

HPE Aruba Networking 9114 Gateway

Installation Guide



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| Contents | 1 |
|---|----|
| About This Guide | 2 |
| Guide Overview | |
| Related Documentation | |
| Contacting Support | |
| HPE Aruba Networking 9114 Gateway | |
| Package Checklist | |
| HPE Aruba Networking 9114 Gateway Components | |
| Power, Status, and Gateway LEDs | |
| Reset Button | |
| Access Ports | 5 |
| RJ-45 Console Port | 7 |
| USB Type-C Console Port | 8 |
| Management Port | 8 |
| USB Interface | 9 |
| Expansion Slot | 9 |
| Grounding Point | 9 |
| Fan Module | 9 |
| PSU Slot 0 | 10 |
| PSU Slot 1 | 11 |
| Installation | 12 |
| Precautions | 12 |
| Selecting a Location | |
| Rack mount Installation - Standard | 13 |
| Rack mount Installation - Mid | |
| Four Post Rack mount Installation | |
| Table or Shelf Installation | |
| Installing and Removing a Fan Module | |
| Installing and Removing a Power Supply | |
| Connecting and Disconnecting the AC Power Cord | |
| Connecting the DC Power Cord | |
| Installing and Removing an SFP Module | |
| Connecting and Disconnecting an LC Cable | |
| Specifications, Safety, and Compliance | |
| HPE Aruba Networking 9114 Gateway Specifications | |
| Regulatory Model Name | |
| Safety and Regulatory Compliance | |
| Proper Disposal of HPE Aruba Networking Equipment | 31 |

Chapter 1 About This Guide

This document describes the hardware features of the HPE Aruba Networking 9114 Gateway. It provides a detailed overview of the physical and performance characteristics of each gateway model and explains how to install the gateway and its accessories.

Guide Overview

- <u>HPE Aruba Networking 9114 Gateway</u> provides a detailed hardware overview of the HPE Aruba Networking 9114 Gateway and each of its components.
- <u>Installation</u> describes how to install the HPE Aruba Networking 9114 Gateway in a number of ways and how to install each of its components.
- <u>Specifications</u>, <u>Safety</u>, <u>and Compliance</u> lists the HPE Aruba Networking 9114 Gateway's technical specifications and safety and regulatory compliance information.

Related Documentation

You require the following documents for the complete management of HPE Aruba Networking gateway.

- Latest document of the software user guide: <u>https://www.arubanetworks.com/techdocs/ArubaDocPortal/content/cons-aos-home.htm</u>
- CLI bank: https://www.arubanetworks.com/techdocs/CLI-Bank/Content/landing-pages/aos8-home.htm

Contacting Support

This section includes the contact information for the HPE Aruba Networking 9114 Gateway.

Table 1: Contact Information

| Main Site | www.arubanetworks.com | |
|--|---|--|
| Support Site | https://asp.arubanetworks.com | |
| Airheads Social Forums and Knowledge Base | www.community.arubanetworks.com | |
| North American Telephone | 1-800-943-4526 (Toll Free) 1-408-754-1200 | |
| International Telephones | https://www.arubanetworks.com/support-services/contact-support/ | |
| Software Licensing Site | www.hpe.com/networking/support | |
| End of Support information | www.arubanetworks.com/support-services/end-of-life/ | |
| Security Incident Response Team (SIRT) | Site: <u>https://www.arubanetworks.com/support-services/security-bulletins/</u> Email: <u>aruba-sirt@hpe.com</u> | |

Chapter 2 HPE Aruba Networking 9114 Gateway

The HPE Aruba Networking 9114 Gateway is a high-performance edge appliance with the ability to perform intelligent routing and tunnel orchestration software or wireless control plane management for SASE security and scalability.

Package Checklist

Inform your supplier to check if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use these materials to repack and return the unit to the supplier if needed.

Table 2: Package Contents

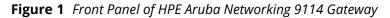
| Item | Quantity |
|---|----------|
| HPE Aruba Networking 9114 Gateway | 1 |
| Mounting Brackets | 2 |
| M6 x 15 mm Phillips Pan Head Screws | 4 |
| M4 x 8 mm Phillips Flat Head Screws | 8 |
| M6 x 7 mm Grounding Screws | 2 |
| Power Cable Power cable is shipped with only AC SKU. No power cable is shipped with DC SKU. | 1 |
| USB Type-C Console Cable | 1 |
| Rubber Feet | 4 |



Optional accessories are available for use with the HPE Aruba Networking 9114 Gateway series and are sold separately. Contact your HPE Aruba Networking sales representative for details and assistance

HPE Aruba Networking 9114 Gateway Components

This section introduces the different component and its location in the HPE Aruba Networking 9114 Gateway. The following figure shows the front and rear panel of the HPE Aruba Networking 9114 Gateway.



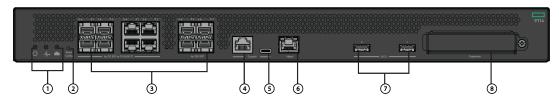


Table 3: Components of HPE Aruba Networking 9114 Gateway Front Panel

| Callout | Component | Description | Page |
|---------|----------------------------|---|--------|
| 1 | Power LED 🖒 | Used for basic monitoring of the HPE Aruba Networking 9114 Gateway | page 4 |
| | Status LED | | |
| | Gateway LED 📤 | | |
| 2 | Reset Configuration button | Used to reset the configuration settings | page 5 |
| 3 | Access Ports | There are 2 types of access ports: 4 x 1G Combo ports (1G SFP or 10/100/1000M Base-T) 4 x 10G SFP+ ports (10G/1G SFP) | page 5 |
| 4 | RJ-45 Console Port | RJ-45 serial console access port | page 7 |
| 5 | USB Type-C Console Port | Provides console access for direct local access | page 8 |
| 6 | Management Port | An out of band management port (RJ-45), used to connect to a separate management network | page 8 |
| 7 | USB3.0 Interfaces | 2 x USB3.0 interfaces. USB storage device can be used to save and upload configurations | page 9 |
| 8 | Expansion Slot | Reserved for future use | page 9 |

Figure 2 Back Panel of the HPE Aruba Networking 9114 Gateway

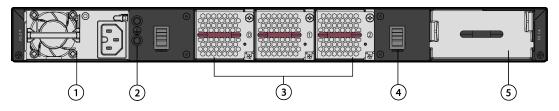


Table 4: Components of HPE Aruba Networking 9114 Gateway Back Panel

| Callout | Component | Description | Page |
|--------------|------------------|---|---------|
| 1 | PSU Slot 0 | Primary power supply module | page 10 |
| 2 | Grounding Points | Used to attach the grounding screws | page 9 |
| 3 | Fans | 3 x hot-swappable high speed fans | page 9 |
| 4 Cable Clip | | 2 x Cable clip to secure the Power cord | |
| 5 | PSU Slot 1 | Slot for additional power supply module | page 11 |

