

# HP V1910 Switch Series

## Getting Started Guide



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# Preface

The HP V1910 Switch Series Getting Started Guide describes the appearance, installation, power-on, maintenance, and troubleshooting of the HP V1910 switches.

This preface includes:

- [Audience](#)
- [Conventions](#)
- [Contacting HP](#)
- [Subscription service](#)
- [Warranty](#)
- [Documents](#)

## Audience

This documentation set is intended for:

- Network planners
- Field technical support and servicing engineers
- Network administrators working with the HP V1910 switches





## Conventions

This section describes the conventions used in this documentation.

### GUI conventions

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

### Symbols

Convention	Description
 <b>WARNING</b>	An alert that calls attention to important information that if not understood or followed can result in personal injury.
 <b>CAUTION</b>	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.
 <b>IMPORTANT</b>	An alert that calls attention to essential information.
<b>NOTE</b>	An alert that contains additional or supplementary information.
 <b>TIP</b>	An alert that provides helpful information.

## Network topology icons

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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.

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## Port numbering in examples

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

## Contacting HP

For worldwide technical support information, see the HP support website:

<http://www.hp.com/support>

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

## Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:

<http://www.hp.com/go/e-updates>

After registering, you will receive e-mail notification of product enhancements, new driver versions, firmware updates, and other product resources.

## Warranty

The Hewlett-Packard Limited Warranty Statement for this product and the HP Software License Terms which apply to any software accompanying this product are available on the HP networking Web site at [www.hp.com/networking/warranty](http://www.hp.com/networking/warranty). The customer warranty support and services information are available on the HP networking Web site at [www.hp.com/networking/support](http://www.hp.com/networking/support). Additionally, your HP-authorized network reseller can provide you with assistance, both with services that they offer and with services offered by HP.

## Documents

To find related documents, browse to the Manuals page of the HP Business Support Center website:

<http://www.hp.com/support/manuals>

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# Product overview

## About the HP V1910 Switch Series

HP V1910 Switch Series is a line of Layer 2 Gigabit Ethernet switching products developed by Hewlett-Packard Development Company, L.P. (hereinafter referred to as HP). The V1910 switches are intelligent manageable switches designed for network environments where high performance, high-density port distribution, and easy installation are required.

With 10/100/1000 Mbps Ethernet interfaces, the V1910 switches are mainly deployed at the access layer in enterprise networks requiring Gigabit to the Desktop (GTTD) application and at the distribution layer in metropolitan-area networks (MANs). In the latter deployment, the V1910 Switch Series provides GE electrical interfaces for user access or low-end switch convergence in the downlink direction. In the uplink direction, they are aggregated to large-capacity Layer 3 switches or switches at the exchange office through their GE interfaces.

Table 1 and Table 2 show the models and system specifications of the V1910 Switch Series.

**Table 1 System specifications for non-PoE switches of the V1910 Switch Series**

Item	HP V1910-16G Switch JE005A	HP V1910-24G Switch JE006A	HP V1910-48G Switch JE009A
Dimensions (H x W x D)	43.6 x 440 x 160 mm (1.72 x 17.32 x 6.30 in)	43.6 x 440 x 160 mm (1.72 x 17.32 x 6.30 in)	43.6 x 440 x 260 mm (1.72 x 17.32 x 10.24 in)
Weight	≤ 3 kg (6.61 lb)	≤ 3 kg (6.61 lb)	≤ 5 kg (11.02 lb)
Console port	1		
Service ports	16 x 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces	24 x 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces	48 x 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces
Input voltage (AC)	Rated voltage range: 100 VAC to 240 VAC, 50 Hz or 60 Hz Maximum voltage range: 90 VAC to 264 VAC, 47 Hz or 63 Hz		
Power consumption	11.9 W	13.4 W	25.7 W
Power consumption (full configuration)	25.1 W	31.5 W	59.8 W
Operating temperature	0°C to 45°C (32°F to 113°F)		
Operating humidity (noncondensi ng)	10% to 90%		



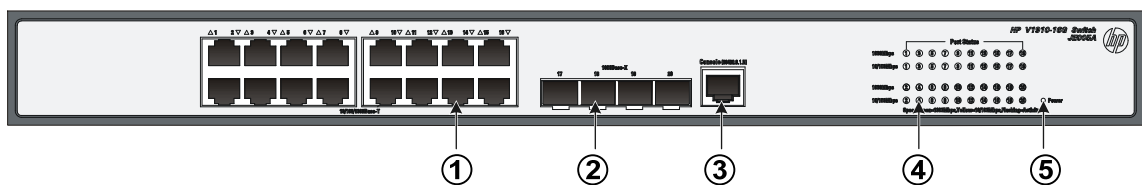
**Table 2 System specifications for the V1910 PoE switches**

Item	HP V1910-24G-PoE (170W) Switch JE008A	HP V1910-24G-PoE (365W) Switch JE007A
Dimensions (H × W × D)	43.6 × 440 × 420 mm (1.72 × 17.32 × 16.54 in)	43.6 × 440 × 420 mm (1.72 × 17.32 × 16.54 in)
Weight	≤ 7 kg (15.43 lb)	≤ 7 kg (15.43 lb)
Console port	1	
Service ports	24 × 10/100/1000Base-T autosensing Ethernet ports + 4 GE SFP interfaces	
Input voltage	AC	Rated voltage range: 100 VAC to 240 VAC, 50 Hz or 60 Hz Maximum voltage range: 90 VAC to 264 VAC, 47 Hz or 63 Hz
	RPS DC	N/A
Supported RPS unit	N/A	A-RPS1600
Power consumption	25.0 W	AC: 45.6 W
		DC: 27.5 W
Power consumption (full configuration)	255 W (85 W for system power consumption and 170 W for PoE power consumption)	AC power input: 523 W (158 W for system power consumption and 365 W for PoE power consumption) DC power input: 832 W (92 W for system power consumption and 740 W for PoE power consumption)
Operating temperature	0°C to 45°C (32°F to 113°F)	
Operating humidity (noncondensing)	10% to 90%	

## HP V1910-16G Switch JE005A

### Front panel

**Figure 1 HP V1910-16G Switch JE005A front panel**



- |  |                              |
|--|------------------------------|
| (1) 10/100/1000Base-T auto-sensing Ethernet port | (2) 1000Base-X SFP interface |
| (3) Console port                                 | (4) Port status LED          |
| (5) Power LED (Power)                            |                              |

## Rear panel

Figure 2 HP V1910-16G Switch JE005A rear panel



## Power supply system

AC power input:

Rated voltage range: 100 VAC to 240 VAC, 50 Hz or 60 Hz

Input voltage range: 90 VAC to 264 VAC, 47 Hz or 63 Hz

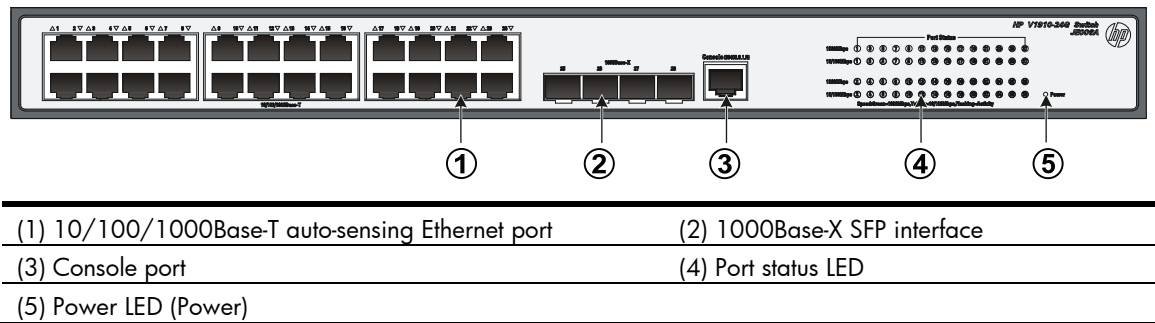
## Cooling system

The HP V1910-16G Switch JE005A is equipped with one fan for heat dissipation

# HP V1910-24G Switch JE006A

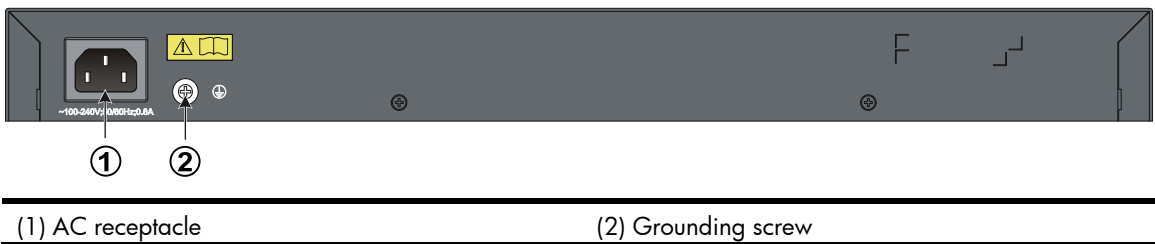
## Front panel

Figure 3 HP V1910-24G Switch JE006A front panel



## Rear panel

Figure 4 HP V1910-24G Switch JE006A rear panel



## Power supply system

AC power input:

Rated voltage range: 100 VAC to 240 VAC, 50 Hz or 60 Hz

Input voltage range: 90 VAC to 264 VAC, 47 Hz or 63 Hz

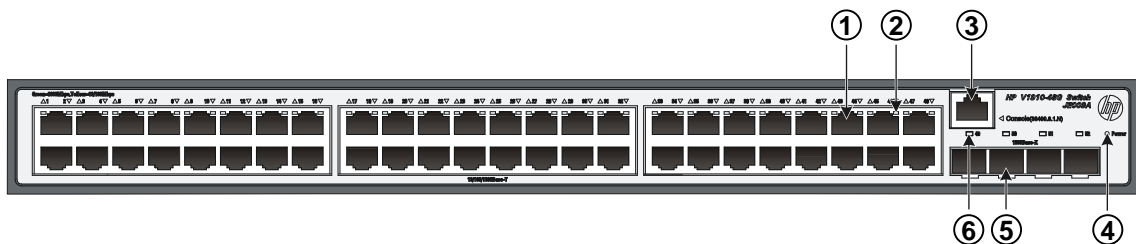
## Cooling system

The HP V1910-24G Switch JE006A is equipped with one fan for heat dissipation.

