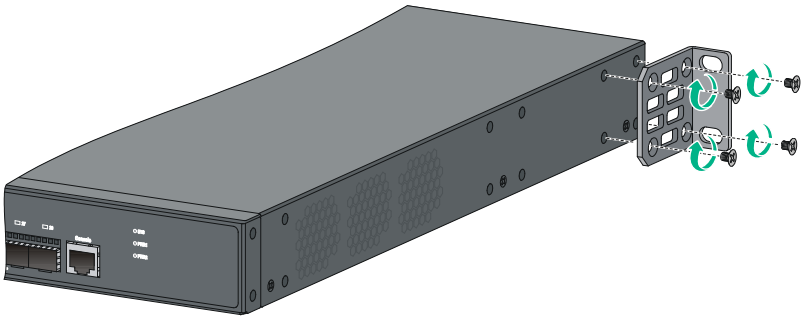
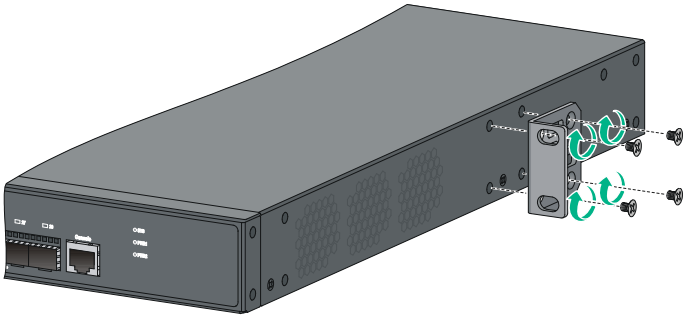


Figure 8 Attaching a four-hole mounting bracket to the mid-mounting position on an HPE 5130 24G SFP 4SFP+ EI switch



Rack-mounting the switch

This task requires two people. To mount the switch in the rack:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Verify that the mounting brackets have been securely attached to the switch chassis.
3. Install cage nuts in the mounting holes in the rack posts.
4. One person holds the switch chassis and aligns the mounting brackets with the mounting holes in the rack posts, and the other person attaches the mounting brackets with screws (user-supplied) to the rack.
5. Verify that the switch chassis is horizontal and secure.

Figure 9 Mounting an HPE 5130 24G SFP 4SFP+ EI switch by the front mounting position

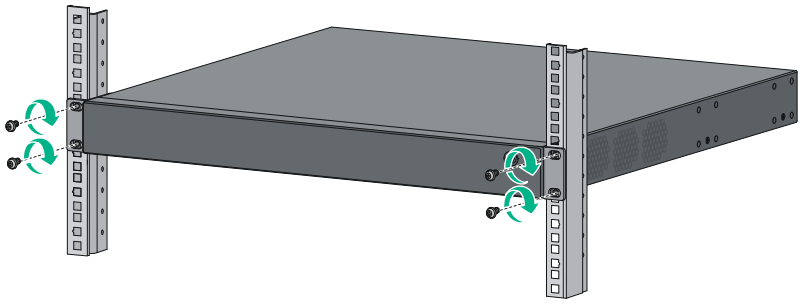


Figure 10 Mounting an HPE 5130 24G SFP 4SFP+ EI switch by the rear mounting position

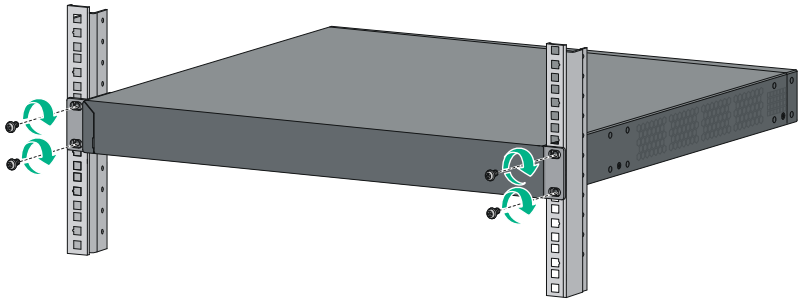
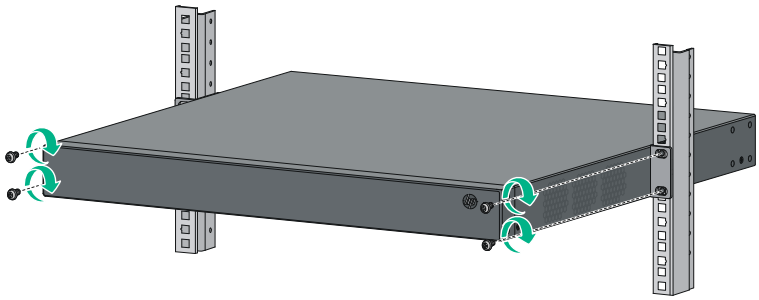


Figure 11 Mounting an HPE 5130 24G SFP 4SFP+ EI switch by the mid-mounting position



Mounting the switch on a workbench

IMPORTANT:

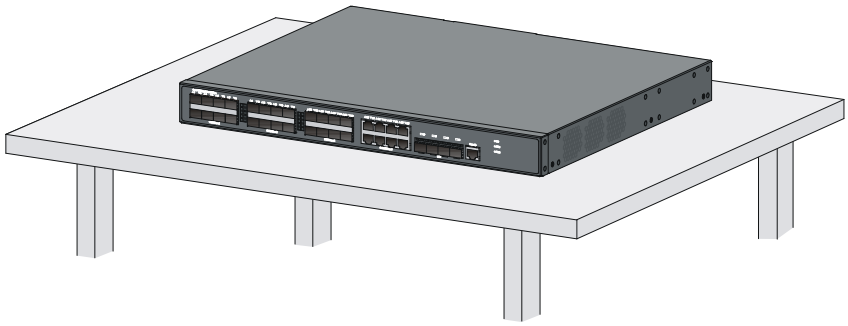
- Ensure 10 cm (3.9 in) of clearance around the chassis for heat dissipation.
- Do not place heavy objects on the switch.

If a standard 19-inch rack is not available, you can place you switch on a workbench.

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.

Figure 12 Mounting the switch on a workbench



Grounding the switch

WARNING!

Correctly connecting the switch grounding cable is crucial to lightning protection and EMI protection.

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.
- To guarantee the grounding effect, use the grounding cable provided with the switch to connect to the grounding strip in the equipment room as long as possible.

Grounding the switch with a grounding strip

WARNING!

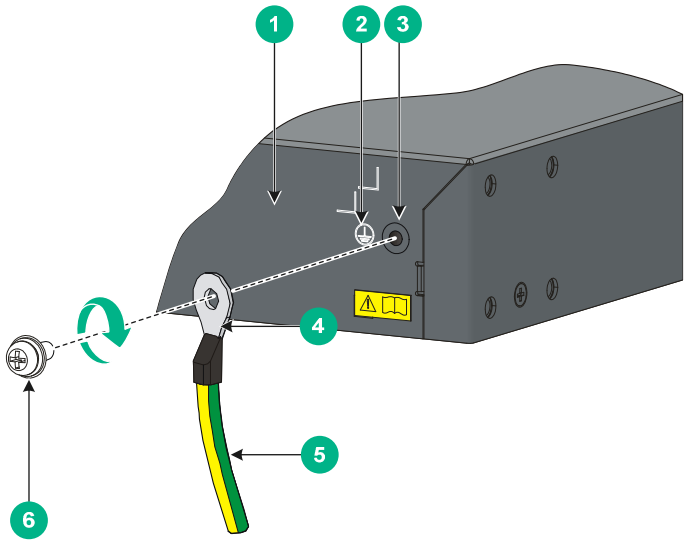
Connect the grounding cable to the grounding system in the equipment room. Do not connect it to a fire main or lightning rod.

If a grounding strip is available at the installation site, use the grounding strip to ground the switch.

To ground the switch by using a grounding strip:

1. Connect one end of the grounding cable to the grounding screw on the switch.
   a. Remove the grounding screw from the rear panel of the switch chassis.
   b. Attach the grounding screw to the ring terminal of the grounding cable.
   c. Use a screwdriver to fasten the grounding screw into the grounding screw hole.

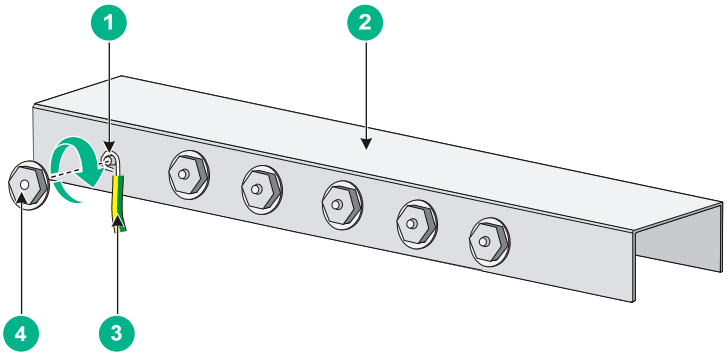
Figure 13 Connecting the grounding cable to the grounding hole of the switch



(1) Chassis rear panel	(2) Grounding sign
(3) Grounding hole	(4) Ring terminal
(5) Grounding cable	(6) Grounding screw

2. Connect the other end of the grounding cable to the grounding strip.
   a. Cut the grounding cable to a length according to the distance between the switch and the grounding strip.
   b. Peel 20 mm (0.79 in) of insulation sheath by using a wire stripper.
   c. Use the needle-nose pliers to bend the bare wire.
   d. Hook the grounding cable to the post on the grounding strip, and use the hex nut to secure the cable to the post.

Figure 14 Connecting the grounding cable to a grounding strip



(1) Grounding post	(2) Grounding strip
(3) Grounding cable	(4) Hex nut

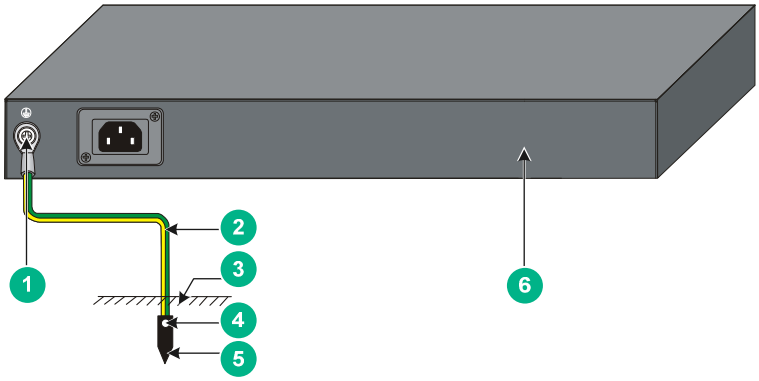
Grounding the switch with a grounding conductor buried in the earth ground

If the installation site has no 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 at least 50 × 50 × 5 mm (1.97 × 1.97 × 0.20 in). The steel tube must be zinc-coated and its wall thickness must be at least 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 15 Grounding the switch by burying the grounding conductor into the earth ground



(1) Grounding screw	(2) Grounding cable	(3) Earth
(4) Joint	(5) Grounding conductor	(6) Chassis rear panel

Installing and removing a power supply (HPE 5130 24G SFP 4SFP+ EI switch)

CAUTION:

Provide a circuit breaker for each power supply and make sure the circuit breaker is off before installation.

The HPE 5130 24G SFP 4SFP+ EI switch provides two power supply slots and comes with power supply slot 1 empty and a filler panel in power supply slot 2. You can install one power supply, or two power supplies for redundancy. For information about power supplies available for the HPE 5130 24G SFP 4SFP+ EI switch, see "Appendix B FRUs."

When two power supplies are installed, you can hot-swap a power supply. To avoid device damage and bodily injury, follow the procedures in Figure 16 and Figure 17 to install and replace a power supply.