Power, Status, and Gateway LEDs

In addition to the LEDs on each port, there are three additional LEDs on the front panel that provides the overall status of the device. These LEDs provide basic monitoring of the overall status of the HPE Aruba Networking 9114 Gateway.

| LED | Symbol | Function | Indicator | Status |
|---------|-----------------------------|------------------|------------------|--|
| Power | ower System power | | Green (Solid) | Unit is powered on |
| | U | | Off | Unit is powered off |
| | | | Amber (Solid) | Unit is in error state |
| Status | us System status | | Green (Solid) | Unit is operational |
| | _//~ | ∽ | Green (Blinking) | Device is loading software |
| | | Amber (Blinking) | Major alarm | |
| | | | Amber (Solid) | Critical alarm |
| | | | Off | No power |
| Gateway | eway Gateway Operation Mode | | Green (Solid) | The unit is connected to Network Management System |
| | | | Off | Power Off |

Reset Button

The HPE Aruba Networking 9114 Gateway includes a reset button for resetting the gateway configurations. Insert a pin into the reset button hole until you feel the pin touches a surface. Push and hold the pin for two seconds to reset the gateway configuration.

Access Ports

The HPE Aruba Networking 9114 Gateway is equipped with following access ports:

• 4 x 1G Combo ports (1G SFP or 10/100/1000M Base-T)

| E | | | | |
|---|---|---|---|--|
| | _ | | 3 | |
| | | | 7 | |
| Ν | 0 | т | Е | |

HPE Aruba Networking 9114 Gateway does not support 1G copper SFP in dual-media 1G SFP ports. If 1G copper SFPs are connected during the boot-up or run-time process, it may lead to unpredictable or inconsistent behavior on the gateway.

4 x 10G SFP+ ports (10G/1G SFP)

Use 10G SFP+ ports with SFP/SFP+ modules and 1G combo SFP ports with 1G SFP modules that HPE Aruba Networking supports. 10G SFP ports support the operation of two speeds (10G or 1G).



HPE Aruba Networking tests and supports HPE Aruba Networking optics within their gateway systems. HPE Aruba Networking does not guarantee the proper functionality of third-party optics if used with a HPE Aruba Networking system since the third-party optics have not been tested or supported.

Access Port LEDs

The two LEDs on each access port allow you to monitor the status of and activity on the port. These LEDs provide basic monitoring of the status, activity, and basic configuration of each port.

- LINK/ACT: on the left side of the port, it displays the link status of the port.
- **SPEED:** on the right side of the port, it displays the speed of the port. The following table describes the LED behavior for each mode.

| LED | Function | Indicator | Speed Status |
|----------|-------------------|------------------|--|
| LINK/ACT | Link status | Green (Solid) | Link has been established |
| | | Green (Blinking) | Port is transmitting or receiving data |
| | | Off | No link on port |
| SPEED | Port speed status | Green (Solid) | 10G speed |
| | | Amber (Solid) | 1G speed |
| | | Off | No link on port |

Table 6: 10G SFP+ Access Port

Table 7: 1G Combo port

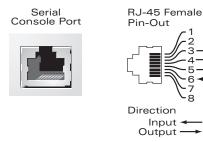
| LED | Function | Indicator | Speed status |
|----------|-------------------|------------------|--|
| LINK/ACT | Link status | Green (Solid) | Link has been established |
| | | Green (Blinking) | Port is transmitting or receiving data |
| | | Off | No link on port |
| SPEED | Port speed status | Green (Solid) | 1G speed |
| | | Off | No link on port |

| LED | Function | Indicator | Speed Status |
|----------|-------------------|------------------|--|
| LINK/ACT | Link status | Green (Solid) | Link has been established |
| | | Green (Blinking) | Port is transmitting or receiving data |
| | | Off | No link on port |
| SPEED | Port speed status | Green (Solid) | 1G speed |
| | | Off | 100M/10M speed |

RJ-45 Console Port

The serial console port allows connecting a gateway to a terminal or a laptop for direct local management. This port is a RJ-45 female connector with the pin-out described in the following figure.

Figure 3 Serial Console Port Pin-Out



Communication settings for the serial console port are indicated in the following table.

νD GND GND **RxD**

8

Table 9: Console Terminal Settings

| Baud Rate | Data Bits | Parity | Stop Bits | Flow Control |
|-----------|-----------|--------|-----------|--------------|
| 9600 | 8 | None | 1 | None |



The CONSOLE port is compatible only with RS-232 devices. Non-RS-232 devices, such as APs, are not supported.

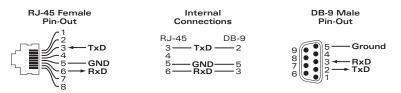


Do not connect the Console port to an Ethernet switch or a PoE power source. This may damage the gateway.

Serial Console Port Adapter

A modular adapter can be used to convert the RJ-45 (female) connector to a DB9 (male) connector. Refer to following figure for complete details.

Figure 4 RJ-45 (female) to DB9 (male) Modular Adapter Conversion



USB Type-C Console Port

The HPE Aruba Networking 9114 Gateway has one USB type-C console port that provides console access for direct local access. If both USB and RJ-45 console ports are connected, the USB connection takes precedence over the RJ-45 console connection.

Using the USB Console Port

To use the USB type-C console port, follow these steps:

- 1. Download and install the USB driver file as follows:
 - a. Go to https://asp.arubanetworks.com.
 - b. Click on the **Software & Document** tab.
 - c. Under the **Product** section click **Show All**.
 - d. Select Aruba Mobility Gateways and click Apply.
 - e. Search **Driver** in the search box.
 - f. In the search result, according to your operating system, choose **Windows Driver for USB Console port** or **MacBook Driver for USB Console port**.
 - g. Download and install the driver to your PC.
- 2. Use the USB Type C connector cable, which is included in the package, to connect the gateway and your PC.
 - a. Connect its Type A connector to a USB port on your PC.
 - b. Connect its Type C connector to the USB console port on the gateway.

Management Port

The HPE Aruba Networking 9114 Gateway has a 10/100/1000BASE-T Gigabit Management (RJ-45) port.

The management port provides 10/100/1000 Mbps Ethernet access to the HPE Aruba Networking 9114 Gateway CLI, SNMP, and Web interface for complete system management and troubleshooting. It can also be used to connect to a separate management network.

The management port has a LINK/ACT LED on its left side, and a SPEED LED on its right side. During operation, these LEDs provide status information as shown in the following table:

| LED | Function | Indicator | Status |
|----------|-------------------------|------------------|---------------------------|
| LINK/ACT | Link Status Information | Green (Solid) | Link has been established |
| | | Green (Blinking) | Link activity |
| | | Off | No link on port |
| SPEED | Interface Speed | Green (Solid) | 1G speed |
| | | Off | 100/10Mbps speed |

USB Interface

There are two USB 3.0 interfaces on the HPE Aruba Networking 9114 Gateway. You can use a USB storage device to save and upload configurations to the gateway.