# HP V1910-48G Switch JE009A

## Front panel

Figure 5 HP V1910-48G Switch JE009A front panel



(1) 10/100/1000Base-T auto-sensing Ethernet port

(2) 10/100/1000Base-T auto-sensing Ethernet port status LED

(3) Console port

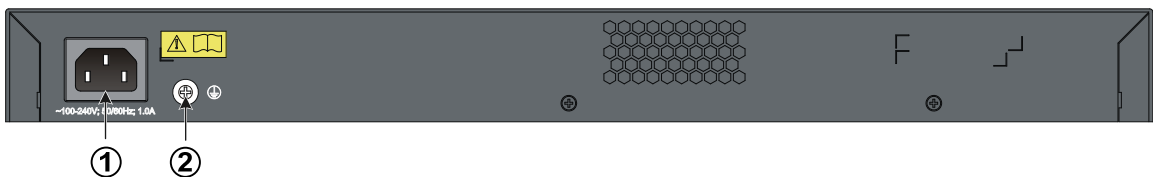
(4) Power LED (Power)

(5) 1000Base-X SFP interface

(6) 1000Base-X SFP interface status LED

## Rear panel

Figure 6 HP V1910-48G Switch JE009A rear panel



(1) AC receptacle

(2) Grounding screw

## Power supply system

AC power input:

Rated voltage range: 100 VAC to 240 VAC, 50 Hz or 60 Hz

Input voltage range: 90 VAC to 264 VAC, 47 Hz or 63 Hz

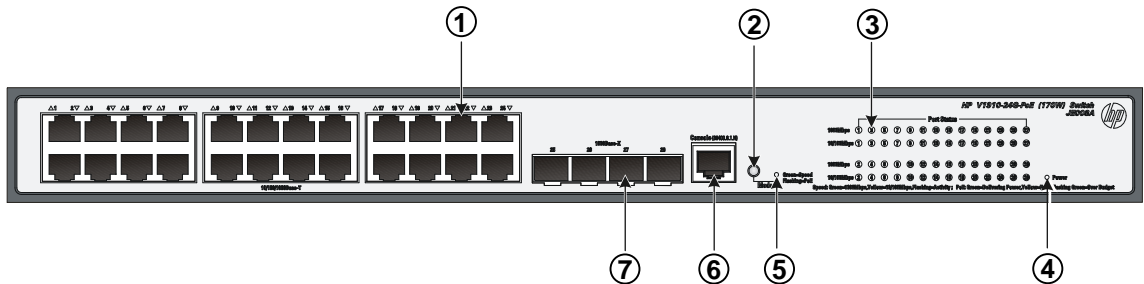
## Cooling system

The HP V1910-48G Switch JE009A is equipped with one fan for heat dissipation.

# HP V1910-24G-PoE (170W) Switch JE008A

## Front panel

Figure 7 HP V1910-24G-PoE (170W) Switch JE008A front panel



- |  |   |
|--|---|
| (1) 10/100/1000Base-T auto-sensing Ethernet port | (2) Port status LED mode switching button |
| (3) Port status LED                              | (4) Power LED (Power)                     |
| (5) Port mode LED                                | (6) Console port                          |
| (7) 1000Base-X SFP interface                     |   |

## Rear panel

Figure 8 HP V1910-24G-PoE (170W) Switch JE008A rear panel



- |                   |                     |
|-------------------|---------------------|
| (1) AC receptacle | (2) Grounding screw |
|-------------------|---------------------|

## Power supply system

AC power input:

Rated voltage range: 100 VAC to 240 VAC, 50 Hz or 60 Hz

Input voltage range: 90 VAC to 264 VAC, 47 Hz or 63 Hz

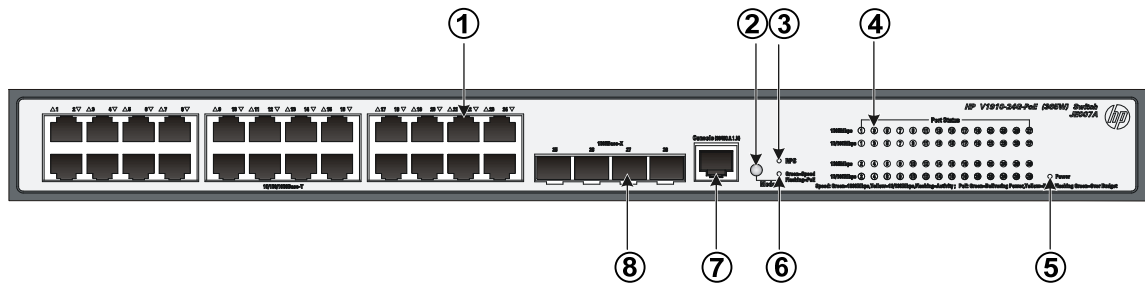
## Cooling system

The HP V1910-24G-PoE (170W) Switch JE008A is equipped with three fans for heat dissipation.

# HP V1910-24G-PoE (365W) Switch JE007A

## Front panel

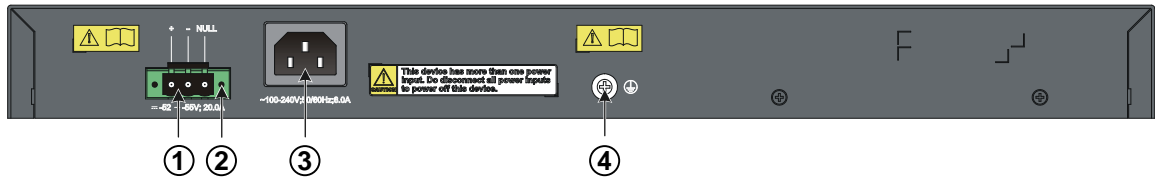
Figure 9 HP V1910-24G-PoE (365W) Switch JE007A front panel



(1) 10/100/1000Base-T auto-sensing Ethernet port	(2) Port status LED mode switching button
(3) RPS status LED (RPS)	(4) Port status LED
(5) Power LED (Power)	(6) Port mode LED
(7) Console port	(8) Port 1000Base-X SFP interface

## Rear panel

Figure 10 HP V1910-24G-PoE (365W) Switch JE007A rear panel



(1) DC power receptacle	(2) Screw hole of the plug
(3) AC receptacle	(4) Grounding screw

## Power supply system

The HP V1910-24G-PoE (365W) Switch JE007A can adopt AC power input, or DC power input, or both to provide backup

- AC power input:

Rated voltage range: 100 VAC to 240 VAC, 50 Hz or 60 Hz

Input voltage range: 90 VAC to 264 VAC, 47 Hz or 63 Hz

- DC power input

Rated voltage range: -52 VDC to -55 VDC

### ⚠ CAUTION:

Only the RPS recommended by HP can be used for the HP V1910-24G-PoE (365W) Switch JE007A. The -48 VDC power supply in the equipment room cannot be used directly. Otherwise, the switch may be damaged.

## Cooling system

The HP V1910-24G-PoE (365W) Switch JE007A is equipped with six fans for heat dissipation.

## Ports

### Console port

Each V1910 switch provides one console port on the front panel.

**Table 3 Console port specifications**

Item	Specification
Connector type	RJ-45
Compliant standard	EIA/TIA-232
Transmission baud rate	9600 bps to 115200 bps (38400 by default)
Service	<ul style="list-style-type: none"><li>• Provides connection to an ASCII terminal.</li><li>• Provides connection to a serial port of a local or remote (through a pair of modems) PC running terminal emulation program.</li></ul>

### 10/100/1000Base-T Ethernet port

Each V1910 switch provides 10/100/1000Base-T Ethernet ports on its front panel. Quantity of Ethernet ports varies with the device model. For more information, see [Table 1](#).

**Table 4 10/100/1000Base-T Ethernet port specifications for the V1910 Switch Series**

Item	Specification
Connector type	RJ-45
Interface speed and operating mode	<ul style="list-style-type: none"><li>• 10 Mbps, full duplex</li><li>• 100 Mbps, full duplex</li><li>• 1000 Mbps, full duplex</li><li>• MDI/MDI-X, auto-sensing</li></ul>
Max transmission distance	100 m (328.1 ft)
Transmission medium	Category-5 unshielded twisted pair cable
Standard	IEEE 802.3i, IEEE 802.3u, IEEE 802.3ab

### 1000Base-X SFP interface

Each V1910 switch provides one or four 1000Base-X SFP interfaces on its front panel. You can select the GE SFP transceiver modules described in [Table 5](#).

**Table 5 Transceiver modules supported by the 1000Base-X SFP interfaces on the V1910 Switch Series**

Product Code	Description	Central wavelength (nm)	Fiber diameter (μm)	Multimode fiber modal bandwidth (MHz*km)	Maximum transmission distance	
JD089B	HP X120 1G SFP RJ45 T Transceiver	N/A	Category-5 twisted pair	N/A	100 m (328.08 ft)	
JD118B	HP X120 1G SFP LC SX Transceiver	850	50/125	500	550 m (1804.46 ft)	
				400	500 m (1640.42 ft)	
			62.5/125	200	275 m (902.23 ft)	
				160	220 m (721.78 ft)	
JD119B	HP X120 1G SFP LC LX Transceiver	1310	50/125	500	550 m (1804.46 ft)	
				400		
			62.5/125	500	550 m (1804.46 ft)	
JD061A	HP X125 1G SFP LC LH40 1310nm Transceiver	1310	9/125	N/A	40 km (18.64 miles)	
JD062A	HP X120 1G SFP LC LH40 1550nm Transceiver	1550	9/125	N/A	40 km (24.86 miles)	
JD063B	HP X125 1G SFP LC LH70 Transceiver	1550	9/125	N/A	70 km (43.50 miles)	
JD098B	HP X120 1G SFP LC BX 10-U Transceiver	The two modules must be used together.	TX: 1310nm RX: 1490nm	9/125	N/A	10 km (6.21 miles)
JD099B	HP X120 1G SFP LC BX 10-D Transceiver					

**NOTE:**

- To guarantee the functionality of the SFP ports, always use HP SFP transceiver modules on the HP V1910 Switch Series.
- The SFP transceiver modules available for this switch series are subject to change over time. For the most up-to-date list of SFP transceiver modules, consult your HP sales representative or technical support engineer.
- For the SFP transceiver module specifications, see the *HP A-Series Switches Transceiver Modules User Guide*.