Figure 16 Installation procedure

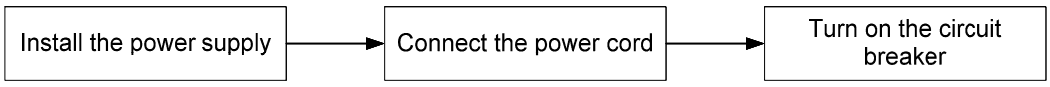
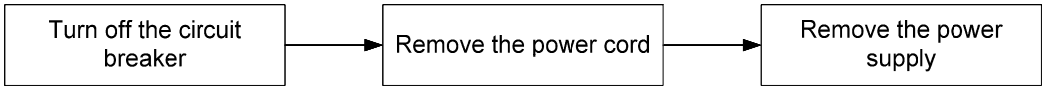


Figure 17 Removal procedure



The installation and removal procedures are the same for the PSR150-A/PSR150-A1(JD362A/JD362B) and PSR150-D/PSR150-D1(JD366A/JD366B) power supplies. This guide uses the PSR150-A1 (JD362B) power supply as an example.

Installing a power supply

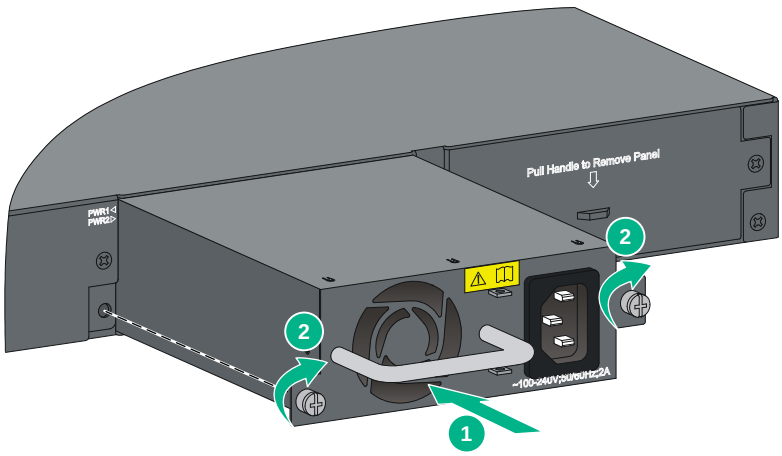
1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Unpack the power supply and verify that the power supply model is as required.
3. Remove the filler panel (if any) from the target slot.

   If you require only one power supply, install it in power supply slot 1 and make sure a filler panel is installed in power supply slot 2.
4. Orient the power supply with the upside up. Grasp the handle of the power supply with one hand and support its bottom with the other, and slide the power supply slowly along the guide rails into the slot. See callout 1 in Figure 18.

   To prevent damage to the power supply and the connector on the switch backplane, insert the power supply gently. If you encounter a hard resistance or the power supply tilts while inserting the power supply, pull out the power supply, realign it with the slot, and then insert it again.
5. 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 18.

   If the captive screw cannot be tightly fastened, examine the installation of the power supply.

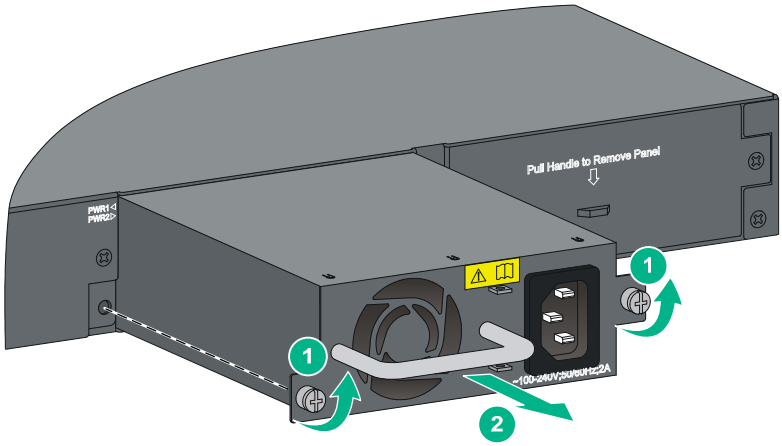
Figure 18 Installing a PSR150-A1 (JD362B) power supply



Removing a power supply

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Power off the power supply and remove the power cord.
3. Loosen the captive screws on the power supply with a Phillips screwdriver until they are completely disengaged from the chassis.
4. Grasp the handle of the power supply with one hand and pull the module part way out. Support the module bottom with the other hand, and pull the power supply slowly along the guide rails out of the slot.
5. Place the removed power supply in an antistatic bag.

Figure 19 Removing a PSR150-A1 (JD362B) power supply



Connecting the power cord

CAUTION:

- Provide a circuit breaker for each power cord.
- Before connecting the power cord, make sure the circuit breaker on the power cord is turned off.

Table 5 Power cord connection procedures at a glance

Switch model	Available power source	Connection procedure reference
• HPE 5130 24G 4SFP+ EI • HPE 5130 24G 2SFP+ 2XGT EI • HPE 5130 24G 4SFP+ EI BR	AC power source	Connecting the switch to an AC power source
• HPE 5130 48G 4SFP+ EI • HPE 5130 24G SFP 4SFP+ EI • HPE 5130 48G 2SFP+ 2XGT EI • HPE 5130 48G 4SFP+ EI BR	AC power source	Connecting the switch to an AC power source
	–48 V DC power source in the equipment room	Connecting the switch to a –48 VDC power source
	RPS Recommended HPE RPS models: A-RPS800 (JD183A) and A-RPS1600 (JG136A)	Connecting the switch to an RPS
• HPE 5130 24G PoE+ 4SFP+ (370W) EI • HPE 5130 48G PoE+ 4SFP+ (370W) EI	AC power source	Connecting the switch to an AC power source
• HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI • HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI • HPE 5130 24G PoE+ 4SFP+ (370W) EI BR • HPE 5130 48G PoE+ 4SFP+ (370W) EI BR	HPE A-RPS1600	Connecting the switch to an RPS

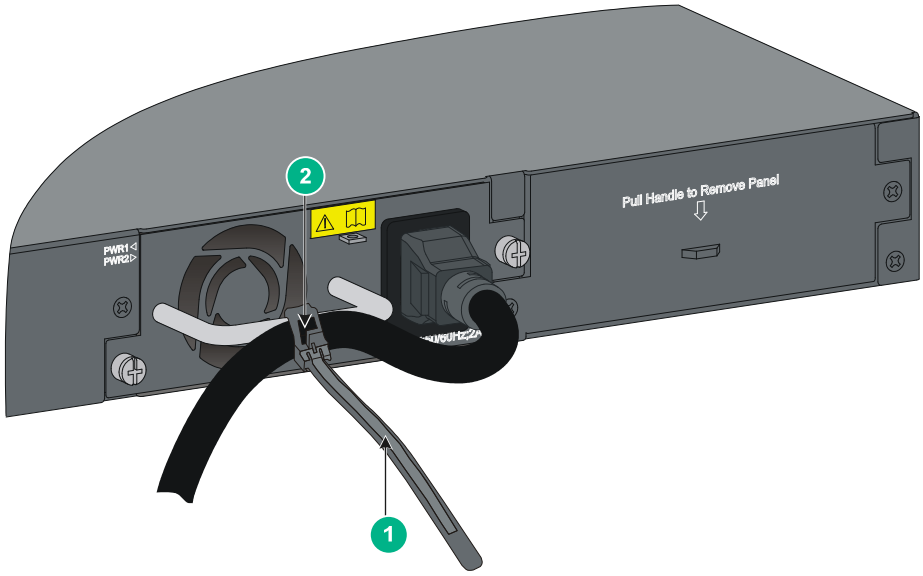
The HPE 5130 24G SFP 4SFP+ EI switch provides two power supply slots. The PSR150-A/PSR150-A1 (JD362A/JD362B) and PSR150-D/PSR150-D1 (JD366A/JD366B) power supplies are available for the HPE 5130 24G SFP 4SFP+ EI switch. The PSR150-A/PSR150-A1 (JD362A/JD362B)power supply supports AC power input. The PSR150-D/PSR150-D1 (JD366A/JD366B) power supply supports –48 V DC power input and RPS power input.

Connecting the switch to an AC power source

Securing the AC power cord for a hot-swappable AC power supply

1. Insert the cable tie through the hole in the power supply handle.
2. Use the cable tie to secure the AC power cord to the power supply handle.

Figure 20 Securing the AC power cord for a hot-swappable AC power supply



Securing the AC power cord for a fixed power supply

1. Insert the cable tie through the cable bridge.
2. Use the cable tie to secure the AC power cord to the cable bridge.

Figure 21 Inserting the cable tie through the cable bridge

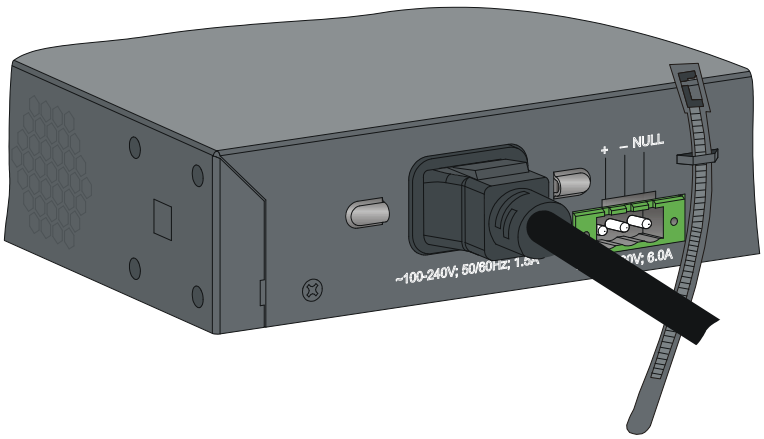
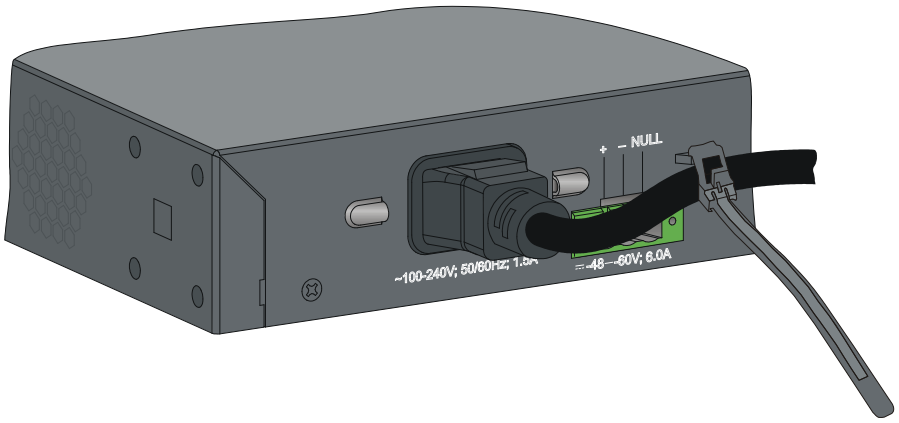


Figure 22 Using the cable tie to secure the AC power cord



Connecting the switch to a –48 VDC power source

CAUTION:

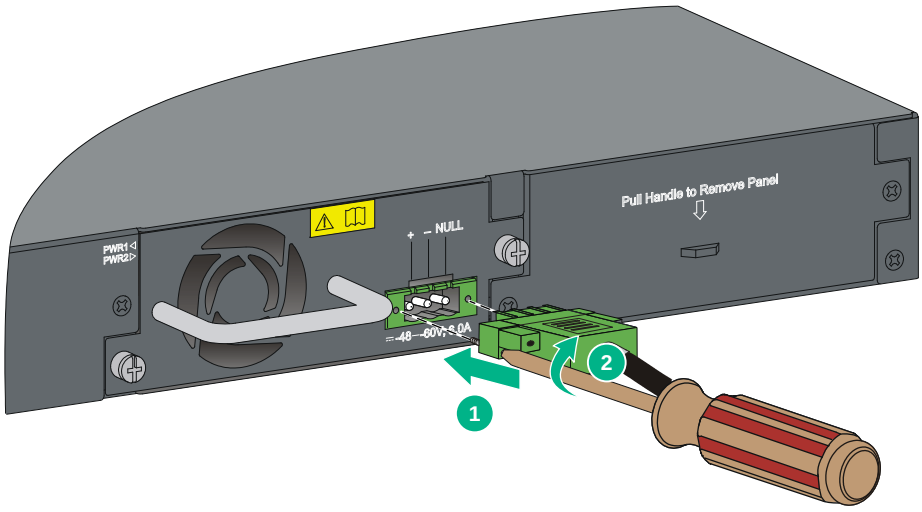
- You can only use an HPE DC power cord to connect the switch to a –48 VDC power source.
- The power cord color code scheme in Figure 23 is for illustration only. The cable delivered for your country or region might use a different color scheme. When you connect a power cord, always identify the polarity symbol on its wires.