Expansion Slot

The expansion slot is reserved for future use. It is compatible with OCP 3.0 SFF supporting PCIE Gen3.0 x16 Lanes.

Grounding Point

To meet safety and electromagnetic interference (EMI) requirements and to ensure proper operation, the gateway must be adequately grounded before power is connected. Connect a grounding cable to the earth ground and then attach it to the chassis grounding point using two screws.

Comply with electrical grounding standards during all phases of installation and operation of the product. Do not allow the gateway's chassis, network ports, power supply, or mounting brackets to contact any device, cable, object, or person attached to a different electrical ground. Also, never connect the device to external storm grounding sources.

Fan Module

The HPE Aruba Networking 9114 Gateway has three field-replaceable, hot-swappable fan modules.

Each fan module features a fan that pulls air through the chassis from the front to the rear. The HPE Aruba Networking 9114 Gateway system can tolerate the failure of a single fan while maintaining a safe operating temperature for the gateway.



The HPE Aruba Networking 9114 Gateway is not compatible with fan modules from other HPE Aruba Networking hardware platforms.

The LED behavior in the fan module is as follows:

- Green Fan module is operational
- Amber Fan module is faulty

Hot Swapping

Hot swapping allows you to replace a failed fan module without shutting down the HPE Aruba Networking 9114 Gateway during the replacement procedure.

PSU Slot 0

Two power supplies are available for use with HPE Aruba Networking 9114 Gateway:

- 250W AC power supply—supports an input voltage of 100 VAC to 240 VAC
- 250W DC power supply—supports an input voltage of -48 VDC to -60 VDC

The power supply has a country-specific power cord for connection to an external AC power outlet. The gateway is shipped with one hot-swappable, field-replaceable AC or a DC power supply in PSU slot 0 and one filler panel in PSU slot 1. The gateway can operate with one or two active power supplies, depending on the demands of your configuration. The following sections describe features of the power supply:

Load Sharing

Load sharing occurs when more than one power supply of the same rating is installed in the HPE Aruba Networking 9114 Gateway and turned on. Load sharing divides the total power load of the gateway among all available power supplies. Since the power supplies work together, the effective power capacity of the gateway increases with each additional power supply.

Redundancy

With power redundancy, the HPE Aruba Networking 9114 Gateway can continue normal operation even when a power supply fails or is turned off. When multiple power supplies are installed, if one becomes unavailable (fails, or is turned off or removed), the remaining power supplies will attempt to provide full power for the device. If the device's total power load does not exceed the combined rated output of the remaining and operational power supplies, the gateway will continue to operate.

Hot Swapping

Hot swapping allows you to replace one failed power supply while the others provide full power. This makes it unnecessary to shut down the HPE Aruba Networking 9114 Gateway during the replacement procedure.

Hot swapping is supported only when power redundancy is in effect. The requirement is that the device's total power load should not exceed the combined rated output of the remaining power supplies on removing the target power supply.



Never insert or remove a power supply module while the power cord is connected to it. Before installing or removing the power supply, verify that the power cord has been disconnected from the power supply.

LED Indicators

The following tables show the LED indicators and the corresponding status of the power supply.

 Table 11: Power Supply Module LED

| Indicator | Status |
|------------------|--|
| Green (Solid) | Power supply is operational |
| Green (blinking) | Power supply is in a faulty state or indicates a warning |
| Off | No power |

PSU Slot 1

The HPE Aruba Networking 9114 Gateway includes a PSU slot 1 that has a filler panel covering the opening. PSU slot 1 is for an additional power supply module required for redundancy. PSU slot 1 can hold the same power supply module as PSU slot 0. For more details, see <u>PSU Slot 0 on page 10</u>.

Chapter 3 Installation

This chapter describes how to install a HPE Aruba Networking 9114 Gateway using available mounting options. The gateway ships with an accessory kit that includes the equipment needed to install the gateway in standard, 19-inch telco rack. Additional mounting options are sold separately.



Installation of the device should be performed by a trained installation professional.

- Precautions on page 12
- Selecting a Location on page 13
- Rack mount Installation Standard on page 13
- Rack mount Installation Mid on page 15
- Four Post Rack mount Installation on page 17
- Table or Shelf Installation on page 19
- Installing and Removing a Fan Module on page 19
- Installing and Removing a Power Supply on page 20
- Connecting and Disconnecting the AC Power Cord on page 24
- Connecting the DC Power Cord on page 25
- Installing and Removing an SFP Module on page 26

Precautions

This section includes information about how to install the gateway and its accessories safely and avoid damage to gateway components.

- Ensure that the rack is correctly and securely installed to prevent it from falling or becoming unstable.
- Dangerous voltage in excess of 240VAC or -48 VDC is always present while the Power Supply Module is plugged into an electrical outlet. Remove all rings, jewelry, and other potentially conductive material before working with this product.
- Never insert foreign objects into the chassis, the power supply, or any other component, even when the power supply is turned off, unplugged, or removed.
- Ensure that the main power is fully disconnected from the gateway by unplugging all power cords from their outlets. For safety, verify that the power outlets and plugs are easily reachable by the operator.
- Do not handle electrical cables which are not insulated. This also includes network cables.
- Keep water and other fluids away from the gateway to minimize electrical hazards.
- Comply with electrical grounding standards during all phases of installation and operation of the product. Do
 not allow the gateway's chassis, network ports, power supply, or mounting brackets to contact any device, cable,
 object, or person attached to a different electrical ground. Also, never connect the device to external storm
 grounding sources.
- Perform installation or removal of the chassis or any module in a static-free environment. Proper use of antistatic body straps and mats is strongly recommended.

- Modules must be kept in anti-static packaging when not installed in the chassis.
- Do not ship or store this product near strong electromagnetic, electrostatic, magnetic or radioactive fields.
- Do not disassemble the chassis.

Selecting a Location

The HPE Aruba Networking 9114 Gateway, like other network and computing devices, requires the following "electronic- friendly" environment.



FOR INDOOR USE ONLY. The gateway, power cord, and all connected cables are not intended for outdoor use.

- Reliable power.
 Verify that your electrical outlet is compatible with the HPE Aruba Networking 9114 Gateway power supply.
- Cool, non-condensing ventilation
 For proper operation, the gateway requires an environment with an ambient air temperature between 0 and 40
 °C (32 and 104 °F). Humidity must be kept at non-condensing levels between 10% and 90%.
 Where a large number of electrical devices are working in the same area, additional air conditioning or air circulation equipment may be required.
- Ample space

For proper air circulation, leave at least 10 cm (4 inches) clearance all around the chassis. Leave additional space in the front and rear side of the chassis to access power cords, network cables, and indicator LEDs.