# LEDs

**Table 6 LEDs**

LED	Device support	Description
Power LED	All series	See "Power LED."
RPS status LED	HP V1910-24G-PoE (365W) Switch JE007A	See "RPS status LED."
Port mode LED	HP V1910-24G-PoE (170W) Switch JE008A and HP V1910-24G-PoE (365W) Switch JE007A	See "Port mode LED."
10/100/1000Base-T auto-sensing Ethernet port status LED	All series	See "10/100/1000Base-T auto-sensing Ethernet port status LED."
1000Base-X SFP interface status LED	All series	See "1000Base-X SFP interface status LED."

## Power LED

The power LED indicates the operation status of the switch.

**Table 7 Description of the power LED**

LED	Status	Description
Power	Solid green	The switch functions properly.
	Blinking green (1 Hz)	The system is performing power-on self test (POST) or downloading software.
	Blinking green (3 Hz)	The POST has failed or another fatal error has been detected.
	Off	The switch has been powered off.

## RPS status LED

The HP V1910-24G-PoE (365W) Switch JE007A provides an RPS status LED on its front panel, indicating the working status of the RPS of the switch.

**Table 8 Description of the RPS status LED**

LED	Status	Description
RPS	Solid green	The RPS DC input is normal.
	Off	The RPS unit is not connected or the RPS DC input is abnormal.



## Port mode LED

The port mode LED on the HP V1910-24G-PoE (170W) Switch JE008A and HP V1910-24G-PoE (365W) Switch JE007A can display the working status of a port for you to obtain more device information. You can use the port mode switching button to change the status of the port mode LED.

**Table 9 Port mode LED description**

LED	Status	Description
Mode	Solid green	Indicates port rate.
	Blinking green (1 Hz)	Indicates port PoE power supply.

## 10/100/1000Base-T auto-sensing Ethernet port status LED

**NOTE:**

- Each port of the HP V1910-48G Switch JE009A has a bi-color LED indicating its status. Each port of other models of the V1910 Switch Series has two LEDs, with only one in the ON state at a time.
- For each port of the HP V1910-24G-PoE (170W) Switch JE008A and HP V1910-24G-PoE (365W) Switch JE007A, the port mode LED and the status LED together indicate the port operation status.

**Table 10 10/100/1000Base-T auto-sensing Ethernet port LEDs description**

Switch model	Port mode LED	Ethernet port status LED	Meaning
HP V1910-16G Switch JE005A HP V1910-24G Switch JE006A	N/A	Green	On The port operates at a rate of 1000 Mbps.
		Green	Fast blinking Data is being transmitted or received at 1000 Mbps.
			Off The port is not up or does not operate at 1000 Mbps.
		Yellow	On The port operates at a rate of 10/100 Mbps.
			Fast blinking Data is being transmitted or received at 10/100 Mbps.
			Off The port is not up or does not operate at 10/100 Mbps.
HP V1910-48G Switch JE009A	N/A	Green	On The port operates at a rate of 1000 Mbps.
		Green	Fast blinking Data is transmitted or received at a rate of 1000 Mbps.
			On The port operates at a rate of 10/100 Mbps.
		Yellow	Fast blinking Data is transmitted or received at a rate of 10/100 Mbps.
			Off The port is not up.

Switch model	Port mode LED	Ethernet port status LED	Meaning	
HP V1910-24G-PoE (170W) Switch JE008A HP V1910-24G-PoE (365W) Switch JE007A	Solid green (rate mode)	On	The port operates at a rate of 1000 Mbps.	
		Green	Fast blinking	Data is transmitted or received at a rate of 1000 Mbps.
		Off		The port is not up or does not operate at 1000 Mbps.
		On		The port operates at a rate of 10/100 Mbps.
		Yellow	Fast blinking	Data is transmitted or received at a rate of 10/100 Mbps.
		Off		The port is not up or does not operate at 10/100 Mbps.
	Blinking green (PoE mode)	Green	On	PoE power supply is normal.
			Blinking at 3 Hz	Power consumption of the device attached to the port exceeds the upper limit of the power supply consumption of the port, or the available power of the switch is not enough for power supply of the port.
		Yellow	Off	No PoE power supply is provided on the port.
			On	The device connected to the interface is not a PD device or a PoE failure occurs
		Off	No PoE power supply is provided on the port or PoE power supply is normal.	

## 1000Base-X SFP interface status LED

### NOTE:

For the HP V1910-24G-PoE (170W) Switch JE008A and HP V1910-24G-PoE (365W) Switch JE007A, the port mode switching button does not take effect for the 1000Base-X SFP interface LEDs.

**Table 11 1000Base-X SFP interface status LEDs description**

SFP interface status LED	Meaning
Solid green	The port operates at a rate of 1000 Mbps The port is transmitting data at 1000 Mbps
Blinking green	The LED is fast flashing when data is being received on the port.
Off	No link is present on the port.

---

# Preparing for installation

## Safety recommendations

To avoid any device impairment and bodily injury caused by improper use, observe these rules:

- Before cleaning the switch, unplug the power cord of the switch first. 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 damaged severely in case of a fall.
- Ensure proper ventilation of the equipment room and keep the ventilation vents of the switch free of obstruction.
- Connect the yellow-green protection grounding cable before power-on.
- Make sure that the operating voltage is as required.
- Do not open the chassis to avoid electrical shocks when the switch is operating or just when the switch is powered off.

## Examining the installation site

The V1910 Switch Series must be used indoors. You can mount the switch in a rack or on a workbench, but make sure:

- Adequate clearance is reserved at the air inlet/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 well grounded.

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

## Temperature/humidity

You must maintain a proper temperature and humidity in the equipment room. Long-term high humidity may lead to bad insulation, electricity leakage, mechanical property changes, and metal corrosion. However, if the relative humidity is too low, captive screws may become loose as the result of contraction of insulation washers and static electricity may be produced in a dry environment to jeopardize the circuits on the device. A high temperature is the most undesirable condition, because it accelerates the aging of insulation materials and thus significantly lowers reliability and service life of the switch.

For the temperature and humidity requirements of different models, see [Table 1](#).

## Cleanness

Dust buildup on the chassis may 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 12 Dust concentration limit in the equipment room**

Substance	Concentration limit (particles/m <sup>3</sup> )
Dust	≤ 3 × 10 <sup>4</sup> (no visible dust on the tabletop over three days)

Note: The dust diameter is greater than or equal to 5 μm.

The equipment room must also meet strict limits on salts, acids, and sulfides to eliminate corrosion and premature aging of components, as shown in Table 13.

**Table 13 Harmful gas limits in the equipment room**

Gas	Maximum concentration (mg/m <sup>3</sup> )
SO <sub>2</sub>	0.2
H <sub>2</sub> S	0.006
NH <sub>3</sub>	0.05
Cl <sub>2</sub>	0.01

## EMI

All electromagnetic interference (EMI) sources, from outside or inside of the switch and application system, adversely affect the switch in a conduction pattern of capacitance coupling, inductance coupling, electromagnetic wave radiation, or common impedance (including the grounding system) coupling. To prevent EMI, take the following actions:

- As the AC power system is a TN system, use a single-phase three-wire power receptacle with a 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.
- Route interface cables only indoors to prevent signal ports from getting damaged by over-voltage or over-current caused by lightning strikes.

## Laser safety

The V1910 Switch Series is a line of class 1 laser devices.

**△ CAUTION:**

When an SFP module on a V1910 switch is operating, do not stare into the optical port because the laser light emitted from the optical fiber may hurt your eyes.

## Installation tools

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

All these installation tools are user supplied.