To connect the switch to a –48 VDC power source:

1. Wear an ESD wrist strap and make sure it makes good skin contact and is reliably grounded.
2. Insert the DC connector into the DC power receptacle. See callout 1 in Figure 23.

   The connector of the DC power cord and the DC power receptacle are foolproof. Make sure the connector is correctly oriented.
3. Use a flat-blade screwdriver to fasten the two screws on the DC plug to secure the plug to the DC receptacle. See callout 2 in Figure 23.
4. Connect the other ends of the wires to the –48 VDC power source wiring terminals, with the negative wire (**–** or **L–**) to the negative terminal (**–**) and the positive wire (**+** or **M/N**) to the positive terminal (**+**).

Figure 23 Connecting the DC power cord to an HPE 5130 24G SFP 4SFP+ EI switch



Connecting the switch to an RPS

CAUTION:

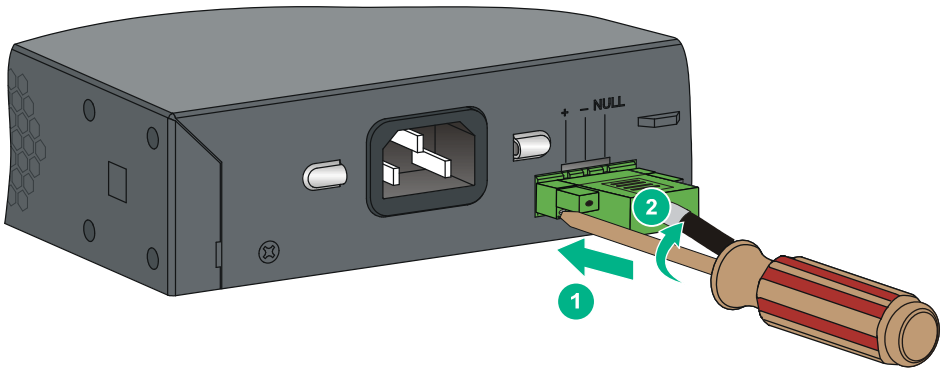
To connect the switch to an HPE RPS, you can only use the power cord that is provided with the RPS.

To connect the switch to an RPS:

1. Correctly orient the plug with the power receptacle on the power supply, and insert the plug into the receptacle (See callout 1 in Figure 23).

   If you cannot insert the plug into the receptacle, re-orient the plug rather than use excessive force to push it in.
2. Tighten the screws on the plug with a flat-blade screwdriver to secure the plug in the RPS receptacle. See callout 2 in Figure 23.
3. Connect the other end of the power cord to the RPS.

Figure 24 Connecting an RPS cord to an HPE 5130 48G 4SFP+ EI switch



Verifying the installation

After you complete the installation, verify that:

- 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.

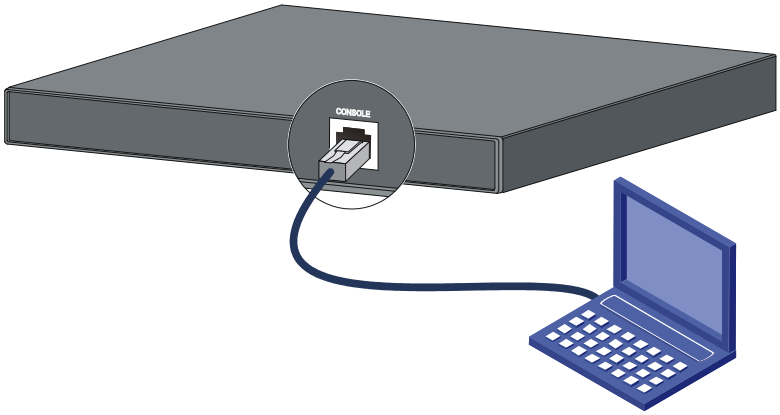
Accessing the switch for the first time

Setting up the configuration environment

The first time you access the switch you must use a console cable to connect a configuration terminal, for example, a PC, to the console port on the switch, as shown in Figure 25.

The switch is not provided with a serial console cable.Prepare yourself or purchase it from Hewlett Packard Enterprise.

Figure 25 Connecting the console port to a terminal



Connecting the console cable

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

Figure 26 Console cable

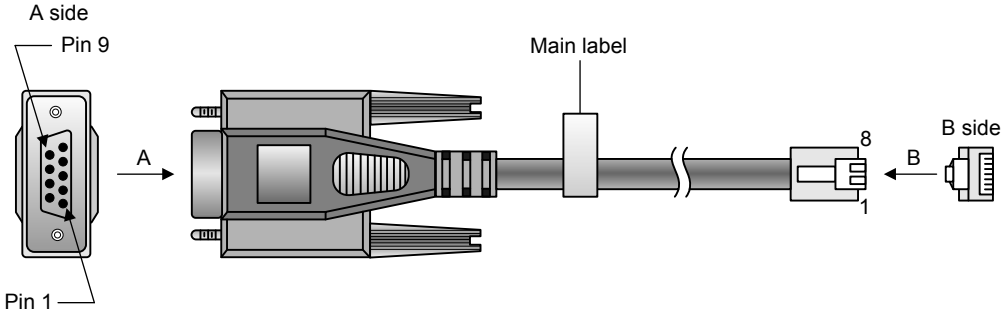


Table 6 Console cable pinouts

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

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

To connect a terminal (for example, a PC) to the switch:

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

NOTE:

- Identify the mark on the 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.

Setting terminal parameters

To configure and manage the switch through the console port, you must run a terminal emulator program, HyperTerminal or PuTTY, on your configuration terminal. For more information about the terminal emulator programs, see the user guides for these programs.

The following are the required terminal settings:

- **Bits per second**—9,600.
- **Data bits**—8.
- **Stop bits**—1.
- **Parity**—None.
- **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 configuration terminal (a PC, for example) 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.

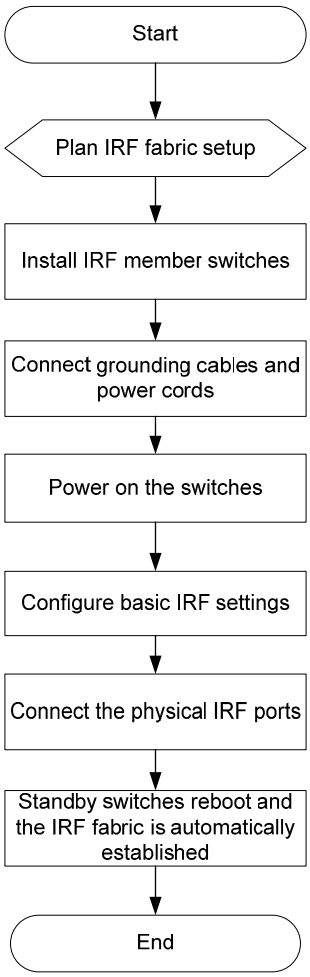
For more information about the configuration commands and CLI, see *HPE FlexNetwork 5130 EI Switch Series Configuration Guides* and *HPE FlexNetwork 5130 EI Switch Series Command References*.

Setting up an IRF fabric

You can use HPE IRF technology to connect and virtualize HPE FlexNetwork 5130 EI switches into a large virtual switch called an "IRF fabric" for flattened network topology, and high availability, scalability, and manageability.

IRF fabric setup flowchart

Figure 27 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 physical IRF 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 grounding cables 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 *HPE FlexNetwork 5130 EI Switch Series IRF Configuration Guide*.
6. Connect the physical IRF ports.	Connect physical IRF ports on switches. Use SFP+ transceiver modules and fibers for connections over a long distance, or use SFP+ cables or twisted pair cables for connections over a short distance. 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.

An HPE FlexNetwork 5130 IRF fabric can have a maximum of 9 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.

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 *HPE FlexNetwork 5130 EI Switch Series IRF Configuration Guide*.

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 at least 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 HPE FlexNetwork 5130 EI switches can provide 10-GE IRF connections through 1/10 GE Ethernet ports or SFP+ ports, and you can bind several 1/10 GE Ethernet ports or SFP+ ports to an IRF port for increased bandwidth and availability.

Figure 28 and Figure 29 show the topologies of an IRF fabric containing three HPE 5130 24G 4SFP+ EI switches. The IRF port connections in the two figures are for illustration only, and more connection methods are available.

Figure 28 IRF fabric in daisy chain topology

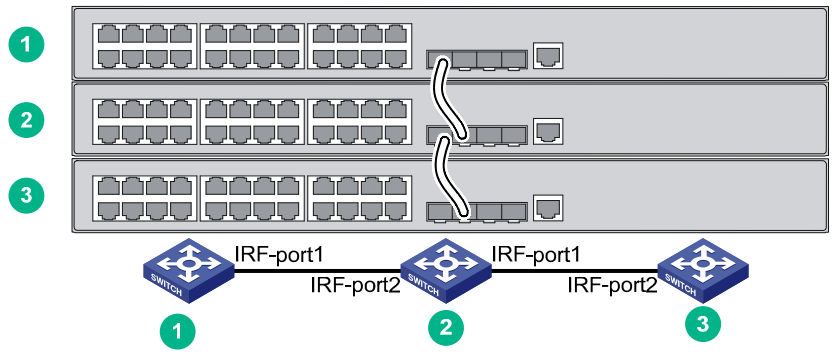
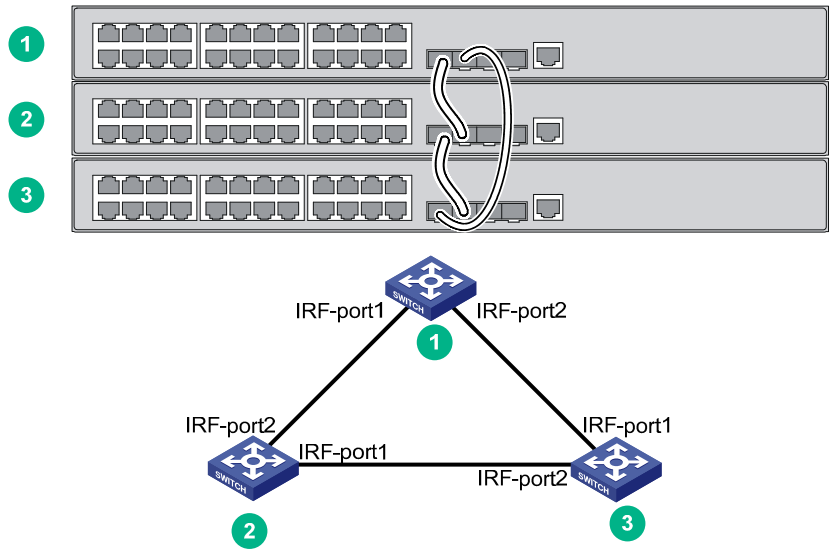


Figure 29 IRF fabric in ring topology



Identifying physical IRF ports on the member switches

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

Planning the cabling scheme

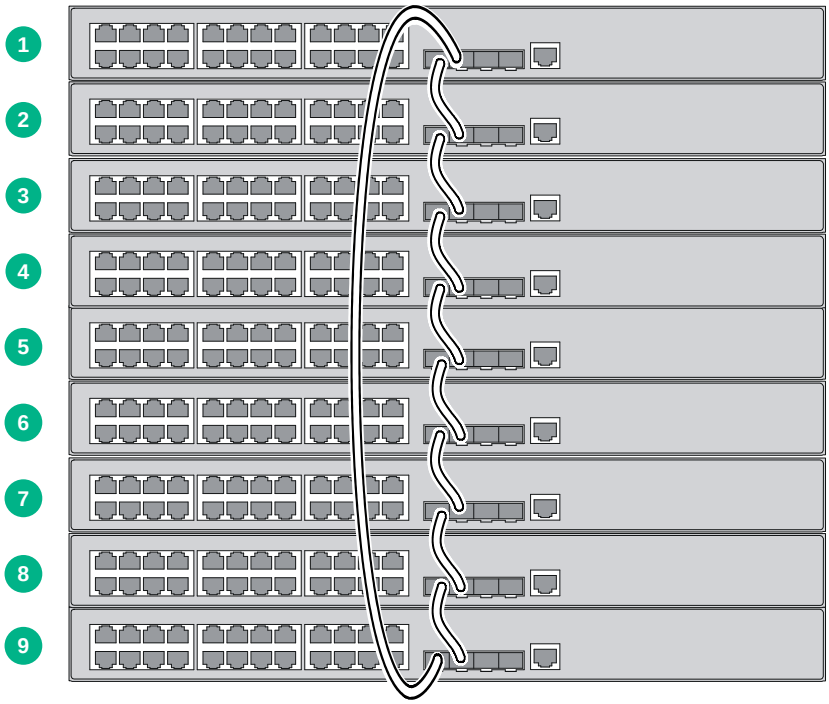
Use twisted pair cables, SFP+ cables, or SFP+ transceiver modules and fibers to connect the IRF member switches. If the IRF member switches are far away from one another, choose the SFP+ transceiver modules with optical fibers. If the IRF member switches are all in one equipment room, choose twisted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

As a best practice, use ring topology to connect the switches. The following describes cabling schemes in ring topology.