Limited electromagnetic interference

For best operation, keep the HPE Aruba Networking 9114 Gateway and all cords and cables at least 0.7 meters (2.3 feet) from fluorescent lighting fixtures, and 2 meters (6.6 feet) from photocopiers, radio transmitters, electric generators, and other sources of strong electromagnetic interference.

Rack mount Installation - Standard

This mounting option allows mounting the HPE Aruba Networking 9114 Gateway in a two-post 19-inch Telco rack.



Each HPE Aruba Networking 9114 Gateway should have its own mounting equipment. Do not place other networking equipment directly on top of a mounted HPE Aruba Networking 9114 Gateway. Failure to do so can damage the device.

The rack with the installed gateway unit cannot be transported. You need to detach the gateway unit before transporting the rack.

Required Tools and Equipment

The following tools and equipment are required for installing a HPE Aruba Networking 9114 Gateway:

- Mounting Bracket (x2) (included in the kit): Do not use for table or shelf installation
- Screws for mounting bracket (x8): M4 x 8 mm Phillips Flat Head Screws (included in the kit)
- Screws for system rack mount (x4): M6 x 15 mm Phillips Pan Head Screws (included in the kit)
- Suitable Screwdrivers for all screw types provided in the box (not included in the kit)



Some racks require screws that differ from those included with the HPE Aruba Networking 9114 Gateway. Ensure that you have the correct screws before installing the HPE Aruba Networking 9114 Gateway.

Installation Steps

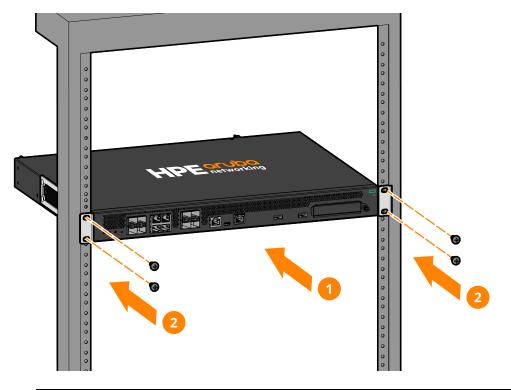
To install a HPE Aruba Networking 9114 Gateway into a two-point 19-inch (48.26 cm) Telco rack:

- 1. Place the mounting bracket over the mounting holes on either side of the gateway (see Figure 5).
- 2. Secure the bracket to the gateway using the eight screws for the mount bracket (four per bracket) and a suitable screwdriver.

Figure 5 Attaching the Rack Mounting Brackets-Standard



3. Mount the gateway within your organization's rack system using the four screws for system rack mount (two per bracket) and a suitable screwdriver.





Leave a minimum of 10 cm (4 inches) of space on the left and right side of the gateway for proper air flow and ventilation.

Leave additional space in the front and the back of the gateway to access network cables, LED status indicators, and power cord.

Rack mount Installation - Mid

This mounting option allows mounting the HPE Aruba Networking 9114 Gateway from the middle in standard twopost 19-inch Telco rack. The mounting brackets can be used for this installation as well.



Each HPE Aruba Networking 9114 Gateway should have its own mounting equipment. Do not place other networking equipment directly on top of a mounted HPE Aruba Networking 9114 Gateway. Failure to do so can damage the device.

The rack with the installed gateway unit cannot be transported. You need to detach the gateway unit before transporting the rack.

Required Tools and Equipment

The following tools and equipment are required for installing a HPE Aruba Networking 9114 Gateway:

- Mounting Bracket (x2) (included in the kit)
- Screws for mounting bracket (x8): M4 x 8 mm Phillips Flat Head Screws (included in the kit)
- Screws for system rack mount (x4): M6 x 15 mm Phillips Pan Head Screws (included in the kit)
- Suitable Screwdrivers for all screw types provided in the box (not included in the kit)



Some racks require screws that differ from those included with the HPE Aruba Networking 9114 Gateway. Ensure that you have the correct screws before installing the HPE Aruba Networking 9114 Gateway.

Installation Steps

To install a HPE Aruba Networking 9114 Gateway from the middle in a standard two-point 19-inch Telco rack:

- 1. Place the mounting bracket over the mounting holes on either side of the gateway in the middle (see Figure 7).
- 2. Secure the bracket to the gateway using the eight screws for the mount bracket (four per bracket) and a suitable screwdriver.

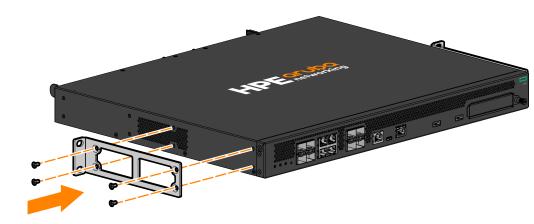
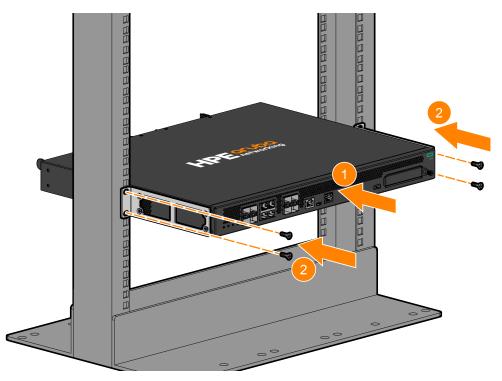


Figure 7 Attaching the Rack Mounting Brackets-Standard

3. Mount the gateway within your organization's rack system using the four screws for system rack mount (two per bracket) and a suitable screwdriver.

Figure 8 Rack Mount Installation-Mid





Leave a minimum of 10 cm (4 inches) of space on the left and right side of the gateway for proper air flow and ventilation.

Leave additional space in the front and the back of the gateway to access network cables, LED status indicators, and power cord.

Four Post Rack mount Installation

The HPE Aruba Networking version B gateway rail kit (J9583B) is an optional accessory kit used to mount a HPE Aruba Networking 9114 Gateway in four-post racks or cabinets. This rail kit stabilizes and supports the gateway.



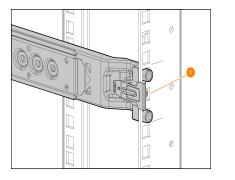
Optional accessories are available for use withb HPE Aruba Networking 9114 Gateway and are sold separately. Contact your HPE Aruba Networking sales representative for details and assistance.

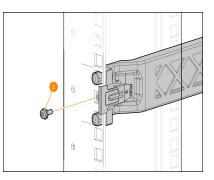


The rack with the installed gateway unit cannot be transported. You need to detach the gateway unit before transporting the rack.

Installation Steps

1. Install the rails into the four-post rack. Predetermine the orientation of the gateway in the rack (front-facing or rear-facing), then secure the rails to the rack's front and back columns as appropriate. Ensure the rails are at the same level on each rack post, front and rear. Install the rear 10-32 mounting screw.