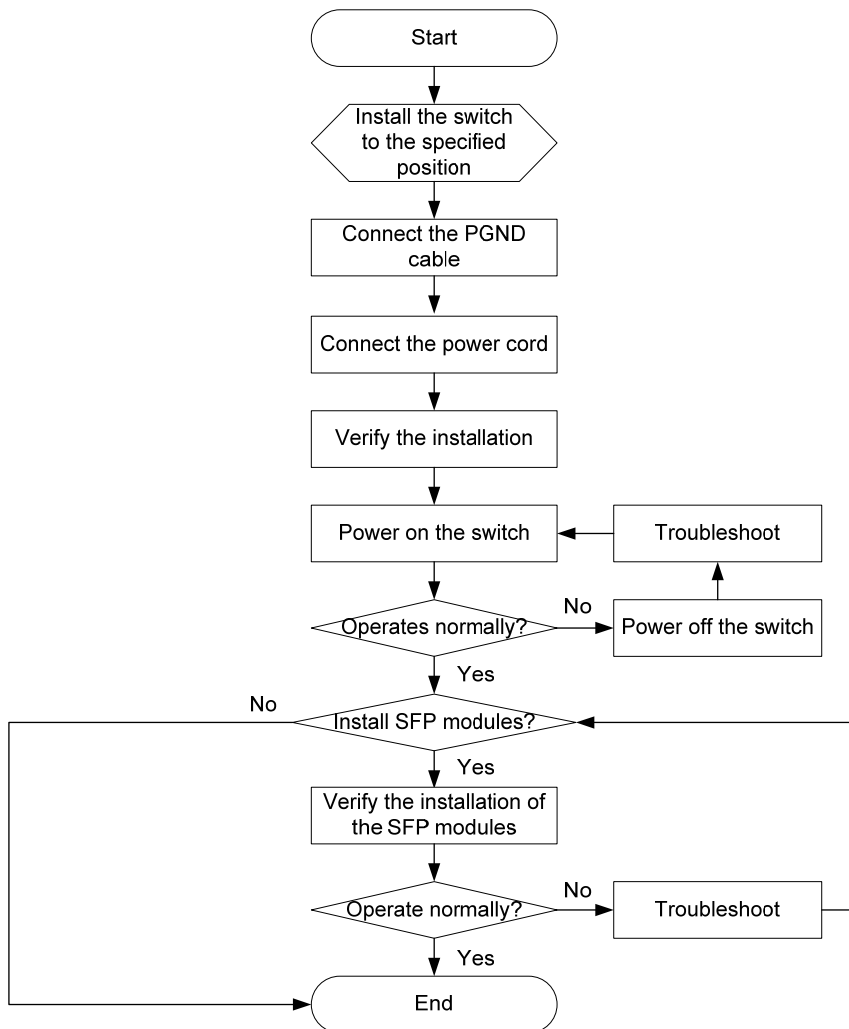
# Installing the switch

**CAUTION:**

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

## Installation flow

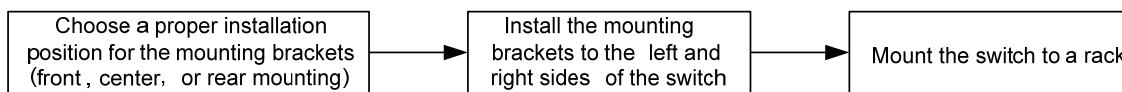
Figure 11 Installation flow



# Installing the switch into a 19-inch rack

The V1910 Switch Series is shipped with a pair of mounting brackets to fix and support the switch. [Figure 12](#) shows how to install a V1910 into a 19-inch rack.

**Figure 12 Install a V1910 into a 19-inch rack**

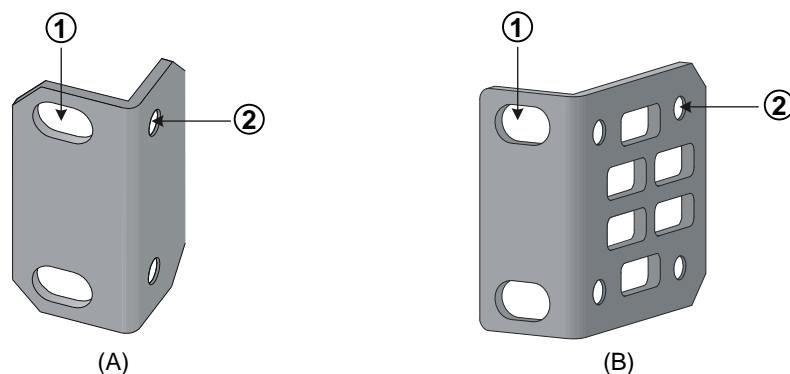


## Introduction to mounting brackets

**Table 14 Mounting brackets for the V1910 Switch Series**

Model	Mounting brackets	Appearance	Mounting position	Description
HP V1910-16G Switch JE005A	Provided by default	See callout A in <a href="#">Figure 13</a>	Front or rear part of the chassis's side	See <a href="#">Figure 14</a> and <a href="#">Figure 15</a>
HP V1910-24G Switch JE006A				
HP V1910-48G Switch JE009A			Front or rear part of the chassis's side	See <a href="#">Figure 16</a> and <a href="#">Figure 18</a>
HP V1910-24G-PoE (170W) Switch JE008A	Provided by default	See callout B in <a href="#">Figure 13</a>	Front, center, or rear part of the chassis's side	See <a href="#">Figure 16</a> , <a href="#">Figure 17</a> , and <a href="#">Figure 18</a>
HP V1910-24G-PoE (365W) Switch JE007A				

**Figure 13 Mounting brackets**



- (1) Screw hole used to fix the mounting bracket to the rack (with an M6 screw)
- (2) Screw hole used to fix the switch to the mounting bracket

## Attaching the mounting brackets to the switch



**CAUTION:**

The installation of mounting brackets varies depending on your switch model.

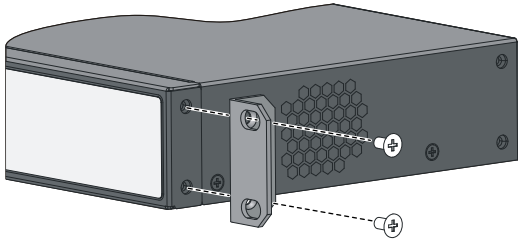
As shown in [Table 14](#), the mounting brackets can be attached to the switch for front, center, or rear mounting. You can choose a proper position according to the actual requirements.

Follow these steps to install a mounting bracket to the chassis:

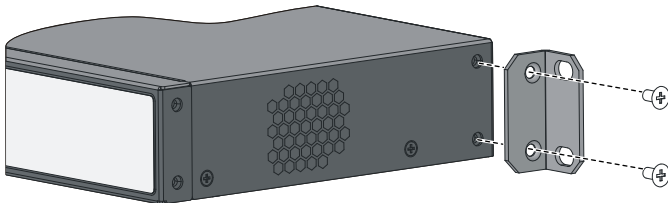
**Step1** Align the mounting holes of the bracket with the holes of the chassis, as shown in [Figure 14~Figure 18](#).

**Step2** Fasten the screws.

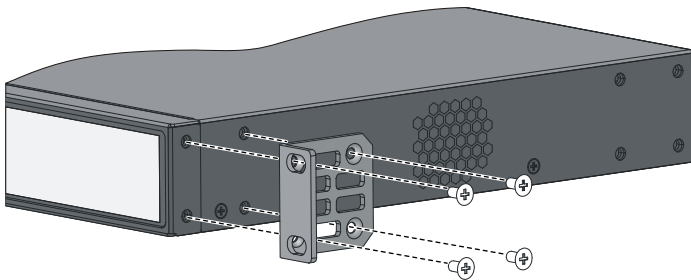
**Figure 14 Install a mounting bracket on the chassis (A)**



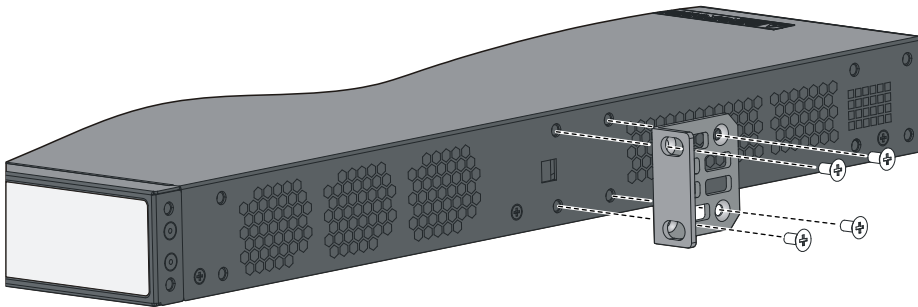
**Figure 15 Install a mounting bracket on the chassis (B)**



**Figure 16 Install a mounting bracket on the chassis (C)**

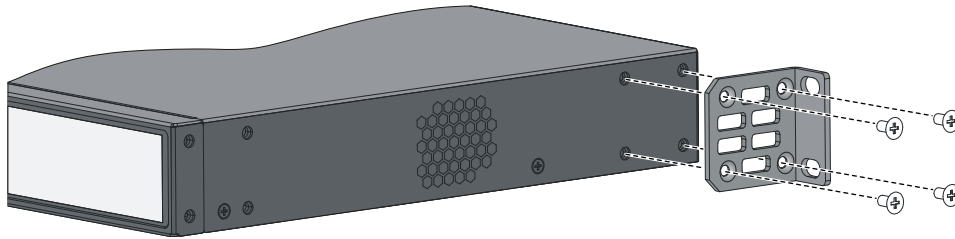


**Figure 17 Install a mounting bracket on the chassis (D)**





**Figure 18** Install a mounting bracket on the chassis (E)



## Mounting the switch to a rack

- Step1** Wear an ESD-preventive wrist strap and make sure the rack is well grounded and is firm enough to support the switch and cables.
- Step2** Locate the positions for installing cage nuts on the rack post, and use a marker to mark the positions.
- Step3** Install cage nuts at the marked positions.
- Step4** Attach the mounting brackets to the switch. For more information, see [“Attaching the mounting brackets to the switch.”](#)
- Step5** Supporting the bottom of the switch, gently place the switch on the rack to a proper location.
- Step6** Have another person to fix the mounting brackets with screws (anti-rust screws with cage nuts prepared yourself) to the square holes of the rack to install the switch to the rack horizontally, as shown in [Figure 19](#) or [Figure 20](#).

---

### NOTE:

The method for installing the V1910 Switch Series into a rack is similar. For how to install the switch to a rack by using mounting brackets, see [Figure 19](#) or [Figure 20](#) according to the model and mounting position of the mounting brackets as described in [Table 14](#).