Connecting the IRF member switches in one rack

Use SFP+ cables to connect the IRF member switches (9 switches in this example) in a rack as shown in Figure 30. The switches in the ring topology (see Figure 31) are in the same order as connected in the rack.

Figure 30 Connecting the switches in one rack



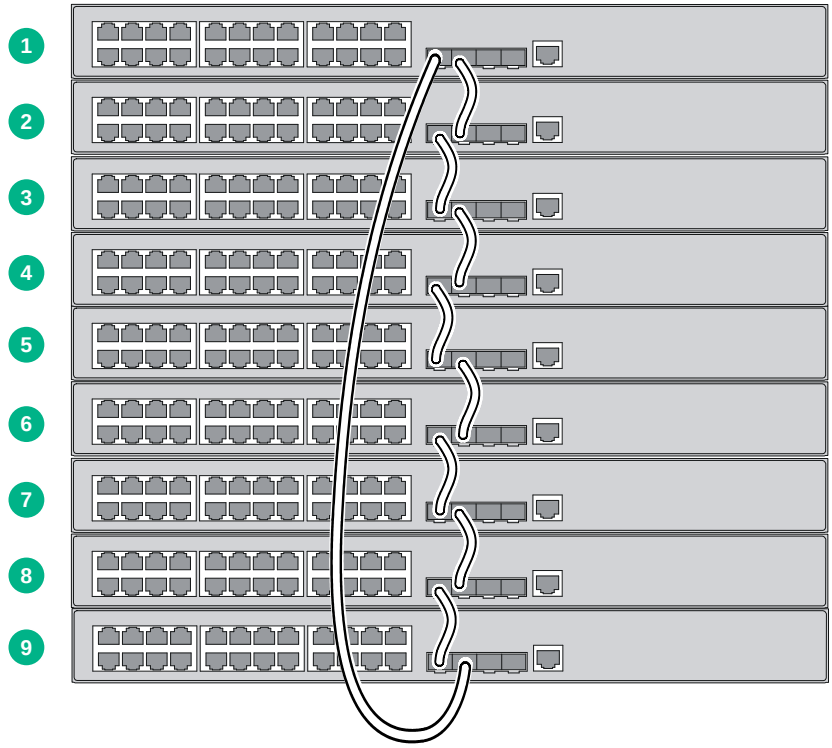
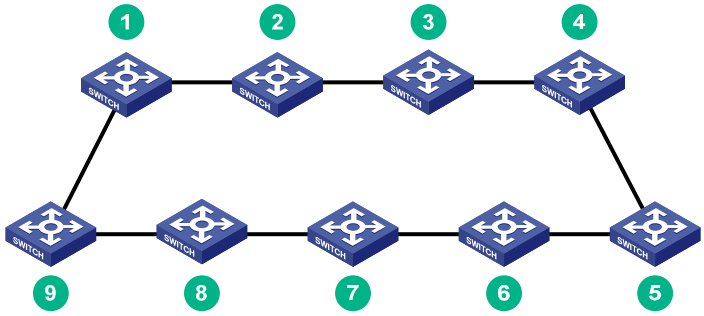


Figure 31 IRF fabric topology

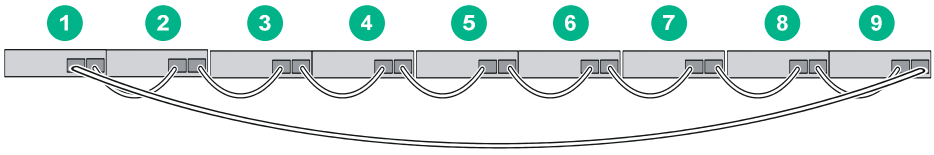


Connecting the IRF member switches in a ToR solution

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

Figure 32 shows an example for connecting 9 top of rack IRF member switches by using SFP+ transceiver modules and optical fibers. The topology is the same as Figure 31.

Figure 32 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 *HPE FlexNetwork 5130 EI Switch Series Fundamentals Configuration Guide*) 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 *HPE FlexNetwork 5130 EI Switch Series IRF Configuration Guide*.

Connecting the physical IRF ports

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

Wear an ESD wrist strap when you connect twisted pair cables, SFP+ cables, or SFP+ transceiver modules and fibers. For how to connect them, see *HPE 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 or SNMP to access the IRF fabric from the network management station. (See *HPE FlexNetwork 5130 EI Switch Series Fundamentals Configuration Guide*.)
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 7.

Table 7 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 at least 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 *HPE FlexNetwork 5130 EI Switch Series IRF Configuration Guide*.

Maintenance and troubleshooting

Fixed power supply failure

The HPE 5130 24G 4SFP+ EI, HPE 5130 24G 2SFP+ 2XGT EI, and HPE 5130 24G 4SFP+ EI BR switches use fixed power supplies and support only AC power input.

The HPE 5130 24G PoE+ 4SFP+ (370W) EI, HPE 5130 48G 4SFP+ EI, HPE 5130 24G PoE+ 4SFP+ (370W) EI BR, HPE 5130 48G PoE+ 4SFP+ (370W) EI BR, HPE 5130 48G 2SFP+ 2XGT EI, HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI, and HPE 5130 48G PoE+ 4SFP+ (370W) EI switches use fixed power supplies and support AC power input, RPS power input, and concurrent AC and RPS DC inputs. For these switch models, the "Power x failed" message is displayed as long as only one power supply is operating because the switch cannot identify whether the other power supply is not connected or has failed. In this case, see this section to determine the power supply state.

To identify a fixed power supply failure, examine the system status LED and the RPS status LED of the switch.

Table 8 Fixed power supply LED description

LED	Mark	Status	Description
System status LED	SYS	Off	The switch is powered off.
RPS status LED	RPS	Steady green	The AC input is normal, and the RPS is in position or working normally.
		Steady yellow	RPS power input is normal, but AC input has failed or AC input is not connected.
		Off	No RPS is connected.

AC input failure

Symptom

The system status LED is off.

Solution

To resolve the problem:

1. Verify that the AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
2. Verify that the AC power source is operating correctly.
3. Verify that the operating temperature of the switch is in the acceptable range, and the power supply has good ventilation. Over-temperature can cause the power supply to stop working and enter the protection state.
4. If the problem persists, contact Hewlett Packard Enterprise Support.

RPS DC input failure

Symptom

The system status LED or RPS status LED is off.

Solution

To resolve the problem:

1. Verify that the switch is securely connected to the RPS.
2. Verify that the RPS is operating correctly.
3. Verify that the operating temperature of the switch is in the acceptable range, and the power supply has good ventilation. Over-temperature can cause the power supply to stop working and enter the protection state.
4. If the problem persists, contact Hewlett Packard Enterprise Support.

Concurrent RPS and AC input failure

Symptom

- The system status LED is off.

  It indicates that both the AC input and RPS input have failed. To resolve the problem, see "Solution 1."
- The system status LED is on but the RPS status LED is steady yellow.

  It indicates that the AC input has failed. To resolve the problem, see "Solution 2."
- The system status LED is on but the RPS status LED is off.

  It indicates that the RPS input has failed. To resolve the problem, see "Solution 3."

Solution 1

To resolve the problem:

1. Verify that the AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
2. Verify that the AC power source is operating correctly.
3. Verify that the switch is securely connected to the RPS.
4. Verify that the RPS is operating correctly.
5. Verify that the operating temperature of the switch is in the acceptable range, and the power supply has good ventilation. Over-temperature can cause the power supply to stop working and enter the protection state.
6. If the problem persists, contact Hewlett Packard Enterprise Support.

Solution 2

To resolve the problem:

1. Verify that the AC power cord is securely connected to the switch, and the AC-input power receptacle on the switch and the connected AC power outlet are in good condition.
2. Verify that the AC power source is operating correctly.
3. If the problem persists, contact Hewlett Packard Enterprise Support.

Solution 3

To resolve the problem:

1. Verify that the switch is securely connected to the RPS.
2. Verify that the RPS is operating correctly.
3. If the problem persists, contact Hewlett Packard Enterprise Support.

Hot-swappable power supply failure

The HPE 5130 24G SFP 4SFP+ EI switch uses hot-swappable power supplies. You can determine the power supply operating status by examining the power supply LEDs PWR1 and PWR2 on the switch front panel. For descriptions about the PWR1 and PWR2 LEDs, see "Appendix C Ports and LEDs."

Symptom

The LED indicates that a power supply failure has occurred.

Solution

To resolve the problem:

1. Verify that the power supply model is as required.
2. Verify that the power supply is installed correctly in the switch.
3. Verify that the switch is operating in the acceptable temperature range.
4. If the problem persists, contact Hewlett Packard Enterprise Support.

Configuration terminal problems

No display on the configuration terminal

Symptom

The configuration terminal does not display any information when the switch is powered on.

Solution

To resolve the problem:

1. Verify that the power system is operating correctly.
2. Verify that the switch is operating correctly.
3. Verify that the console cable has been connected correctly.
4. Verify that the following settings are configured for the terminal:
   - **Baud rate**—9600.
   - **Data bits**—8.
   - **Parity**—None.
   - **Stop bits**—1.
   - **Flow control**—None.
5. Verify that the console cable is not faulty.
6. If the problem persists, contact Hewlett Packard Enterprise Support.

Garbled display on the configuration terminal

Symptom

The configuration terminal displays garbled text.

Solution

To resolve the problem:

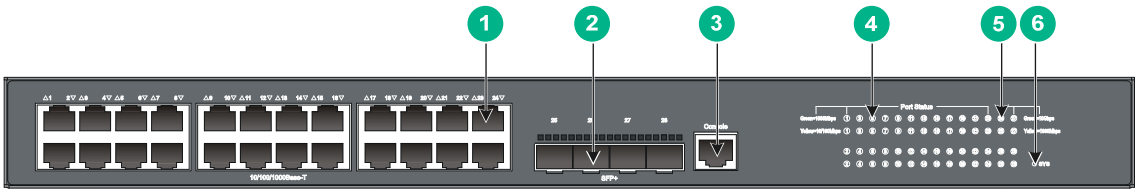
1. Verify that the following settings are configured for the terminal:
   - **Baud rate**—9600.
   - **Data bits**—8.
   - **Parity**—None.
   - **Stop bits**—1.
   - **Flow control**—None.
2. If the problem persists, contact Hewlett Packard Enterprise Support.