Retaining clip

Mounting screw (10-32)

2. Attach the sliders to the gateway using the M4 flat head screws. There are multiple sets of mounting holes on the sliders for gateway of different depths.



- 1. Sliders
- 2. Mounting screw (M4)
- 3. Install the gateway into the rails.



Align the sliders with the rails and slide the gateway

At the front of gateway, secure the sliders and

into the rails.

gateway assembly to the rack columns using 10-32 screws, one on each side. The screws will pass through the slider holes to the rails. Install and tighten the screws.

4. **(Optional) Secure the gateway for shipping in a rack.** For shipping in a rack, install a 10-32 screw on each side as shown. Any one of the three positions may be used.

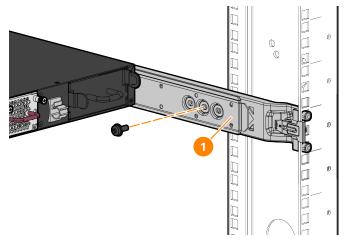


Table or Shelf Installation

This mounting option allows the mounting of a HPE Aruba Networking 9114 Gateway on a table or shelf.

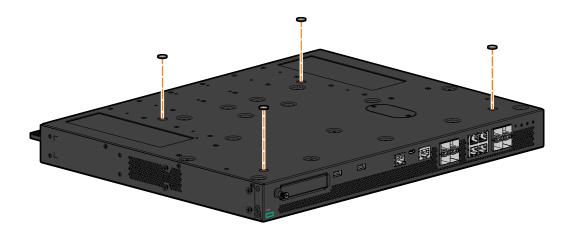
Required Tools and Equipment

Rubber Feet (included in the kit)

Installation Steps

1. Attach the rubber feet to the bottom of the gateway.

Figure 9 Attaching the Rubber Feet



2. Place your gateway in the location you have chosen.

Installing and Removing a Fan Module

The fan module is field-replaceable and hot-swappable. Hot-swapping allows you to replace the fan module without having to power down the gateway.



Use standard ESD precautions when installing or removing a fan module.

To install and remove a fan module do the following:

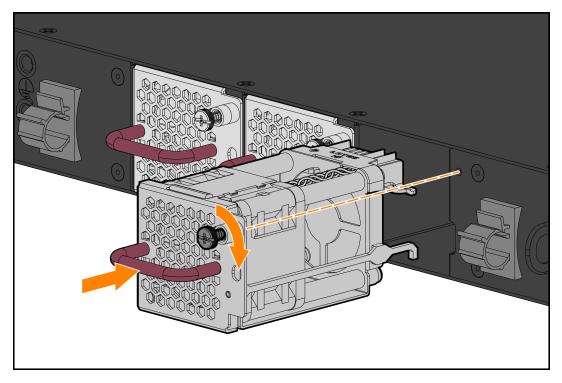
- 1. Remove the old fan module.
 - a. Using a Phillips Head screwdriver, turn the screw counter-clockwise until loose (it cannot be removed completely).
 - b. Use the fan module handle to pull the fan module out.
- 2. Align the new fan module with opening in the gateway.



Ensure that fan module is correctly aligned with the opening on the gateway. Failure to do so can result in damage to the fan module.

- 3. Insert the fan module into the gateway (see Figure 10).
- 4. Tighten the screw on the fan module to secure it.

Figure 10 Installing a Fan Module



Installing and Removing a Power Supply

The power supply module is hot-swappable when two power supplies are installed. Hot swapping allows you to replace a failed power supply without powering down the HPE Aruba Networking 9114 Gateway during the replacement process. This makes it unnecessary to shut down the HPE Aruba Networking 9114 Gateway during the installation procedure.



Never insert or remove a power supply while the power cord is connected. Verify that cord has been disconnected from the power supply before installation or removal.



Use standard ESD precautions when installing or removing a power supply module.

Installing an AC Power Supply (JL085A-AC-PSU)

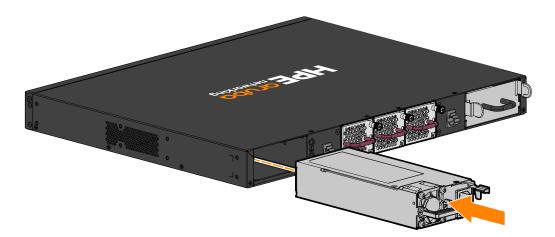
If you are replacing a failed power supply, see <u>Removing an AC Power Supply on page 21</u> before you proceed:

- 1. Align the new power supply module with the opening in the gateway.
- 2. Insert the power supply module into the gateway until the tab securely engages on to the gateway.
- 3. Insert the AC power cord in the AC connector on the power supply module. For more details, see <u>Connecting and Disconnecting the AC Power Cord on page 24</u>.

If you are adding an additional power supply module:

- 1. Remove the filler panel in PSU slot 1 by pressing the two tabs on the filler panel and sliding it out using the handle.
- 2. Align the additional power supply module with the opening in the gateway.
- 3. Insert the power supply module into the gateway until the tab securely engages on to the gateway.
- 4. Insert the power cord in the AC connector on the power supply module. For more details, see <u>Connecting and Disconnecting the AC Power Cord on page 24</u>.

Figure 11 Installing a Power Supply Module



Removing an AC Power Supply

To remove the power supply from the HPE Aruba Networking 9114 Gateway:

- 1. Remove the power cord in the AC connector on the power supply module.
- 2. Grasping the handle of the failed power supply, release the locking mechanism by squeezing the latch handle while removing the power supply.

3. If you are not replacing the removed power supply module, install the filler panel that was included with the HPE Aruba Networking 9114 Gateway.

Installing a DC Power Supply (JL757A-DC-PSU)



This unit is intended for installation in restricted access areas.

Only trained and qualified personnel should install, replace, or service the device.

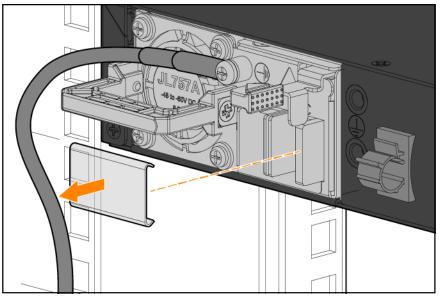
Make sure the power source is properly grounded before connecting power to the power supply.



Never insert or remove a power supply while the power cord is connected. Verify that cord has been disconnected from the power supply source before installation or removal.

To replace a failed power supply module with a new power supply module:

- 1. Switch off the DC source and remove the DC cable from the DC source.
- Remove the transparent protective cover from the DC input connector on the DC power supply. Unfasten the DC cable from the DC power supply. Remember to reinstall the protective transparent cover back on the DC power supply input connector.