---

Figure 19 Mount the HP V1910-16G Switch JE005A to a rack

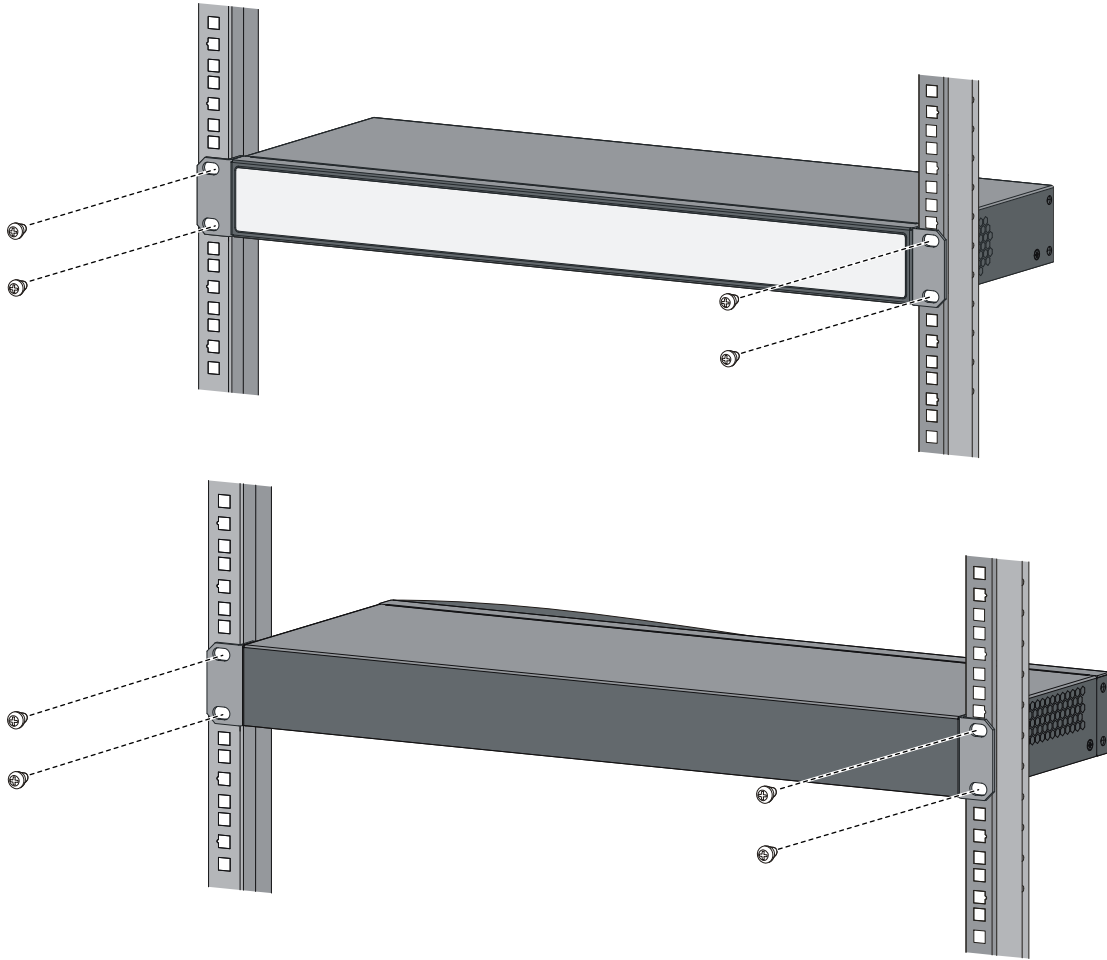
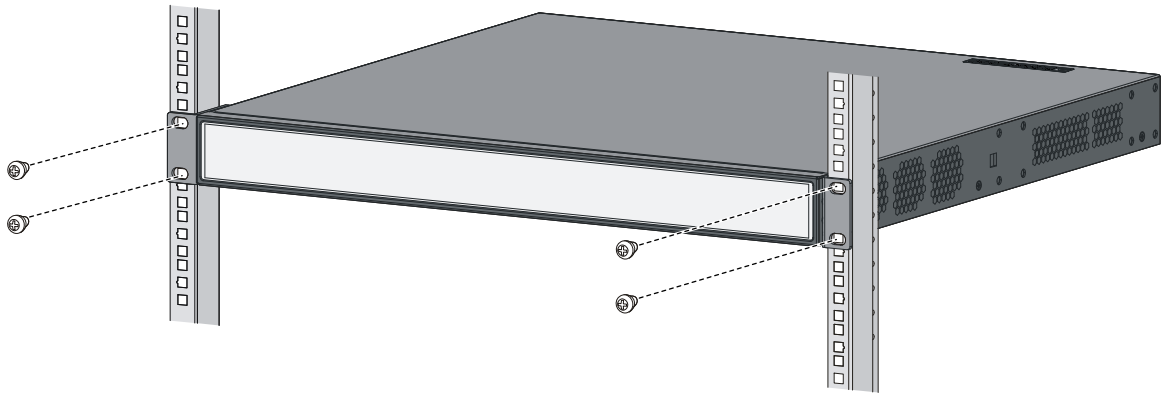
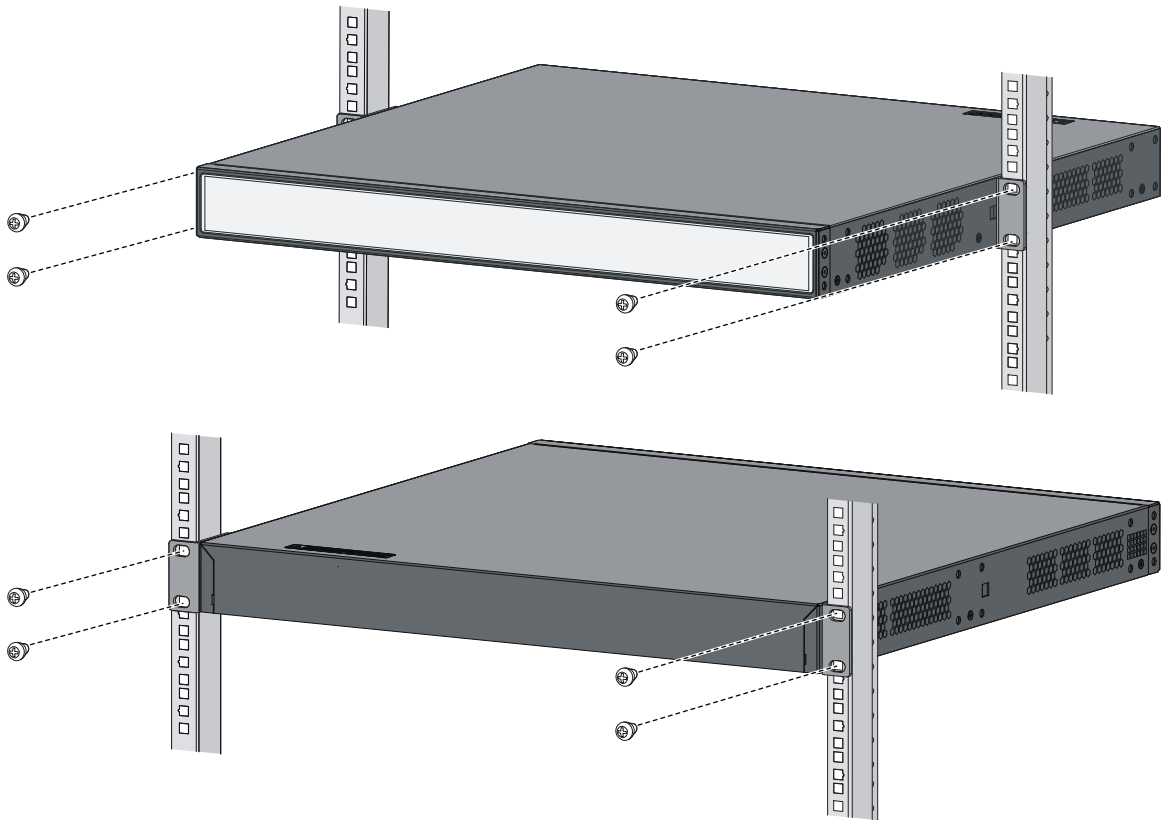


Figure 20 Mount the HP V1910-24G-PoE (170W) Switch JE008A to a rack





---

**NOTE:**

If support trays are provided on the rack, you can mount the switch to the rack with mounting brackets and trays. To do so, put the switch on the support tray and slide the switch to an appropriate location, and then fix the mounting brackets.

---

## Mounting the switch on a workbench

In many cases, standard 19-inch racks are not available. Switches are often placed on clean workbenches. To place the switch on a workbench, follow these steps:

- Step1** Place the switch with bottom up carefully, and then clean the round holes on the chassis bottom with dry cloth.
- Step2** Attach the rubber feet to the four round holes on the chassis bottom.
- Step3** Place the switch with upside up on the workbench.

During the operation, you simply need to follow these guidelines:

- Make sure that the workbench is flat and sturdy.
- Ensure good ventilation and a space of 10 cm (3.94 in) around the chassis for heat dissipation.
- Avoid heavy objects on the switch.

## Grounding the switch

**△ CAUTION:**

- Correctly connecting the switch grounding cable is crucial to the lightning protection and EMI protection.
- The power interface and grounding terminals in this section are for illustration only.

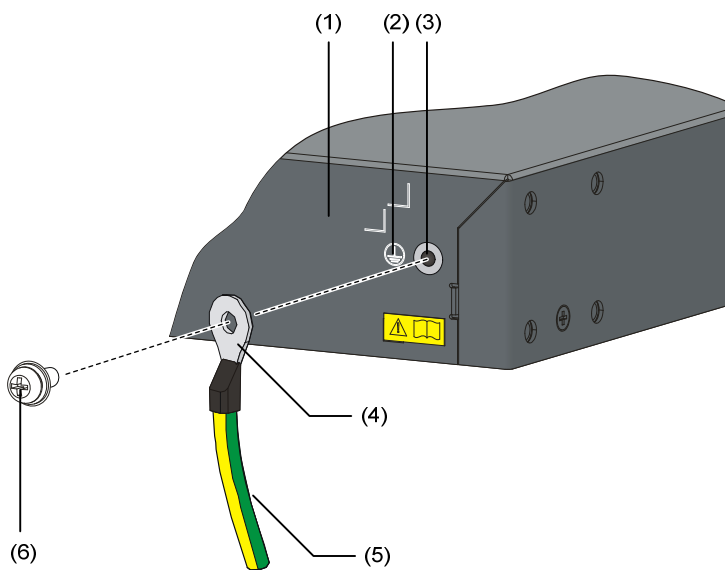
The power input end of the switch has a noise filter, whose central ground is directly connected to the chassis to form the chassis ground. You must securely connect this chassis ground to the earth so that the faradism and leakage electricity can be safely released to the earth to minimize EMI susceptibility of the switch.

## Grounding the switch with a grounding strip

Follow these steps to connect the grounding cable:

- Step1** Remove the grounding screw from the rear panel of the switch chassis.
- Step2** Attach the supplied OT terminal of the grounding cable to the grounding screw.
- Step3** Fasten the grounding screw, which is attached with the OT terminal of the grounding cable, into the grounding screw hole with a screwdriver.