Appendix A Chassis views and technical specifications

Chassis views

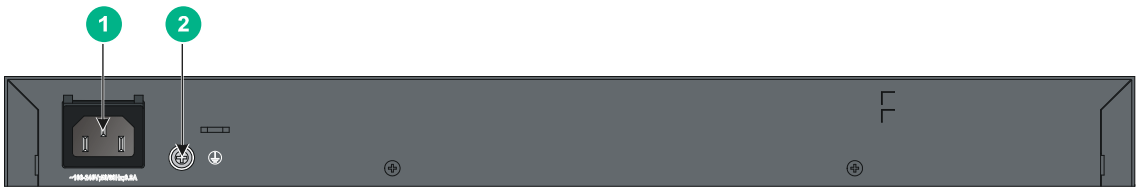
HPE 5130 24G 4SFP+ EI/HPE 5130 24G 4SFP+ EI BR

Figure 33 Front panel



(1) 10/100/1000Base-T autosensing Ethernet port	(2) SFP+ port
(3) Console port	(4) 10/100/1000Base-T autosensing Ethernet port LED
(5) SFP+ port LED	(6) System status LED (SYS)

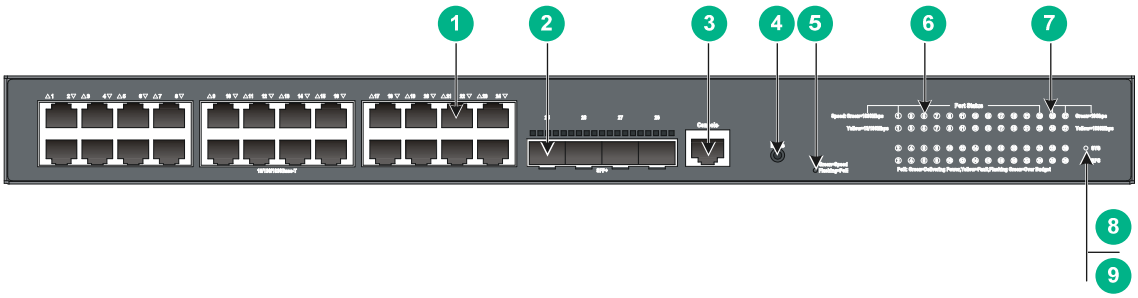
Figure 34 Rear panel



(1) AC-input power receptacle	(2) Grounding screw

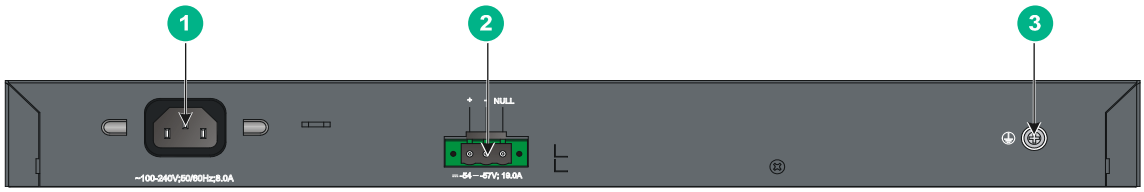
HPE 5130 24G PoE+ 4SFP+ (370W) EI/HPE 5130 24G PoE+ 4SFP+ (370W) EI BR

Figure 35 Front panel



(1) 10/100/1000Base-T autosensing Ethernet port	(2) SFP+ port
(3) Console port	(4) Port LED mode switching button
(5) Port mode LED	(6) 10/100/1000Base-T autosensing Ethernet port LED
(7) SFP+ port LED	(8) System status LED (SYS)
(9) RPS status LED (RPS)	

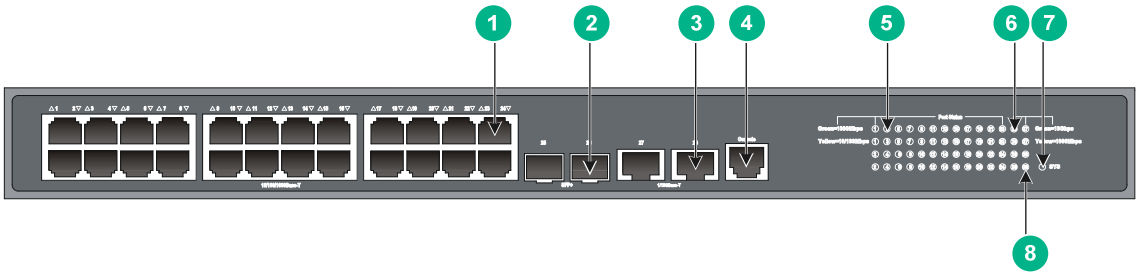
Figure 36 Rear panel



(1) AC-input power receptacle	(2) RPS receptacle
(3) Grounding screw	

HPE 5130 24G 2SFP+ 2XGT EI

Figure 37 Front panel



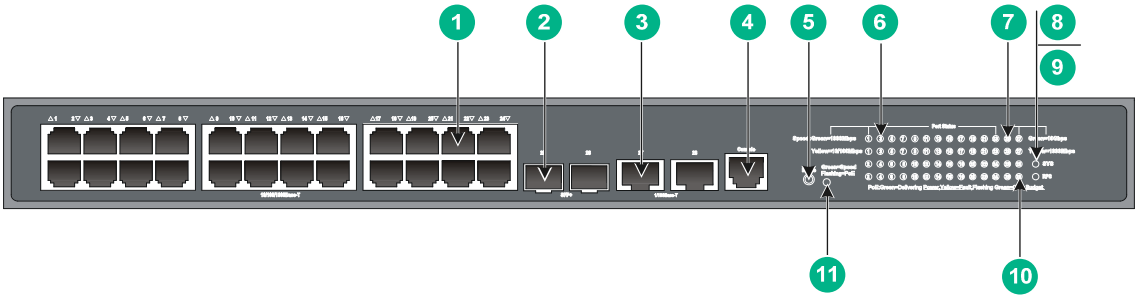
(1) 10/100/1000Base-T autosensing Ethernet port	(2) SFP+ port
(3) 1/10GBase-T autosensing Ethernet port	(4) Console port
(5) 10/100/1000Base-T autosensing Ethernet port LED	(6) SFP+ port LED
(7) System status LED (SYS)	(8) 1/10GBase-T autosensing Ethernet port LED

Figure 38 Rear panel

(1) AC-input power receptacle	(2) Grounding screw

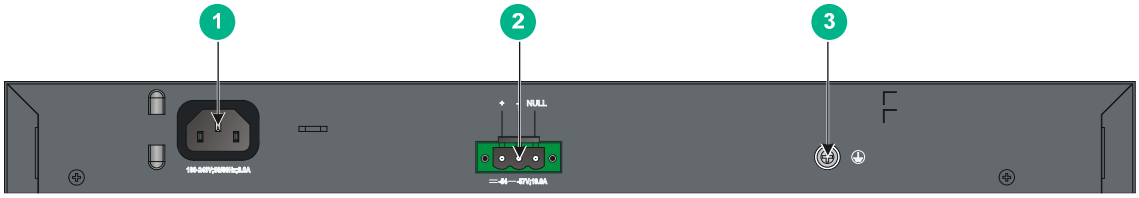
HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI

Figure 39 Front panel



(1) 10/100/1000Base-T autosensing Ethernet port	(2) SFP+ port
(3) 1/10GBase-T autosensing Ethernet port	(4) Console port
(5) Port LED mode switching button	(6) 10/100/1000Base-T autosensing Ethernet port LED
(7) SFP+ port LED	(8) System status LED (SYS)
(9) RPS status LED (RPS)	(10) 1/10GBase-T autosensing Ethernet port LED
(11) Port mode LED	

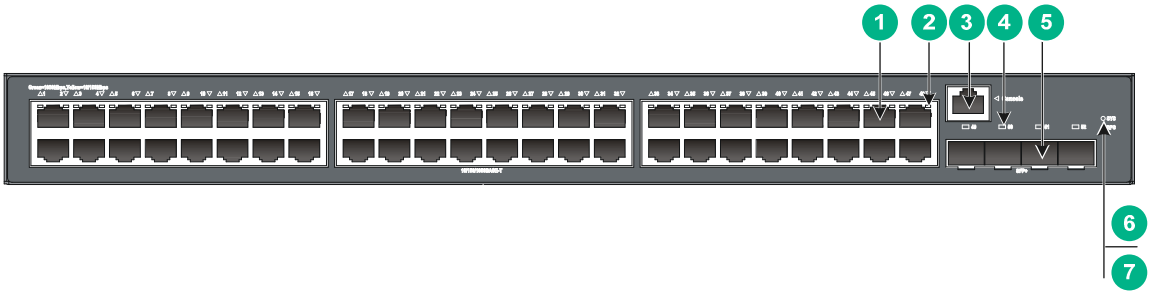
Figure 40 Rear panel



(1) AC-input power receptacle	(2) RPS receptacle
(3) Grounding screw	

HPE 5130 48G 4SFP+ EI/HPE 5130 48G 4SFP+ EI BR

Figure 41 Front panel



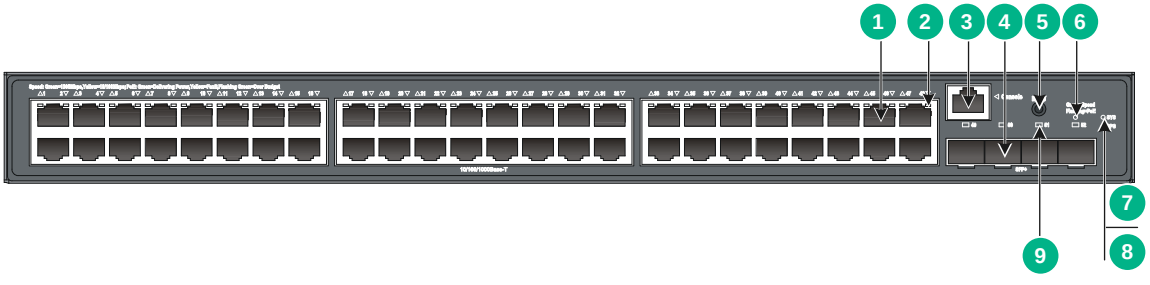
(1) 10/100/1000Base-T autosensing Ethernet port	(2) 10/100/1000Base-T autosensing Ethernet port LED
(3) Console port	(4) SFP+ port LED
(5) SFP+ port	(6) System status LED (SYS)
(7) RPS status LED (RPS)	

Figure 42 Rear panel

(1) AC-input power receptacle	(2) RPS receptacle
(3) Grounding screw	

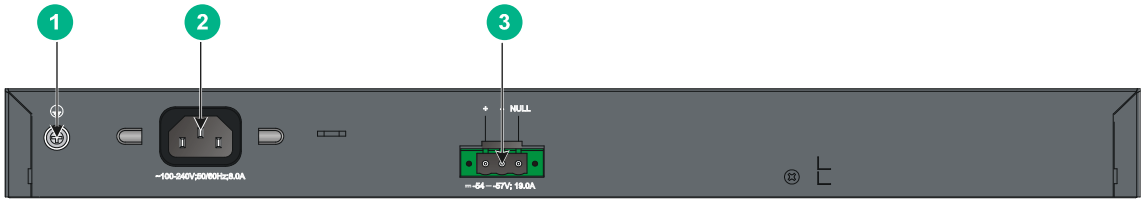
HPE 5130 48G PoE+ 4SFP+ (370W) EI/HPE 5130 48G PoE+ 4SFP+ (370W) EI BR

Figure 43 Front panel



(1) 10/100/1000Base-T autosensing Ethernet port	(2) 10/100/1000Base-T autosensing Ethernet port LED
(3) Console port	(4) SFP+ port
(5) Port LED mode switching button	(6) Port mode LED
(7) System status LED (SYS)	(8) RPS status LED (RPS)
(9) SFP+ port LED	