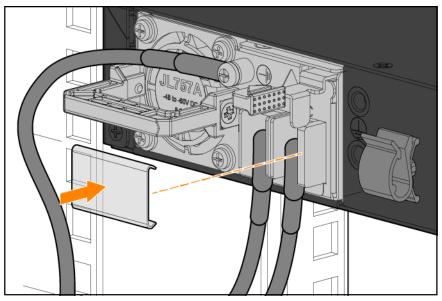
- 3. Grasping the handle of the failed power supply, release the locking mechanism by squeezing the latch handle while removing the failed power supply.
- 4. Align the new power supply module with the opening in the gateway.
- 5. Insert the power supply module into the gateway until the locking mechanism locks.
- 6. Connect the DC power cords to the DC connector on the power supply module. For more details, see <u>Connecting the DC Power Cord</u>.

The DC cable needs to be strain-relieved by tying securely it to a fixed structure or rack.



Do not tie the DC cables to the power supply handle or the fan handle as it is not designed to take the weight of the cables.

7. Replace the transparent protective cover on the DC power supply



If you are adding an additional power supply module:

- 1. Switch off the DC source.
- 2. Remove the filler panel in PSU slot 1 by pressing the two tabs on the filler panel and sliding it out using the handle.
- 3. Align the additional power supply module with the opening in the gateway.
- 4. Insert the power supply module into the gateway until the locking mechanism locks.
- 5. Connect the DC power cords to the DC connector on the power supply module. For more details, see <u>Connecting the DC Power Cord</u>.

The DC cable needs to be strain-relieved by tying securely it to a fixed structure or rack.



Do not tie the DC cables to the power supply fan handle as it is not designed to take the weight of the cables.

6. Replace the transparent protective cover on the DC power supply.



Do not move the unit with the power supply after the DC cables are installed.

Do not remove the DC power supply from the unit with the DC cable installed or the DC source turned on.

Removing a DC Power Supply

To remove a DC power supply from your HPE Aruba Networking 9114 Gateway:

1. Ensure that the input circuit breaker is open and the voltage across the power source cables is 0V. This prevents the leads from becoming active while you connect the PSU to power.

- 2. Switch off the DC source and remove the DC cable from the DC source
- 3. Remove the transparent protective cover from the DC input connector on the DC power supply.
- 4. Remove the power cables connected to the power supply module using a Phillips-head screwdriver and save the screws.
- 5. Grasping the handle of the power supply, release the locking mechanism by squeezing the latch handle while removing the power supply.
- 6. Replace the plastic terminal cover.
- 7. Close the input circuit breaker.
- 8. If you are not replacing the removed power supply module, install the filler panel that was included with the HPE Aruba Networking 9114 Gateway.

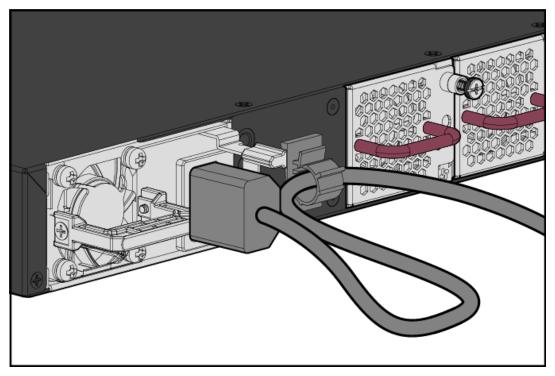
Connecting and Disconnecting the AC Power Cord

Once you have installed the JL085A-AC-PSU, you are ready to power on the device. There is no On/Off switch on the HPE Aruba Networking 9114 Gateway. After connecting the power cord to the power supply module and an AC power outlet, the device powers up.

To connect the AC power cord to the HPE Aruba Networking 9114 Gateway do the following:

- 1. Insert the coupler end of the AC power cord into the AC power connector on the power supply module.
- 2. Secure the AC power cord using the cable clip adjacent to the power supply module. After passing the wire through the cable clip, lock the ramp.

Figure 12 Connecting the AC power cord



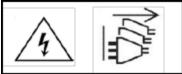
The HPE Aruba Networking 9114 Gateway should now be receiving power.

To disconnect the AC power cord from the HPE Aruba Networking 9114 Gateway do the following:

1. Unlock the ramp in the cable clip and remove the power cord from the cable clip that securely holds the AC power cord.

 Pull the AC power cord from the power supply module. The HPE Aruba Networking 9114 Gateway is now turned Off.





Shock hazard. Disconnect both power supplies to remove all power.

Connecting the DC Power Cord

Once you have installed the JL757A-DC-PSU, you are ready to power on the device. There is no On/Off switch on the HPE Aruba Networking 9114 Gateway. After connecting the power cord to the power supply module and a DC power outlet, the device powers up.

To connect the DC power cord to the JL757A-DC-PSU do the following:

- 1. Ensure that the power supply is fully inserted and secure in the device.
- 2. Ensure that the input circuit breaker is open and the voltage across the power source cables is 0V. This prevents the leads from becoming active while you connect the PSU to power.
- 3. Remove the plastic terminal cover from the terminal.
- 4. Remove the screws from the terminals using a Phillips-head screwdriver and save the screws.
- 5. To connect the power cables to the JL757A-DC-PSU:
 - a. Secure the ring lug of the ground (GND) DC power source cable to the GND terminal on the JL757A-DC-PSU.
 - b. Secure the ring lug of the positive (+) DC power source cable to the +VE terminal on the JL757A-DC-PSU.
 - c. Secure the ring lug of the negative (-) DC power source cable to the -VE terminal on the JL757A-DC-PSU.
 - d. Tighten each screw on the JL757A-DC-PSU terminals until snug using a Phillips-head screwdriver. Take care not to over-tighten the screw.

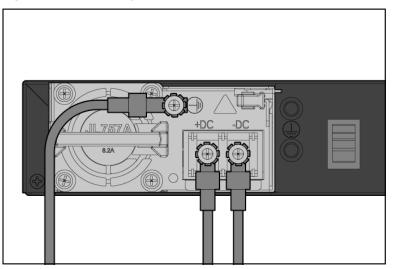


Figure 13 Connecting Power Cables

6. Replace the plastic terminal cover on the DC power supply.

- 7. Connect the other end of the DC cable to a DC source following the correct polarity.
- 8. Close the input circuit breaker.

Grounding is required for DC power supplies and systems.



The DC power inlet in the power supply has two terminals labeled +DC and -DC and has a screw

marked with \bigoplus symbol to connect to earth ground. The DC power inlet has a clear plastic cover. Unplugging the DC PSU from the system when the PSU is powered is not supported. The DC input power source has to power off before removing the DC PSU from the system.

Installing and Removing an SFP Module



Use standard ESD precautions when installing or removing an SFP module.

Installing an SFP module

To install an SFP module into the HPE Aruba Networking 9114 Gateway, slide the SFP module into a port until a connection is made and an audible click is heard. The SFP module is designed to fit one way.