**Figure 21 Connect the grounding cable to the grounding hole of switch**

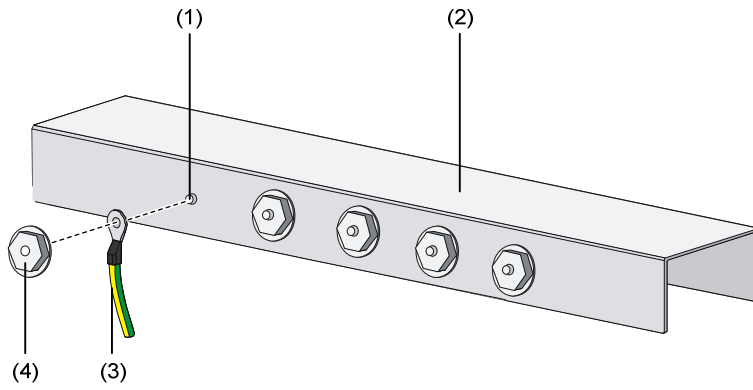


(1) Rear panel of the switch	(2) Grounding sign
(3) Grounding hole	(4) OT terminal
(5) Grounding cable	(6) Grounding screw

Follow these steps to attach the other end of the grounding cable to the grounding strip:

- Step4** Cut the grounding cable to a proper length according to the distance between the switch and the grounding strip.
- Step5** Peel 5 mm (0.20 in) of insulation sheath by using a wire stripper, and then insert the naked metal part through the insulation covering into the end of the OT terminal.
- Step6** Secure the metal part of the cable to the OT terminal with a crimper, and then cover it with the insulation covering. Then heat the insulation covering with a blower to make it completely cover the metal part.
- Step7** Connect the OT terminal to the grounding pole of the grounding strip, and then fasten it with a hex nut.

**Figure 22 Connect the grounding cable to the grounding strip**



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

**CAUTION:**

- Only the grounding cables supplied with the HP V1910-24G-PoE (365W) Switch JE007A and HP V1910-24G-PoE (170W) Switch JE008A provide OT terminals at the ends connecting the grounding strip. For other switch models, prepare proper OT terminals by yourself.
- Connect the grounding cable to the grounding system in the equipment room. Do not connect it to a fire main or lightning rod.

## 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 angle iron must have a dimension no less than 50 × 50 × 5 mm (1.97 × 1.97 × 0.20 in) and the steel tube must have a wall thickness no less than 3.5 mm (0.14 in) and be zinc-coated.

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

**Figure 23 Ground 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) Switch rear panel

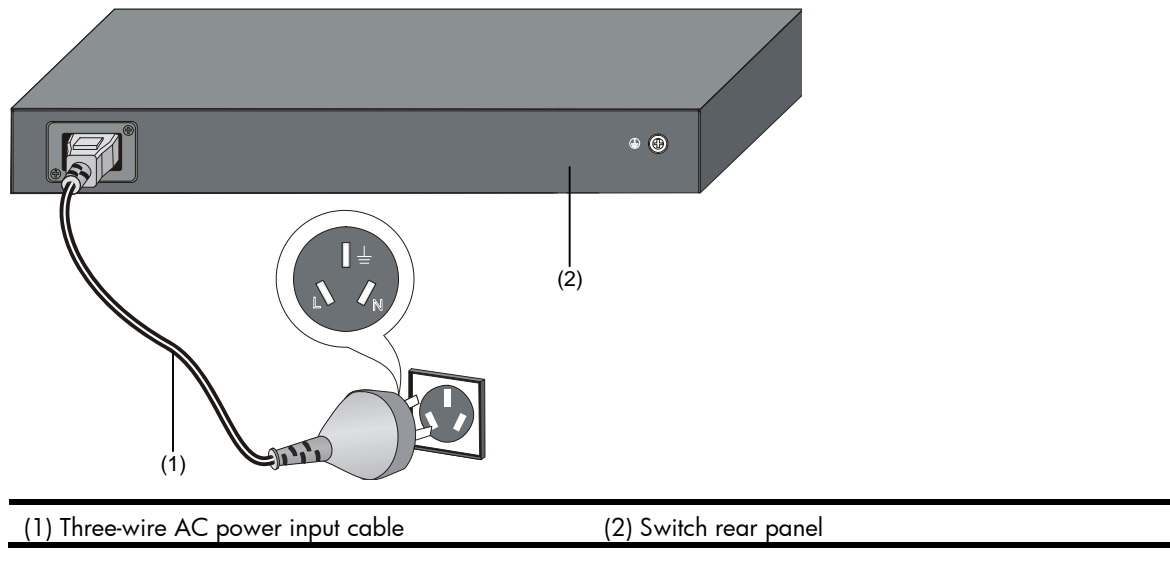
# Grounding the switch in other grounding environments

## Grounding an AC-powered switch

If the installation site has no grounding strips or earth ground, you ground an AC-powered switch through the PE wire of the AC power supply.

Make sure the PE wire is well connected to the ground at the power distribution room or AC transformer side, the switch PE terminal and the PE wire are well connected, and the three-wire input cable of the grounding cable is used for the power supply cable. If the PE wire of the AC power supply is not grounded at the power distribution room or AC transformer side, report the problem and reconstruct the grounding system.

**Figure 24** Ground through an AC power PE wire



### NOTE:

Use the grounding cable provided with the switch to connect the grounding strip in the equipment room. Otherwise, the grounding effect may not be ensured, which easily causes damage to the switch.

## Connecting the power cord

### Connecting an AC power cord

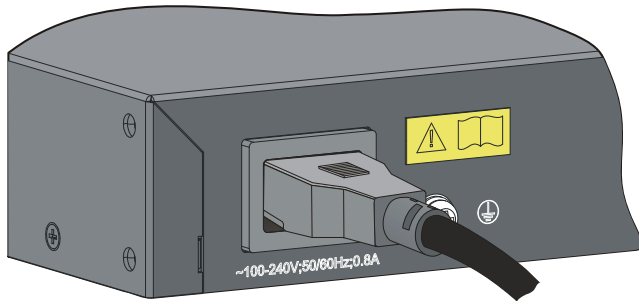
#### ⚠ CAUTION:

Make sure that the grounding cable has been properly connected before powering on the switch.

The V1910 Switch Series uses an external AC power system for its power supply. Follow these steps to connect an AC power cord:

- Step1** Connect one end of the supplied grounding cable to the grounding screw on the rear panel of the chassis and the other end to the ground as near as possible.
- Step2** Insert one end of the AC power cord to the AC power receptacle on the rear panel of the chassis, as shown in [Figure 25](#).
- Step3** Connect the other end of the power cord to a power source.

Figure 25 Connect the AC power cord (A)

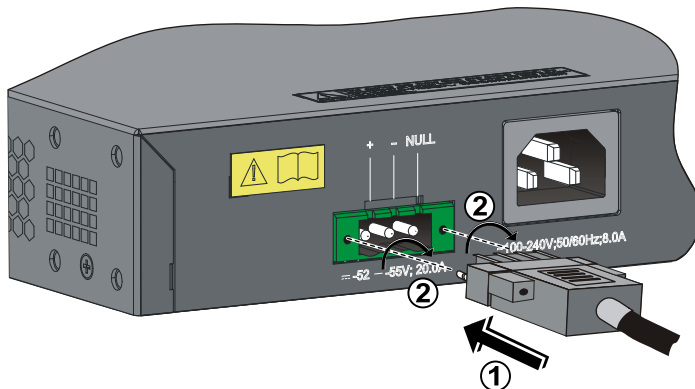


## Connecting an RPS DC power cord

The HP V1910-24G-PoE (365W) Switch JE007A also supports RPS DC power input with the input voltage ranging from  $-52$  V to  $-55$  V. Follow these steps to install a DC power cord:

- Step1** Connect one end of the supplied grounding cable to the grounding screw on the rear panel of the chassis and the other end to the ground as near as possible.
- Step2** Keep the upside of the DC RPS plug on top and plug it in the RPS DC receptacle (see callout 1 in [Figure 26](#)). (If you plug it with the upside down, the insertion is not smooth because of the specific structure design of the RPS DC receptacle and the RPS plug.)
- Step3** Use a flat-blade screwdriver to fix the two screws on the RPS plug clockwise to secure the plug to the RPS DC receptacle (see callout 2 in [Figure 26](#)).
- Step4** Connect the other end of the RPS DC power cord to the external RPS power supply system ( $-54$  V/25 A output).
- Step5** Check whether the RPS LED on the front panel of the switch is ON. If the LED is ON, it shows the power cord is properly connected.

Figure 26 Connect an RPS DC power cord to the HP V1910-24G-PoE (365W) Switch JE007A



---

**⚠ CAUTION:**

- Make sure that the grounding cable has been properly connected before powering on the switch.
  - The length of the DC power cord must be less than 3 m (9.8 ft).
-

# Verifying the installation

Before powering on the switch, check 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 selected power module matches that required by the switch.
- The power cords are properly connected.
- All the interface cables are cabled indoors.

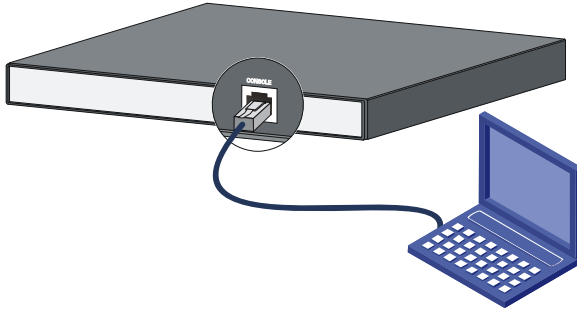


# Powering on the switch for the first time

## Setting up the configuration environment

To set up the configuration environment, connect a terminal (a PC in this example) to the console port on the switch with a console cable.