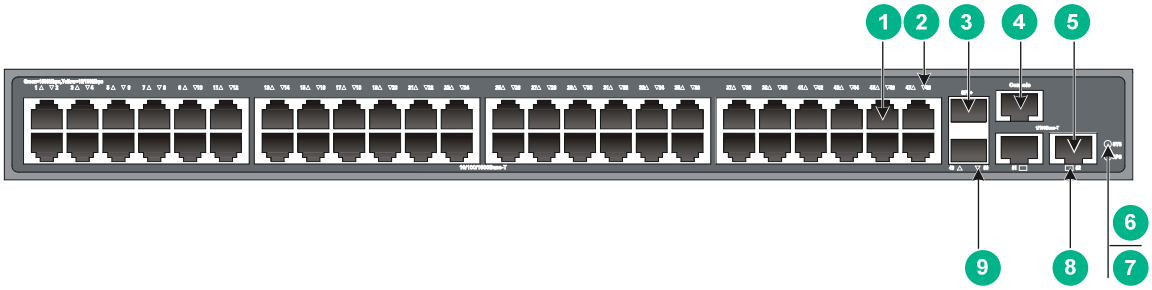
Figure 44 Rear panel



(1) Grounding screw	(2) AC-input power receptacle
(3) RPS receptacle	

HPE 5130 48G 2SFP+ 2XGT EI

Figure 45 Front panel



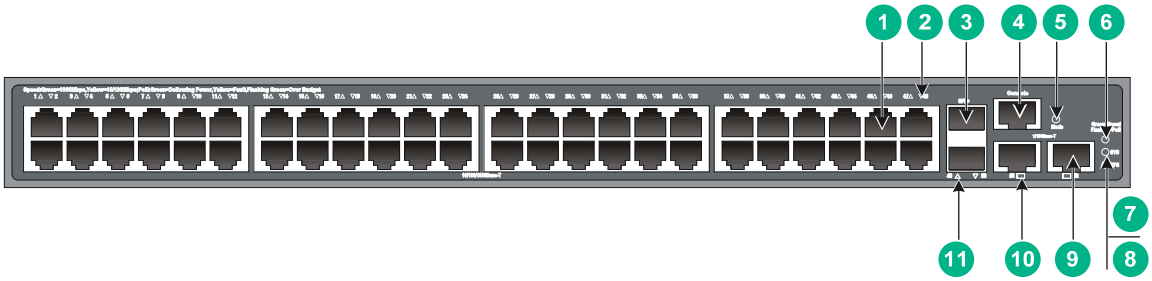
(1) 10/100/1000Base-T autosensing Ethernet port	(2) 10/100/1000Base-T autosensing Ethernet port LED
(3) SFP+ port	(4) Console port
(5) 1/10GBase-T autosensing Ethernet port	(6) System status LED (SYS)
(7) RPS status LED (RPS)	(8) 1/10GBase-T autosensing Ethernet port LED
(9) SFP+ port LED	

Figure 46 Rear panel

(1) AC-input power receptacle	(2) RPS receptacle
(3) Grounding screw	

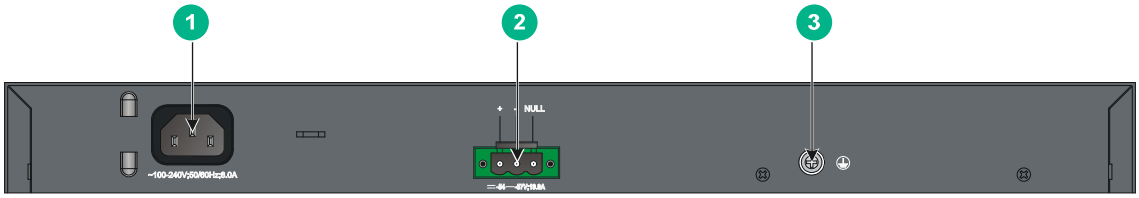
HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI

Figure 47 Front panel



(1) 10/100/1000Base-T autosensing Ethernet port	(2) 10/100/1000Base-T autosensing Ethernet port LED
(3) SFP+ port	(4) Console port
(5) Port LED mode switching button	(6) Port mode LED
(7) System status LED (SYS)	(8) RPS status LED (RPS)
(9) 1/10GBase-T autosensing Ethernet port	(10) 1/10GBase-T autosensing Ethernet port LED
(11) SFP+ port LED	

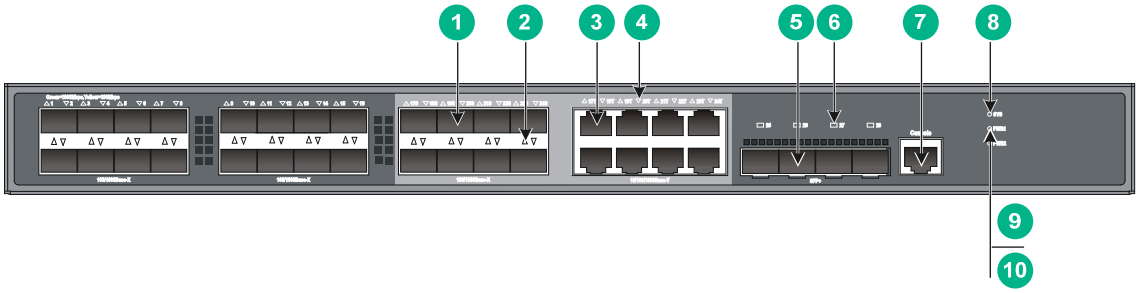
Figure 48 Rear panel



(1) AC-input power receptacle	(2) RPS receptacle
(3) Grounding screw	

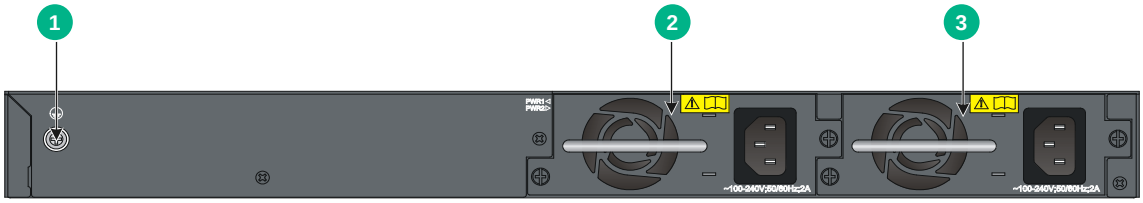
HPE 5130 24G SFP 4SFP+ EI

Figure 49 Front panel



(1) 100/1000Base-X SFP port	(2) 100/1000Base-X SFP port LED
(3) 10/100/1000Base-T autosensing Ethernet port	(4) 10/100/1000Base-T autosensing Ethernet port LED
(5) SFP+ port	(6) SFP+ port LED
(7) Console port	(8) System status LED (SYS)
(9) Power supply 1 status LED (PWR1)	(10) Power supply 2 status LED (PWR2)

Figure 50 Rear panel



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

The HPE 5130 24G SFP 4SFP+ EI switch comes with no power supply or filler panel in power supply slot 1 and a filler panel in power supply slot 2. You can install one or two power supplies for the switch as needed. In Figure 50, two PSR150-A1 (JD362B) AC power supplies are installed. For more information about installing and removing a power supply, see "Installing and removing a power supply (HPE 5130 24G SFP 4SFP+ EI switch)."

Technical specifications

Table 9 Technical specifications for non-PoE switch models

Item	HPE 5130 24G 4SFP+ EI HPE 5130 24G 4SFP+ EI BR	HPE 5130 24G 2SFP+ 2XGT EI	HPE 5130 48G 4SFP+ EI HPE 5130 48G 4SFP+ EI BR	HPE 5130 24G SFP 4SFP+ EI	HPE 5130 48G 2SFP+ 2XGT EI
Dimensions (H × W × D)	43.6 × 440 × 160 mm (1.72 × 17.32 × 6.30 in)	43.6 × 440 × 160 mm (1.72 × 17.32 × 6.30 in)	43.6 × 440 × 260 mm (1.72 × 17.32 × 10.24 in)	43.6 × 440 × 360 mm (1.72 × 17.32 × 14.17 in)	43.6 × 440 × 270 mm (1.72 × 17.32 × 10.63 in)

Item	HPE 5130 24G 4SFP+ EI HPE 5130 24G 4SFP+ EI BR	HPE 5130 24G 2SFP+ 2XGT EI	HPE 5130 48G 4SFP+ EI HPE 5130 48G 4SFP+ EI BR	HPE 5130 24G SFP 4SFP+ EI	HPE 5130 48G 2SFP+ 2XGT EI
Weight	≤ 5 kg (11.02 lb)	≤ 3 kg (6.61 lb)	≤ 5 kg (11.02 lb)	≤ 8 kg (17.64 lb)	≤ 5 kg (11.02 lb)
Console ports	1	1	1	1	1
10/100/1000Base-T autosensing Ethernet ports	24	24	48	8 (Each and its corresponding SFP port form a combo interface.)	48
1/10GBase-T autosensing Ethernet ports	N/A	2	N/A	N/A	2
100/1000Base-X SFP ports	N/A	N/A	N/A	24 (The rightmost eight SFP ports and their corresponding 10/100/1000Base-T autosensing Ethernet ports form combo interfaces.)	N/A
SFP+ ports	4	2	4	4	2
Power supply slots	N/A	N/A	N/A	2, on the rear panel	N/A

Input voltage	• Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz
	• Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz
			• AC power source
			  ○ Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz
			  ○ Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz
			• DC power source: –48 V DC power source in the equipment room or RPS (recommended HPE RPS models: A-RPS800 or A-RPS1600)
			  ○ Rated voltage: –48 VDC to –60 VDC
			• Max voltage: –36 VDC to –72 VDC		

Minimum power consumption	19 W	20 W	• AC: 38 W • DC: 38 W	• AC: 30 W • DC: 38 W	• AC: 36 W • DC: 36 W
Maximum power consumption	26 W	34 W	• AC: 45 W • DC: 50 W	• AC: 60 W • DC: 68 W	• AC: 54 W • DC: 54 W
Chassis leakage current compliance	• UL60950-1 • EN60950-1 • IEC60950-1 • GB4943.1				

Item	HPE 5130 24G 4SFP+ EI HPE 5130 24G 4SFP+ EI BR	HPE 5130 24G 2SFP+ 2XGT EI	HPE 5130 48G 4SFP+ EI HPE 5130 48G 4SFP+ EI BR	HPE 5130 24G SFP 4SFP+ EI	HPE 5130 48G 2SFP+ 2XGT EI
Melting current of power supply fuse	AC-input: 2 A/250 V	2 A/250 V	• AC-input: 10 A/250 V • DC-input: 5 A/250 V	• AC-input: 6.3 A/250 V • DC-input: 8 A/250 V	• AC-input: 10 A/250 V • DC-input: 5 A/250 V
Operating temperature	0°C to 45°C (32°F to 113°F)				
Operating humidity	5% to 95%, noncondensing				
Fire resistance compliance	• UL60950-1 • EN60950-1 • IEC60950-1 • GB4943.1				

Table 10 Technical specifications for PoE switch models

Item	HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI	HPE 5130 24G PoE+ 4SFP+ (370W) EI HPE 5130 24G PoE+ 4SFP+ (370W) EI BR	HPE 5130 48G PoE+ 4SFP+ (370W) EI HPE 5130 48G PoE+ 4SFP+ (370W) EI BR	HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI
Dimensions (H × W × D)	43.6 × 440 × 360 mm (1.72 × 17.32 × 14.17 in)	43.6 × 440 × 300 mm (1.72 × 17.32 × 11.81 in)	43.6 × 440 × 360 mm (1.72 × 17.32 × 14.17 in)	43.6 × 440 × 420 mm (1.72 × 17.32 × 16.54 in)
Weight	≤ 6 kg (13.23 lb)	≤ 8 kg (17.64 lb)	≤ 8 kg (17.64 lb)	≤ 7 kg (15.43 lb)
Console ports	1	1	1	1
10/100/1000 Base-T autosensing Ethernet ports	24	24	48	48
1/10GBase-T autosensing Ethernet ports	2	N/A	N/A	2
SFP+ ports	2	4	4	2

Input voltage	• Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz
	• Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz
		• AC power source
		  ○ Rated voltage: 100 VAC to 240 VAC @ 50 or 60 Hz
		  ○ Max voltage: 90 VAC to 264 VAC @ 47 to 63 Hz
		• DC power source: HPE A-RPS1600
		  ○ Rated voltage: –54 VDC to –57 VDC
		• Max voltage: –44 VDC to –60 VDC for single DC input and –54 VDC to –57 VDC for AC+DC dual inputs		

Maximum	30 W	30 W	30 W	30 W

Item	HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI	HPE 5130 24G PoE+ 4SFP+ (370W) EI HPE 5130 24G PoE+ 4SFP+ (370W) EI BR	HPE 5130 48G PoE+ 4SFP+ (370W) EI HPE 5130 48G PoE+ 4SFP+ (370W) EI BR	HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI
PoE per port				
Total PoE	• AC: 370 W • DC: 800 W	• AC: 370 W • DC: 800 W	• AC: 370 W • DC: 800 W	• AC: 370 W • DC: 800 W
Minimum power consumption	• AC: 31 W • DC: 20 W	• AC: 30 W • DC: 25 W	• AC: 47 W • DC: 43 W	• AC: 43 W • DC: 30 W
Maximum power consumption (including PoE consumption)	• AC: 425 W (including 370 W PoE consumption) • DC: 830 W (including 800 W PoE consumption)	• AC: 460 W (including 370 W PoE consumption) • DC: 850 W (including 800 W PoE consumption)	• AC: 490 W (including 370 W PoE consumption) • DC: 890 W (including 800 W PoE consumption)	• AC: 470 W (including 370 W PoE consumption) • DC: 910 W (including 800 W PoE consumption)
Chassis leakage current compliance	• UL60950-1 • EN60950-1 • IEC60950-1 • GB4943.1			
Melting current of power supply fuse	• AC-input: 10 A/250 V • DC-input: 25 A/250 V	• AC-input: 10 A/250 V • DC-input: 25 A/250 V	• AC-input: 10 A/250 V • DC-input: 25 A/250 V	• AC-input: 10 A/250 V • DC-input: 25 A/250 V
Operating temperature	0°C to 45°C (32°F to 113°F)			
Operating humidity	5% to 95%, noncondensing			
Fire resistance compliance	• UL60950-1 • EN60950-1 • IEC60950-1 • GB4943.1			

Appendix B FRUs

The HPE 5130 24G SFP 4SFP+ EI switch provides two power supply slots. One power supply can meet the power requirement of the switch. You can install two power supplies on the switch for redundancy. Table 11 describes the power supplies available for the HPE 5130 24G SFP 4SFP+ EI switch.