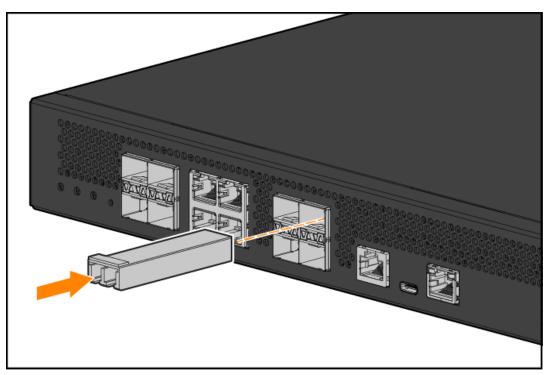


Figure 14 Installing an SFP

Removing an SFP Module

To remove an SFP module:

- 1. Open and release the latch on the module.
- 2. Pull and remove the module from the port.

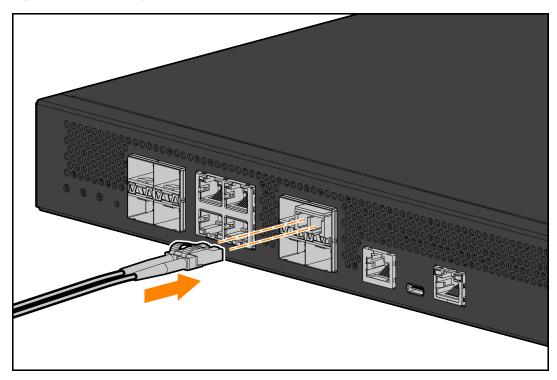
Connecting and Disconnecting an LC Cable

Connecting an LC Cable

To connect an LC fiber cable into an SFP module:

- 1. Remove the protective caps from the LC connector of the LC cable.
- 2. Insert the LC fiber optic cable into the SFP module. Ensure that the latch on the cable faces the top of the SFP module (see Figure 15).
- 3. Slide the cable into place until a connection is made and an audible click is heard.

Figure 15 Connecting an LC Fiber



Disconnecting an LC Cable

To disconnect an LC fiber optic cable from an SFP module, depress the transceiver handle to release the latch on the cable and simultaneously pull the cable out of the port.

Chapter 4 Specifications, Safety, and Compliance

This chapter provides an overview of the HPE Aruba Networking 9114 Gateway specifications, safety, and compliance information.

HPE Aruba Networking 9114 Gateway Specifications

Physical

- Device Dimensions (without mounting brackets) (HxWxD): 1.73" x 17.40" x13.82" (4.4 cm x 44.2cm x 35.1 cm)
- Device Weight: 13.67 lbs (6.2 kg)

Power Supply Specifications

- 250W AC Power Supply
 - AC Input Voltage: 100 VAC to 240 VAC
 - AC Input Current: 1.2A to 3A
 - $^\circ~$ AC Input Frequency: 50 Hz to 60 Hz
 - Output Voltage: 12 VDC
 - Weight: 1.52 lb (0.69 kg)
- 250W DC Power Supply
 - DC Input Voltage (Normal): -48VDC to -60VDC
 - DC Input Voltage (Maximum): -36VDC to -72VDC
 - DC Input Current: 3.95A to 8.2A
 - Output Voltage: 12 VDC
 - Weight: 1.55 lb (0.705 kg)

Environmental

- Operating
 - Temperature Range: 0 °C to 40 °C (32 °F to 104 °F)
 - Humidity Range: 10% to 90% (RH), non-condensing
- Storage and Transportation
 - $^\circ$ Temperature Range: –40 °C to 70 °C (–40 °F to 158 °F)
 - Humidity Range: 10% to 95% (RH), non-condensing

For additional specifications on this product, please refer to the data sheet. The data sheet can be found at <u>www.arubanetworks.com</u>.

Regulatory Model Name

The regulatory model name for the HPE Aruba Networking 9114 Gateway is ARCN9114.

Safety and Regulatory Compliance



HPE Aruba Networking gateways must be installed by a professional installer. The professional installer is responsible for ensuring that grounding is available and it meets applicable local and national electrical codes.

FCC

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.



Changes or modifications to this unit not expressly approved by Hewlett Packard Enterprise, can void the user's authority to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Canada

Innovation, Science and Economic Development Canada

This Class A digital apparatus complies with Canadian ICES-003.

Innovation, Sciences et Développement économique Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

European Union and United Kingdom

The product complies with the requirements of Directive 2014/35/EU relating to electrical equipment designed for use within certain voltage limits, Directive 2014/30/EU relating to electromagnetic compatibility, Directive 2011/65/EU as amended on the restriction of the use of certain hazardous substances in electrical and electronic equipment, and carries the CE marking accordingly. The Declaration of Conformity is available at http://www.hpe.com/eu/certificates. Select the document that corresponds to your device's model number as it is indicated on the product label.



Use of controls or adjustments of performance or procedures other than those specified in this manual may result in hazardous radiation exposure.



Although this gateway has been tested up to 1 kV per CE immunity requirements, it requires surge protection to be provided as part of the building installation to protect against unidirectional surges resulting from electrical switching and lightning strikes.

For protection against these surges in an outdoor installation, any exposed wiring must be shielded, and the shield for the wiring must be grounded at both ends.



Laser compliance notices

This device may contain a laser that is classified as a Class 1 Laser Product in accordance with U.S. FDA regulations and the IEC 60825-1. The product does not emit hazardous laser radiation.

The product complies with 21 CFR 10040.10 and 1040.11 (except for deviations pursuant to Laser Notice No. 56, dated May 8, 2019) and IEC 60825-1.

Use of controls or adjustments or performance of procedures other than those specified herein or in the laser product's installation guide may result in hazardous radiation exposure. To reduce the risk of exposure to hazardous radiation:



- Do not try to open the module enclosure. There are no user-serviceable components inside.
- Do not operate controls, make adjustment, or perform procedures to the laser device other than those specified herein.
- Allow only HPE Aruba Networking authorized service technicians to repair the unit.

Battery Statements



Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie due même type ou d'un équivalent recommandé par le constructeur.

Mettre au rebut les batteries usagées conformément aux unstruction du fabricant.



The battery supplied with this product may contain perchlorate material. Special handling may apply in California and certain other states. See <u>www.dtsc.ca.gov/hazardouswaste/perchlorate</u> for more information.



There is a risk of explosion if battery is replaced by an incorrect type, so dispose used batteries according to the instructions.

Brazil

Para mais informações, consulte o site da Anatel: <u>https://www.gov.br/anatel/pt-br</u>.

India

This product conforms to the relevant Essential Requirements of TEC, Department of Telecommunications, Ministry of Communications, Govt of India, New Delhi-110001.