Figure 27 Network diagram for configuration environment setup



## Connecting the console cable

### 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 console terminal.

Figure 28 Console cable

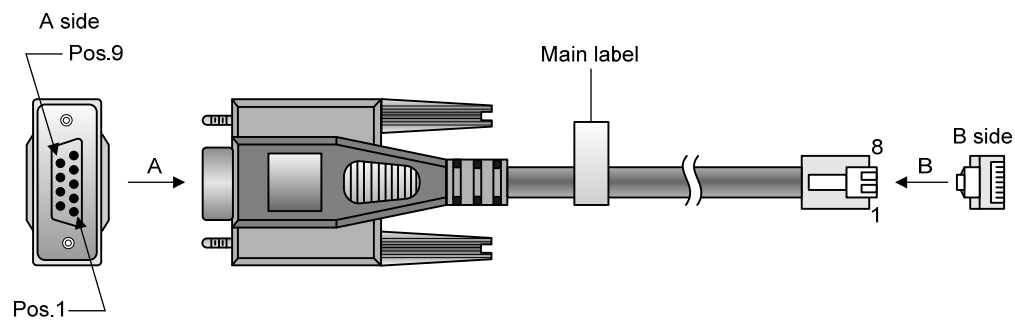


Table 15 Console cable pinouts

RJ-45	Signal	Direction	DB-9
1	RTS	←	7
2	DTR	←	4
3	TXD	←	3

RJ-45	Signal	Direction	DB-9
4	CD	→	1
5	GND	N/A	5
6	RXD	→	2
7	DSR	→	6
8	CTS	→	8

## Connection procedure

Follow these steps to connect a terminal device to the switch by using the console cable:

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

### ⚠ CAUTION:

Identify the mark on the console port to ensure that you are connecting to the correct port.

### NOTE:

- When connecting a PC to a powered-on switch, connect the DB-9 connector of the console cable to the PC before connecting the RJ-45 connector to the switch.
- When disconnecting a PC from a powered-on switch, disconnect the DB-9 connector of the console cable from the PC after disconnecting the RJ-45 connector from the switch.

## Setting terminal parameters

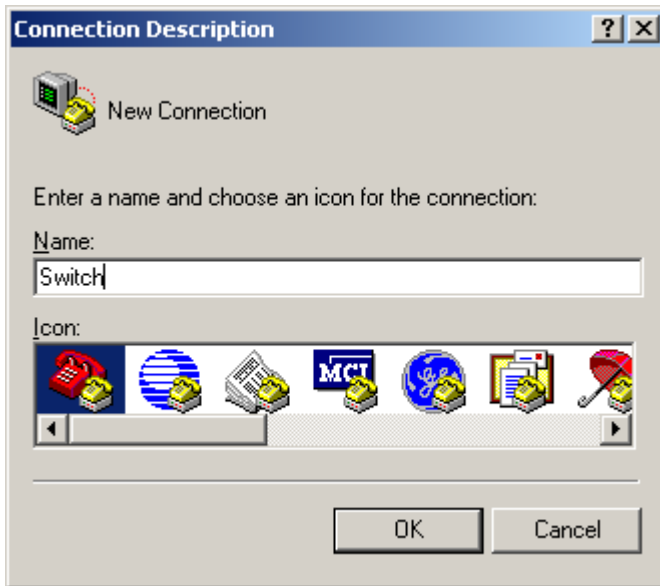
When setting up the configuration environment through the console port, the terminal or PC can use the terminal emulation program to communicate with the switch. You can run the HyperTerminal of the Windows operating system to connect to other PCs, network devices, and Telnet sites. For detailed information and the use of the HyperTerminal, see the HyperTerminal Help documentation in Help and Support Center on the PC running the Windows operating system.

In the following configuration procedure, Windows XP HyperTerminal is used to communicate with the switch.

Follow these steps to set terminal parameters:

- Step 1** Select **Start > All Programs > Accessories > Communications > HyperTerminal** to enter the HyperTerminal window. The **Connection Description** dialog box appears, as shown below.

Figure 29 Connection description of the HyperTerminal



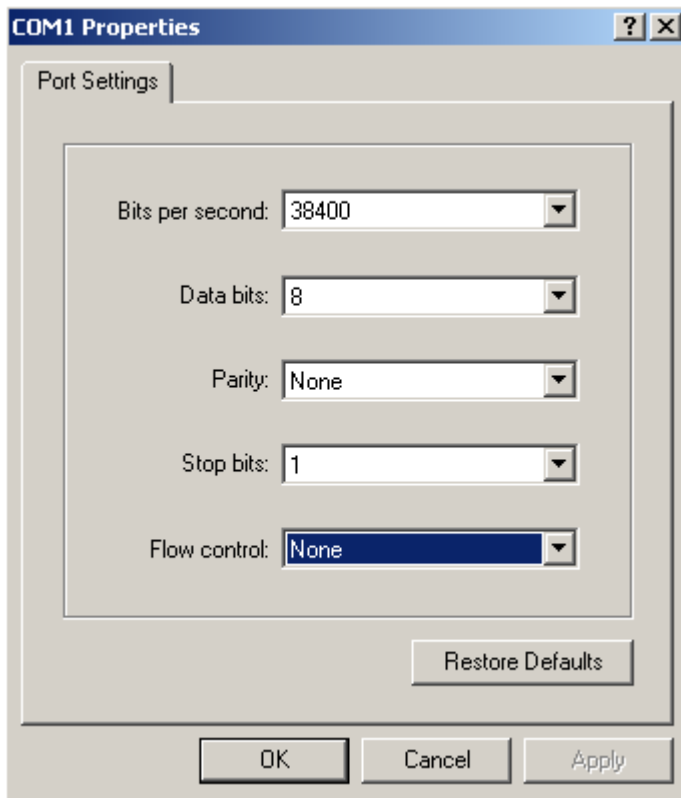
**Step2** Type the name of the new connection in the **Name** text box and click **OK**. The following dialog box appears. Select the serial port to be used from the **Connect using** drop-down list.

Figure 30 Set the serial port used by the HyperTerminal connection



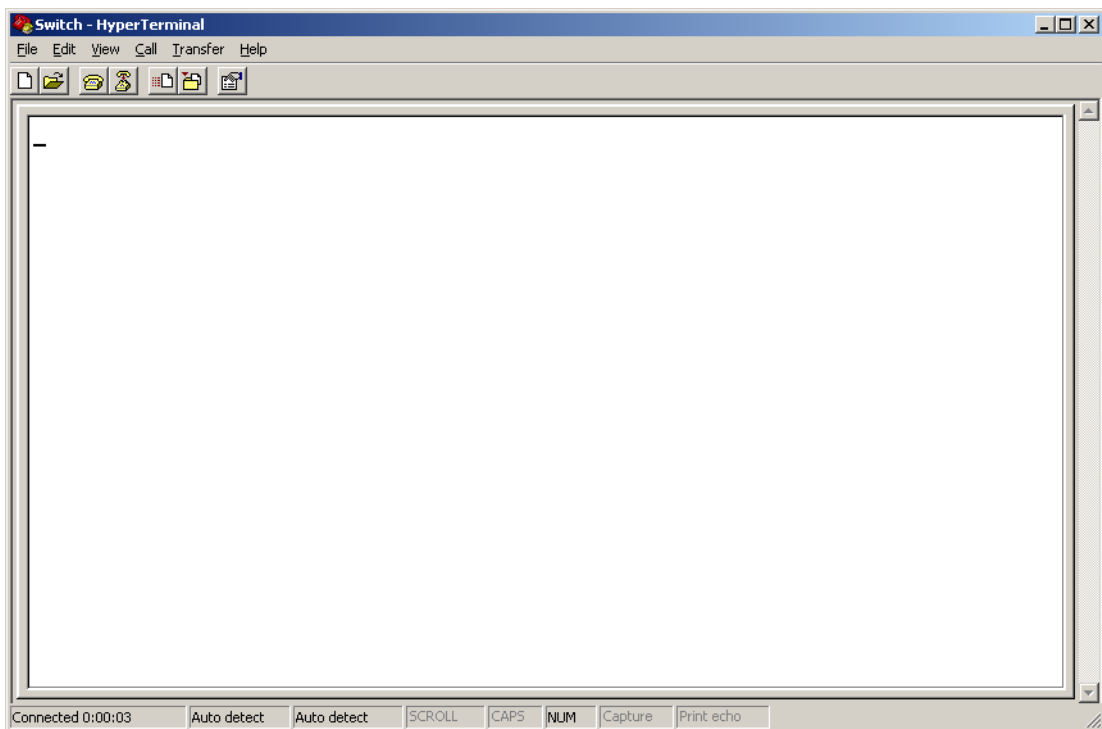
**Step3** Click **OK** after selecting a serial port. The following dialog box appears. Set **Bits per second** to **38400**, **Data bits** to **8**, **Parity** to **None**, **Stop bits** to **1**, and **Flow control** to **None**.

Figure 31 Set the serial port parameters



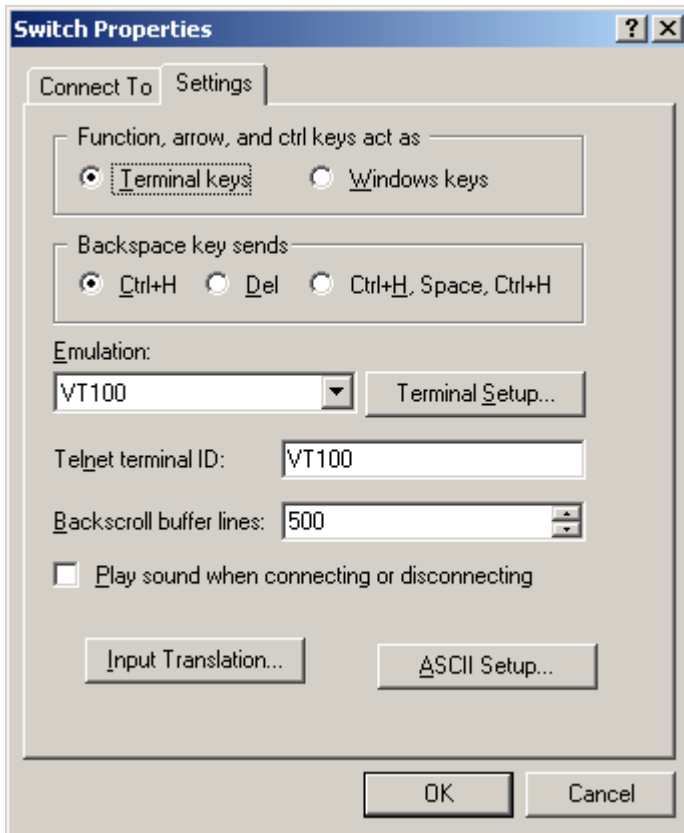
**Step4** Click **OK** after setting the serial port parameters and the system enters the HyperTerminal window shown below.