Table 11 Power supplies available for the HPE 5130 24G SFP 4SFP+ EI switch

Power supply model	Item	Specification	Remarks
PSR150-A(JD362A) PSR150-A1(JD362B)	Rated input voltage	100 VAC to 240 VAC @ 50 Hz or 60 Hz	For more information about the power supplies, see *HPE PSR150-A & PSR150-D Power Supplies User Guide.*
	Max input voltage	90 VAC to 264 VAC @ 47 Hz to 63 Hz	
	Max output power	150 W	
PSR150-D(JD366A) PSR150-D1(JD366B)	Rated input voltage	–48 VDC to –60 VDC	
	Max input voltage	–36 VDC to –72 VDC	
	Max output power	150 W	

When two power supplies are installed, you can hot-swap a power supply. To avoid device damage and bodily injury, follow the procedures in Figure 16 and Figure 17 to install and remove the power supply.

Appendix C Ports and LEDs

Ports

Console port

The switch provides a console port.

Table 12 Console port specifications

Item	Specification
Connector type	RJ-45
Compliant standard	EIA/TIA-232
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.

10/100/1000Base-T autosensing Ethernet port

The switch provides 10/100/1000Base-T autosensing Ethernet ports.

Table 13 10/100/1000Base-T autosensing Ethernet port specifications

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

1/10GBase-T autosensing Ethernet port

The HPE 5130 24G 2SFP+ 2XGT EI, HPE 5130 48G 2SFP+ 2XGT EI, HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI and HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI switches provide 1/10GBase-T autosensing Ethernet ports.

Table 14 1/10GBase-T autosensing Ethernet port specifications

Item	Specification
Connector type	RJ-45
Interface attributes	1/10 Gbps, full duplex, MDI/MDI-X autosensing

Item	Specification
Transmission medium and max transmission distance	• 55 m (180.45 ft) over category-6 unshielded twisted pair cable • 100 m (328.08 ft) over category-6 shielded twisted pair cable • 100 m (328.08 ft) over category-6A or above twisted pair cable
Compatible standards	• IEEE 802.3ab • IEEE 802.3an

To avoid packet loss caused by interferences, layer cables as follows:

- Use category-6A or above cables and connectors.
- Do not bundle cables in their first 20 m (65.62 ft).
- Separate power cords and twisted pair cables at and around the distribution frame.
- For ports adjacent to one another on the device, the peer ports on the distribution frame is preferably not adjacent, for example:
  - If the device connects to one distribution frame, connect port 1 on the device to port 1 on the distribution frame and port 2 on the device to port 3 on the distribution frame.
  - If the device connects to two distribution frames, connect port 1 on the device to port 1 on distribution frame 1 and port 2 on the device to port 1 on distribution frame 2.
- Keep the device and twisted pair cables away from the interference source, such as a two-way radio and a high-power variable-frequency drive.

100/1000Base-X SFP port

The HPE 5130 24G SFP 4SFP+ EI switch provides 24 100/1000Base-X SFP ports, and you can install the 100 Mbps SFP transceiver modules in Table 15 and 1000 Mbps SFP transceiver modules in Table 16 in the SFP ports as needed.

Table 15 100 Mbps SFP transceiver modules available for the SFP ports

Product code	HPE description	Central wavelength (nm)	Connector	Fiber diameter (μm)	Max transmission distance
JD102B	HPE X115 100M SFP LC FX Transceiver	1310	LC	Multi-mode, 50/125 Multi-mode, 62.5/125	2 km (1.24 miles)
JD120B	HPE X110 100M SFP LC LX Transceiver	1310	LC	Single-mode, 9/125	15 km (9.32 miles)
JD090A	HPE X110 100M SFP LC LH40 Transceiver	1310	LC	Single-mode, 9/125	40 km (24.86 miles)
JD091A	HPE X110 100M SFP LC LH80 Transceiver	1550	LC	Single-mode, 9/125	80 km (49.71 miles)
JD100A	HPE X110 100M SFP LC BX 10-U Transceiver	TX: 1310 RX: 1550	LC	Single-mode, 9/125	15 km (9.32 miles)
JD101A	HPE X110 100M SFP LC BX 10-D Transceiver	TX: 1550nm RX: 1310 nm			
Note: JD100A and JD101A must be used in pairs.					

Table 16 1000 Mbps SFP transceiver modules

Product code	HPE description	Central wavelength (nm)	Connector	Cable/fiber diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
JD118B	HPE X120 1G SFP LC SX Transceiver	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)
JD119B	HPE X120 1G SFP LC LX Transceiver	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)
JD061A	HPE X125 1G SFP LC LH40 1310nm Transceiver	1310	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
JD062A	HPE X120 1G SFP LC LH40 1550nm Transceiver	1550	LC	Single-mode, 9/125	N/A	40 km (24.86 miles)
JD063B	HPE X125 1G SFP LC LH70 Transceiver	1550	LC	Single-mode, 9/125	N/A	70 km (43.50 miles)
JD103A	HPE X120 1G SFP LC LH100 Transceiver	1550	LC	Single-mode, 9/125	N/A	100 km (62.14 miles)
JD098B	HPE X120 1G SFP LC BX 10-U Transceiver	TX: 1310 RX: 1490	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)
JD099B	HPE X120 1G SFP LC BX 10-D Transceiver	TX: 1490 RX: 1310				
JD089B	HPE X120 1G SFP RJ45 T Transceiver	N/A	RJ-45	Category-5 twisted pair	N/A	100 m (328.08 ft)
Note: JD098B and JD099B must be used in pairs.						

SFP+ port

The switch provides SFP+ ports. You can install the 1000 Mbps SFP transceiver modules in Table 16, the SFP+ transceiver modules in Table 17, and the SFP+ cables in Table 18 in the SFP+ ports as needed.

Table 17 SFP+ transceiver modules available for the SFP+ ports

Product Code	HPE description	Central wavelength (nm)	Connector	Fiber diameter (μm)	Modal bandwidth (MHz × km)	Max transmission distance
JD092B	HPE X130 10G SFP+ LC SR Transceiver	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)
JD094B	HPE X130 10G SFP+ LC LR Transceiver	1310	LC	Single-mode, 9/125	N/A	10 km (6.21 miles)

Table 18 SFP+ DAC cables available for the SFP+ ports

Product code	HPE description	Max transmission distance
JD095C	HPE X240 10G SFP+ SFP+ 0.65m DA Cable	0.65 m (2.13 ft)
JD096C	HPE X240 10G SFP+ SFP+ 1.2m DA Cable	1.2 m (3.94 ft)
JD097C	HPE X240 10G SFP+ SFP+ 3m DA Cable	3 m (9.84 ft)
JG081C	HPE X240 10G SFP+ SFP+ 5m DA Cable	5 m (16.40 ft)

Table 19 SFP+ active optical cables available for the SFP+ ports

Product code	HPE description	Max transmission distance
JL290A	HPE X2A0 10G SFP+ to SFP+ 7m Active Optical Cable	7 m (22.97 ft)
JL291A	HPE X2A0 10G SFP+ to SFP+ 10m Active Optical Cable	10 m (32.81 ft)
JL292A	HPE X2A0 10G SFP+ to SFP+ 20m Active Optical Cable	20 m (65.62 ft)

NOTE:

As a best practice, use HPE 1000 Mbps SFP transceiver modules, SFP+ transceiver modules, or SFP+ cables for the SFP+ ports on the switch. The HPE 1000 Mbps SFP and SFP+ transceiver modules are subject to change over time. For the most up-to-date list of SFP and SFP+ transceiver modules, contact your Hewlett Packard Enterprise sales representative or technical support engineer.

For more information about the 1000 Mbps SFP transceiver modules, SFP+ transceiver modules, and SFP+ cables, see *HPE Comware-Based Devices Transceiver Modules User Guide*.

Figure 51 SFP+ DAC cable

(1) Connector	(2) Pull latch

Figure 52 SFP+ active optical cable

Combo interface

The HPE 5130 24G SFP 4SFP+ EI switch provides eight combo interfaces. A combo interface includes 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 status of the switch.

Table 20 System status LED description

LED mark	Status	Description
SYS	Steady green	The switch is operating correctly.
	Flashing green	The switch is performing power-on self test (POST).

LED mark	Status	Description
	Steady red	The switch has failed POST.
	Flashing yellow	Some ports have failed POST.
	Off	The switch is powered off.

Power supply status LED

The HPE 5130 24G SFP 4SFP+ EI switch provides the PWR1 and PWR2 LEDs on the front panel to indicate the operating status of the power supplies.

Table 21 Power supply status LED description

LED mark	Status	Description
PWR1/PWR2	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 is faulty or not powered on.
	Steady red	A power supply is installed in the power supply slot, but the power supply is faulty.
	Off	No power supply is installed in the power supply slot.

RPS status LED

The HPE 5130 48G 2SFP+ 2XGT EI, HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 24G PoE+ 4SFP+ (370W) EI, HPE 5130 24G PoE+ 4SFP+ (370W) EI BR, HPE 5130 48G 4SFP+ EI, HPE 5130 48G 4SFP+ EI BR, HPE 5130 48G PoE+ 4SFP+ (370W) EI BR, and HPE 5130 48G PoE+ 4SFP+ (370W) EI switches support RPS input and provide an RPS status LED on the front panel to indicate the RPS operating status.

Table 22 RPS status LED description

LED mark	Status	Description
RPS	Steady green	Both the RPS DC input and the AC input are normal.
	Steady yellow	The RPS DC input is normal, but the AC input is disconnected or has failed.
	Off	The RPS DC input has failed, or no RPS is connected.

Port mode LED

The HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 24G PoE+ 4SFP+ (370W) EI, HPE 5130 24G PoE+ 4SFP+ (370W) EI BR, HPE 5130 48G PoE+ 4SFP+ (370W) EI BR, and HPE 5130 48G PoE+ 4SFP+ (370W) EI switches provide a port mode LED. The port mode LED indicates the type of information that the network port LEDs are showing. You can use the port LED mode switching button to change the type of displayed port information.

Table 23 Port mode LED description

LED mark	Status	Description
Mode	Steady green	The network port LEDs are showing port rates.
	Flashing green	The network port LEDs are showing the PoE status of the ports.

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

- The HPE 5130 48G 2SFP+ 2XGT EI, HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 24G SFP 4SFP+ EI, HPE 5130 48G 4SFP+ EI, HPE 5130 48G 4SFP+ EI BR, HPE 5130 48G PoE+ 4SFP+ (370W) EI, and HPE 5130 48G PoE+ 4SFP+ (370W) EI BR switches provide a double-color (green and yellow) LED for each 10/100/1000Base-T autosensing Ethernet port to indicate its operating status.

Table 24 10/100/1000Base-T autosensing Ethernet port double-color LED description

Switch model	Port mode LED (Mode) status	Double-color (green and yellow) LED status	Description
• HPE 5130 48G 4SFP+ EI • HPE 5130 48G 4SFP+ EI BR • HPE 5130 24G SFP 4SFP+ EI • HPE 5130 48G 2SFP+ 2XGT EI	N/A	Steady green	The port is operating at 1000 Mbps, and a link is present on the port.
		Flashing green	The port is sending or receiving data at 1000 Mbps.
		Steady yellow	The port is operating at 10/100 Mbps, and a link is present on the port.
		Flashing yellow (not 3 Hz)	The port is sending or receiving data at 10/100 Mbps.
		Flashing yellow (3 Hz)	The port has failed POST.
		Off	No link is present on the port.
• HPE 5130 48G PoE+ 4SFP+ (370W) EI • HPE 5130 48G PoE+ 4SFP+ (370W) EI BR • HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI	Steady green (rate mode)	Steady green	The port is operating at 1000 Mbps, and a link is present on the port.
		Flashing green	The port is sending or receiving data at 1000 Mbps.
		Steady yellow	The port is operating at 10/100 Mbps, and a link is present on the port.
		Flashing yellow (not 3 Hz)	The port is sending or receiving data at 10/100 Mbps.
		Flashing yellow (3 Hz)	The port has failed POST.
		Off	No link is present on the port.
	Flashing green (PoE mode)	Steady green	The port is supplying PoE correctly.
		Flashing green (3 Hz)	• The PD power requirement exceeds the

Switch model	Port mode LED (Mode) status	Double-color (green and yellow) LED status	Description
			port PoE capacity. • The port fails to meet the power requirement of the PD because of power insufficiency of the switch.
		Steady yellow	A non-PD device is attached to the port, or the port is experiencing a PoE failure.
		Flashing yellow (3 Hz)	The port has failed POST.
		Off	The port is not supplying PoE.

- The HPE 5130 24G 2SFP+ 2XGT EI, HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 24G 4SFP+ EI, HPE 5130 24G 4SFP+ EI BR, HPE 5130 24G PoE+ 4SFP+ (370W) EI, and HPE 5130 24G PoE+ 4SFP+ (370W) EI BR switches provide two single-color LEDs for each 10/100/1000Base-T autosensing Ethernet port to indicate its operating status.

Table 25 Description for the two single-color LEDs for the 10/100/1000Base-T autosensing Ethernet port

Switch model	Port mode LED (Mode) status	LED	Status	Description
• HPE 5130 24G 4SFP+ EI • HPE 5130 24G 4SFP+ EI BR • HPE 5130 24G 2SFP+ 2XGT EI	N/A	Green LED	Steady on	The port is operating at 1000 Mbps, and a link is present on the port.
			Flashing	The port is sending or receiving data at 1000 Mbps.
			Off	No link is present on the port, or the port is not operating at 1000 Mbps.
		Yellow LED	Steady on	The port is operating at 10/100 Mbps, and a link is present on the port.
			Flashing (not 3 Hz)	The port is sending or receiving data at 10/100 Mbps.
			Flashing yellow (3 Hz)	The port has failed POST.
			Off	No link is present on the port, or the port is not operating at 10/100 Mbps.
• HPE 5130 24G PoE+ 4SFP+ (370W) EI • HPE 5130 24G PoE+ 4SFP+ (370W) EI BR • HPE 5130 24G PoE+ 2SFP+	Steady green (rate mode)	Green LED	Steady on	The port is operating at 1000 Mbps, and a link is present on the port.
			Flashing	The port is sending or receiving data at 1000 Mbps.
			Off	No link is present on the port, or the port is not operating at 1000 Mbps.
		Yellow LED	Steady on	The port is operating at 10/100 Mbps, and a link is present on the port.
			Flashing (not	The port is sending or receiving data

Switch model	Port mode LED (Mode) status	LED	Status	Description
2XGT (370W) EI			3 Hz)	at 10/100 Mbps.
			Flashing yellow (3 Hz)	The port has failed POST.
			Off	No link is present on the port, or the port is not operating at 10/100 Mbps.
	Flashing green (PoE mode)	Green LED	Steady on	The port is supplying PoE correctly.
			Flashing (3 Hz)	• The PD power requirement exceeds the port PoE capacity. • The port fails to meet the power requirement of the PD because of power insufficiency of the switch.
			Off	The port is not supplying PoE power.
		Yellow LED	Steady on	A non-PD device is attached to the port, or the port is experiencing a PoE failure.
			Flashing (3 Hz)	The port has failed POST.
			Off	The port is not supplying PoE power.

1/10GBase-T autosensing Ethernet port LEDs

- The HPE 5130 48G 2SFP+ 2XGT EI and HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI switches provide a double-color (green and yellow) LED for each 1/10GBase-T autosensing Ethernet port to indicate its operating status.

  Table 26 1/10GBase-T autosensing Ethernet port double-color LED description

Status	Description
Steady green	The port is operating at 10 Gbps and a link is present on the port.
Flashing green	The port is sending or receiving data at 10 Gbps.
Steady yellow	The port is operating at 1 Gbps and a link is present on the port.
Flashing yellow (not 3 Hz)	The port is sending or receiving data at 1 Gbps.
Flashing yellow (3 Hz)	The port has failed POST.
Off	• No link is present on the port. • The port mode LED is operating in PoE mode (applicable to the PoE switch models.)

- The HPE 5130 24G 2SFP+ 2XGT EI and HPE 5130 24G PoE+ 2SFP+ 2XGT (370W) EI switches provide two single-color LEDs for each 1/10GBase-T autosensing Ethernet port to indicate its operating status.

Table 27 Description for the two single-color LEDs for the 1/10GBase-T autosensing Ethernet port

LED	Status	Description
Green LED	Steady on	The port is operating at 10 Gbps and a link is present on the port.
	Flashing	The port is sending or receiving data at 10 Gbps.
	Off	• No 10 Gbps link is present on the port. • The port mode LED is operating in PoE mode (applicable to the PoE switch models.)
Yellow LED	Steady on	The port is operating at 1 Gbps and a link is present on the port.
	Flashing (not 3 Hz)	The port is sending or receiving data at 1 Gbps.
	Flashing (3 Hz)	The port has failed POST.
	Off	• No 1 Gbps link is present on the port. • The port mode LED is operating in PoE mode (applicable to the PoE switch models.)

100/1000Base-X SFP port LED

The HPE 5130 24G SFP 4SFP+ EI switch provides a double-color (green and yellow) LED for each 100/1000Base-X SFP port to show its operating status.

Table 28 100/1000Base-X SFP port LED description

Status	Description
Steady green	A transceiver module is installed in the port. The port is operating at 1 Gbps, and a link is present on the port.
Flashing green	The port is sending or receiving data at 1 Gbps.
Steady yellow	A transceiver module is installed in the port. The port is operating at 100 Mbps, and a link is present on the port.
Flashing yellow	The port is sending or receiving data at 100 Mbps.
Flashing yellow (3 Hz)	The port has failed POST.
Off	No transceiver module is installed in the port, or no link is present on the port.

SFP+ port LED

- The HPE 5130 48G 2SFP+ 2XGT EI, HPE 5130 48G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 24G SFP 4SFP+ EI, HPE 5130 48G 4SFP+ EI, HPE 5130 48G 4SFP+ EI BR, HPE 5130 48G PoE+ 4SFP+ (370W) EI, and HPE 5130 48G PoE+ 4SFP+ (370W) EI BR switches provide a double-color (green and yellow) LED for each SFP+ port to indicate its operating status.

  Table 29 SFP+ port double-color LED description

Status	Description
Steady green	A transceiver module is installed in the port. The port is operating at 10 Gbps and a link is present on the port.
Flashing green	The port is sending or receiving data at 10 Gbps.

Status	Description
Steady yellow	A transceiver module is installed in the port. The port is operating at 1 Gbps and a link is present on the port.
Flashing yellow (not 3 Hz)	The port is sending or receiving data at 1 Gbps.
Flashing yellow (3 Hz)	The port has failed POST.
Off	• No transceiver module is installed in the port, or no link is present on the port. • The port mode LED is operating in PoE mode (applicable to the PoE switch models.)

- The HPE 5130 24G 2SFP+ 2XGT EI, HPE FlexNetwork 5130 24G PoE+ 2SFP+ 2XGT (370W) EI, HPE 5130 24G 4SFP+ EI, HPE 5130 24G 4SFP+ EI BR, HPE 5130 24G PoE+ 4SFP+ (370W) EI, and HPE 5130 24G PoE+ 4SFP+ (370W) EI BR switches provide two single-color LEDs for each SFP+ port to indicate its operating status.

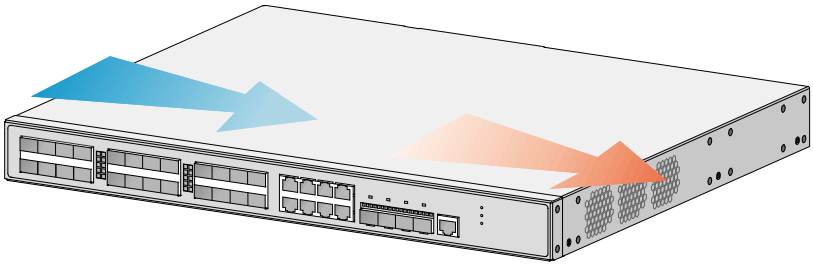
Table 30 Description for the two single-color LEDs for the SFP+ port

LED	Status	Description
Green LED	Steady on	A transceiver module is installed in the port. The port is operating at 10 Gbps, and a link is present on the port.
	Flashing	The port is sending or receiving data at 10 Gbps.
	Off	• No transceiver module is installed in the port, or no 10 Gbps link is present on the port. • The port mode LED is operating in PoE mode (applicable to the PoE switch models.)
Yellow LED	Steady on	A transceiver module is installed in the port. The port is operating at 1 Gbps, and a link is present on the port.
	Flashing (not 3 Hz)	The port is sending or receiving data at 1 Gbps.
	Flashing (3 Hz)	The port has failed POST.
	Off	• No transceiver module is installed in the port, or no 1 Gbps link is present on the port. • The port mode LED is operating in PoE mode (applicable to the PoE switch models.)

Appendix D Cooling system

The cooling system of the switch includes the air vents in the chassis and fixed fans. To maintain good ventilation for the switch, consider the ventilation design at the installation site when you plan the installation position for the switch.

Figure 53 Airflow through the chassis



Document conventions and icons

Conventions

This section describes the conventions used in the documentation.

Port numbering in examples

The port numbers in this document are for illustration only and might be unavailable on your device.

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 at least 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 appears; 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.
ⓘ **IMPORTANT:**	An alert that calls attention to essential information.
NOTE:	An alert that contains additional or supplementary information.

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

Support and other resources

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:

  www.hpe.com/assistance
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:

  www.hpe.com/support/hpesc

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates, go to either of the following:
  - Hewlett Packard Enterprise Support Center **Get connected with updates** page:

    www.hpe.com/support/e-updates
  - Software Depot website:

    www.hpe.com/support/softwaredepot
- To view and update your entitlements, and to link your contracts, Care Packs, and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:

  www.hpe.com/support/AccessToSupportMaterials

IMPORTANT:

Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HP Passport set up with relevant entitlements.

Websites

Website	Link
Networking websites	
Hewlett Packard Enterprise Information Library for Networking	www.hpe.com/networking/resourcefinder
Hewlett Packard Enterprise Networking website	www.hpe.com/info/networking
Hewlett Packard Enterprise My Networking website	www.hpe.com/networking/support
Hewlett Packard Enterprise My Networking Portal	www.hpe.com/networking/mynetworking
Hewlett Packard Enterprise Networking Warranty	www.hpe.com/networking/warranty
General websites	
Hewlett Packard Enterprise Information Library	www.hpe.com/info/enterprise/docs
Hewlett Packard Enterprise Support Center	www.hpe.com/support/hpesc
Hewlett Packard Enterprise Support Services Central	ssc.hpe.com/portal/site/ssc/
Contact Hewlett Packard Enterprise Worldwide	www.hpe.com/assistance
Subscription Service/Support Alerts	www.hpe.com/support/e-updates
Software Depot	www.hpe.com/support/softwaredepot
Customer Self Repair (not applicable to all devices)	www.hpe.com/support/selfrepair
Insight Remote Support (not applicable to all devices)	www.hpe.com/info/insightremotesupport/docs

Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

www.hpe.com/support/selfrepair

Remote support

Remote support is available with supported devices as part of your warranty, Care Pack Service, or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

For more information and device support details, go to the following website:

www.hpe.com/info/insightremotesupport/docs

Documentation feedback

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