Figure 32 HyperTerminal window



- Step5** Click **Properties** in the HyperTerminal window to enter the **Switch Properties** dialog box. Click the **Settings** tab, set the emulation to **VT100**, and then click **OK**.

**Figure 33** Set terminal emulation in **Switch Properties** dialog box



## Powering on the switch

### Checking before power-on

Before powering on the switch, verify that:

- The power cord is properly connected.
- The power supply voltage meets the requirement of the switch.
- The console cable is properly connected; the terminal or PC used for configuration has been started; and the configuration parameters have been set.

### Powering on the switch

The V1910 switches have the same Boot ROM display style. This document uses the Boot ROM output information on the HP V1910-24G Switch JE006A as an example:

Starting.....

```

*****
*
*          HP V1910-24G Switch JE006A BOOTROM, Version 135          *
*

```

\*  
 \*\*\*\*\*  
 Copyright (c) 2010-2011 Hewlett-Packard Development Company, L.P.

```

Creation Date       : Jan 9 2011
CPU Type           : ARM926
CPU L1 Cache       : 32KB
CPU Clock Speed    : 333MHz
Memory Type        : DDR2 SDRAM
Memory Size        : 128MB
Flash Size         : 128MB
CPLD Version       : 001
PCB Version        : Ver.B
Mac Address        : 000ef2001910
  
```

Press Ctrl-B to enter Extended Boot menu...1

The last line asks whether you want to enter the Boot ROM menu. The system waits for one second for your response.

---

**NOTE:**

- The system has two startup modes: normal startup and fast startup. The normal startup mode requires a little longer time than the fast startup mode because of more self-test operations.
  - By default, the system starts up in fast mode and the waiting time here is one second. If you set the startup mode to normal, the waiting time is five seconds. The following section describes the setting of the startup mode.
- 

- If you press **Ctrl + B** within one second, the Boot ROM menu is displayed.

BOOT MENU

1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify BootRom password
6. Enter BootRom upgrade menu
7. Skip current system configuration
8. Set BootRom password recovery
9. Set switch startup mode
0. Reboot

Enter your choice(0-9):

**Table 16 Description on the fields**

Item	Description
1. Download application file to flash	Download the boot file to the flash memory
2. Select application file to boot	Select the boot file to boot
3. Display all files in flash	Display all files in the flash memory

Item	Description
4. Delete file from flash	Delete files from the flash memory
5. Modify BootRom password	Modify the Boot ROM password
6. Enter BootRom upgrade menu	Enter the Boot ROM update menu
7. Skip current system configuration	Skip the current configuration file (this configuration is valid once)
8. Set BootRom password recovery	Restore the Boot ROM password
9. Set switch startup mode	Set the startup mode of the switch
0. Reboot	Restart the switch

- If you perform no operation or press a key other than **Ctrl + B** within one second, once the remaining waiting time becomes zero, the system begins to automatically start up and the following information is displayed:

```
Starting to get the main application file--flash:/V1910-CMW520-A1101.bin!.....
.....
The main application file is self-decompressing.....
.....
.....Done!
System is starting...
User interface aux0 is available.
```

Press ENTER to get started.

The appearance of "Press ENTER to get started" indicates that the automatic startup of the switch is complete.

Press **Enter**. The following prompt is displayed:

```
<HP>
```

You can configure the switch now.

## Changing the boot mode

By default, the system starts up in fast boot mode. If you want to change the boot mode to **normal**, press **Ctrl + B** within one second to enter the Boot ROM menu showed below:

```
BOOT MENU

1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify BootRom password
6. Enter BootRom upgrade menu
7. Skip current system configuration
8. Set BootRom password recovery
9. Set switch startup mode
0. Reboot

Enter your choice(0-9):
```

Enter **9**. The system prompts you to change the startup mode:

The current mode is fast startup mode!

Are you sure you want to change it to full startup mode? Yes or No (Y/N):

Enter **Y**. The system displays the following information:

Setting...Done!

BOOT MENU

1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify BootRom password
6. Enter BootRom upgrade menu
7. Skip current system configuration
8. Set BootRom password recovery
9. Set switch startup mode
0. Reboot

Enter your choice(0-9):

Enter **0**. The system reboots in normal startup mode and displays the following information:

Starting.....

```
*****
*
*           HP V1910-24G Switch JE006A BOOTROM, Version 135           *
*
*****
Copyright (c) 2010-2011 Hewlett-Packard Development Company, L.P.
```

```
Creation Date       : Jan 9 2011
CPU Type            : ARM926
CPU L1 Cache       : 32KB
CPU Clock Speed    : 333MHz
Memory Type        : DDR2 SDRAM
Memory Size        : 128MB
Flash Size         : 128MB
CPLD Version       : 001
PCB Version        : Ver.B
Mac Address        : 000ef2001910
```

Press Ctrl-B to enter Extended Boot menu...5

In normal startup mode, the waiting time here is five seconds. If you press **Ctrl + B** within five seconds, the Boot ROM menu is displayed. If you perform no operation or press a key other than **Ctrl + B** within five seconds, the system begins to automatically start up and the following information is displayed:

```
Starting to get the main application file--flash:/V1910-CMW520-A1101.bin!.....
.....
The main application file is self-decompressing.....
.....
.....Done!
System is starting...
      Board checking.....LS51LTSR
```



```
SDRAM fast selftest.....OK!  
Flash fast selftest.....OK!  
CPLD selftest.....OK!  
Switch chip selftest.....OK!  
PHY selftest.....OK!  
Please check leds.....FINISHED!  
User interface aux0 is available.
```

Press ENTER to get started.

The appearance of "Press ENTER to get started" indicates that the automatic startup of the switch is complete.

Press **Enter**. The following prompt is displayed:

<HP>

You can configure the switch now.

---

# Maintenance and troubleshooting

## Software loading failure

The switch runs with the original software version after it has failed to load new version of software. To identify and remove the loading failure cause, perform the following check procedure:

- Check that the physical ports are properly connected.
- If the physical connection is loose or incorrect, reconnect the physical ports and make another try to load software.
- If the physical connection is secure and correct, view the loading procedure information displayed on the HyperTerminal to check for input errors, and make another try to load software.

Common input errors include:

- Failure to set the baud rate of the HyperTerminal to 38,400 bps when loading files at a baud rate other than 38,400 bps through XMODEM.
- Entering an incorrect IP address, software name, or path of the TFTP server when using TFTP.
- Entering an incorrect IP address, software name, username, or password when using FTP.

If software loading fails for any other cause than physical connection problems and input errors, please contact your sales agent for help.

## Password loss

### Console login password loss

If you forget the console login password, enter the Boot ROM menu:

```
BOOT MENU
1. Download application file to flash
2. Select application file to boot
3. Display all files in flash
4. Delete file from flash
5. Modify BootRom password
6. Enter BootRom upgrade menu
7. Skip current system configuration
8. Set BootRom password recovery
9. Set switch startup mode
0. Reboot
```

Enter your choice(0-9):

Enter **7**, and then restart the switch. After the switch is restarted, the user password is removed.

### Boot ROM password loss

Contact your sales agent for help.

# Power supply failure

The HP V1910-24G-PoE (365W) Switch JE007A adopts AC power input, RPS power input, or both RPS and AC power inputs. Other V1910 switches adopt AC power input only.

You can look at the power LED and the RPS status LED on the front panel of the switch to identify a power system failure.

## AC input

If the switch is AC powered, look at the system status LED to identify a power failure. If the system status LED is off, an AC input failure has occurred. Check the following items:

- The AC power cord is well connected to the switch, and the AC receptacle on the switch and the AC power receptacle are normal.
- The external AC power supply system is correctly working.
- The operating temperature of the switch is normal, and the power module has good ventilation (over-temperature can cause a power module to stop working and enter the protection state).

## RPS input

If the switch is RPS powered, look at the system status LED or RPS status LED to identify a power failure. If the system status LED or RPS status LED is off, an RPS input failure has occurred. Check the following items:

- The switch is well connected to the external RPS power supply.
- The external RPS is correctly working.
- The operating temperature of the switch is normal, and the power module has good ventilation (over-temperature can cause the power module to stop working and enter the protection state).

## Concurrent AC and RPS inputs

If the switch is concurrently powered by an RPS and an AC power supply, look at the power LED and RPS status LED to identify an RPS or AC input failure.

1. If the power LED is off, the AC power supply and the RPS both have an input failure.

Check the following items:

- The AC power cord is well connected to the switch, and the AC receptacle on the switch and the connected AC power receptacle are normal.
  - The AC external power supply system is normal.
  - The switch is well connected to the external RPS.
  - The external RPS is correctly working.
  - The operating temperature of the switch is normal, and the power module has good ventilation (over-temperature can cause the power module to stop working and enter the protection state).
2. If the power LED is on but the RPS status LED is off, an RPS input failure has occurred.

Check the following items:

- The switch is well connected to the external RPS power supply.
- The external RPS is correctly working.

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### NOTE:

If the problem persists, contact your local sales agent or service engineer.

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# Configuration terminal problems

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 would display nothing or garbled text.

## No terminal display

If the configuration terminal displays nothing when the switch is powered on, check that:

- The power supply is normal.
- The console cable is properly connected.
- The console cable has no problem and the terminal settings are correct.

## Garbled terminal display

If terminal display is garbled, check that the following settings are configured for the terminal, for example, HyperTerminal:

- Baud rate—38,400
- Data bits—8
- Parity—none
- Stop bits—1
- Flow control—none
- Emulation—VT100