Japan VCCI

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害 を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう 要求されることがあります。 VCCI-A

Korea

사 용 자 안 내 문 이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

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Taiwan

警告:為避免電磁干擾,本產品不應安裝或使用於住宅環境。 報驗義務人(Applicant):慧與科技股份有限公司 地址(Address):11568台北市南港區經貿二路66號10樓之1 電話(TEL):(02)2652-8700

Нормативные требования Евразийского Экономического Союза

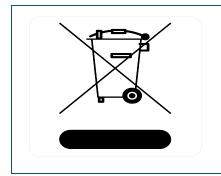


ТОО «Хьюлетт-Паккард (К)», Республика Казахстан, 050040, г. Алматы, Бостандыкский район, проспект Аль-Фараби, 77/7, Телефон/факс: + 7 727 355 35 50 ЖШС «Хьюлетт-Паккард (К)», Қазақстан Республикасы, 050040, Алматы к., Бостандык ауданы, Әл-Фараби даңғылы, 77/7, Телефон/факс: +7 727 355 35 50

Proper Disposal of HPE Aruba Networking Equipment

HPE Aruba Networking equipment complies with countries' national laws for proper disposal and electronic waste management.

Waste of Electrical and Electronic Equipment



HPE Aruba Networking products at end of life are subject to separate collection and treatment in the EU Member States, Norway, and Switzerland and therefore are marked with the symbol shown at the left (crossed-out wheelie bin). The treatment applied at end of life of these products in these countries shall comply with the applicable national laws of countries implementing Directive 2012/19/EU on Waste of Electrical and Electronic Equipment (WEEE).

European Union RoHS

| Rohs | HPE Aruba Netv Substances Dire |
|------|-----------------------------------|
| | hazardous mater |
| | Specifically, rest |
| | used in printed ci |
| | Bromine. Some I |
| | RoHS Directive A |
| | packaging will be |
| | to this Directive. |
| | |

IPE Aruba Networking products also comply with the EU Restriction of Hazardous ubstances Directive 2011/65/EU (RoHS). EU RoHS restricts the use of specific azardous materials in the manufacture of electrical and electronic equipment. pecifically, restricted materials under the RoHS Directive are Lead (including Solder sed in printed circuit assemblies), Cadmium, Mercury, Hexavalent Chromium, and romine. Some HPE Aruba Networking products are subject to the exemptions listed in toHS Directive Annex 7 (Lead in solder used in printed circuit assemblies). Products and ackaging will be marked with the "RoHS" label shown at the left indicating conformance of this Directive.

India RoHS material content declaration

India RoHS material content declaration This product complies with the "India E-waste (Management) Rules, 2016" and prohibits use of lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers in concentrations exceeding 0.1 weight % and 0.01 weight % for cadmium, except for the exemptions set in Schedule II of the Rule.

China RoHS



HPE Aruba Networking products also comply with China environmental declaration requirements and are labeled with the "EFUP 50" label shown at the left.

产品中有害物质的名称及含量 根据中国《电器电子产品有害物质限制使用管理办法》

| | 限用物质及其化学符号 | | | | | |
|----------------------|------------|--------|-------|-----------------|---------------|-----------------|
| 部件名称 | 铅 (Pb) | 汞 (Hg) | 镉(Cd) | 六价铬 (Cr(VI)) | 多溴联苯 (PBB) | 多溴二苯醚 (PBDE) |
| 电池 | 0 | 0 | 0 | 0 | 0 | 0 |
| 传输线和网路线 | 0 | 0 | 0 | 0 | 0 | 0 |
| 断路器 | Х | 0 | 0 | 0 | 0 | 0 |
| 冷却&加热系统 | 0 | 0 | 0 | 0 | 0 | 0 |
| 磁盘控制器 | Х | 0 | 0 | 0 | 0 | 0 |
| 外部机箱 | Х | 0 | 0 | 0 | 0 | 0 |
| 风扇 | 0 | 0 | 0 | 0 | 0 | 0 |
| 液晶显示器 | Х | 0 | 0 | 0 | 0 | 0 |
| 硬盘(HDD) | x | 0 | 0 | 0 | 0 | 0 |
| 液压/气压系统 | 0 | 0 | 0 | 0 | 0 | 0 |
| 键盘 | 0 | 0 | 0 | 0 | 0 | 0 |
| 介貭(CD/DVD/光盘 驱动器) | 0 | 0 | 0 | 0 | 0 | 0 |
| 记忆体 | 0 | 0 | 0 | 0 | 0 | 0 |
| 鼠标 | 0 | 0 | 0 | 0 | 0 | 0 |
| 其他机械组装设备 | Х | 0 | 0 | 0 | 0 | 0 |
| 电源/电源适配器 | Х | 0 | 0 | 0 | 0 | 0 |
| 印刷电路组件 (PCAs) | Х | 0 | 0 | 0 | 0 | 0 |
| 天线 | Х | 0 | 0 | 0 | 0 | 0 |

本表格依据 SJ/T 11364 的规定编制

O:表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下

X:表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求

此表中所有名称中含 "X" 的部件均符合欧盟 RoHS 立法

注:环保使用期限的参考标识取决于产品正常工作的温度和湿度等条

除非另有标明,此电子电器产品有害物质限制使用(EPUP)标签适用于所有慧与公司服务器,网络,存储设备

Taiwan RoHS

| | 限用物質及其化學符號 | | | | | |
|--|------------|--------|--------|-------------------------------------|---------------|-----------------|
| 單元 | 鉛 (Pb) | 汞 (Hg) | 鎘 (Cd) | 六價鉻 (Cr + ⁶) | 多溴聯苯 (PBB) | 多溴二苯醚 (PBDE) |
| 傳輸線和線材 | 0 | 0 | 0 | 0 | 0 | 0 |
| 外殻 | _ | 0 | 0 | 0 | 0 | 0 |
| 記憶體 | 0 | 0 | 0 | 0 | 0 | 0 |
| 其他機械組裝設備 | _ | 0 | 0 | 0 | 0 | 0 |
| 印刷電路零組件 (PCAs) | _ | 0 | 0 | 0 | 0 | 0 |
| 斷路器 (選配) | _ | 0 | 0 | 0 | 0 | 0 |
| 冷卻及加熱系統(選配) | 0 | 0 | 0 | 0 | 0 | 0 |
| 風扇(選配) | 0 | 0 | 0 | 0 | 0 | 0 |
| 存取裝置(HDD) (選配) | _ | 0 | 0 | 0 | 0 | 0 |
| 讀寫元件(CD/DVD/磁碟 機)(選配) | _ | 0 | 0 | 0 | 0 | 0 |
| 變壓器/電源供應器(選配) | — | 0 | 0 | 0 | 0 | 0 |
| 備考 1. "O" 係指該項限用物質之百分比含量未超出百分比含量基準值。 備考 2. "-" 係指該項限用物質為排除項目。 | | | | | | |

台灣限用物質含有情況標示

選配單元使用於特定產品型號,詳細規格請參照產品說明書。

Turkey RoHS

Turkey RoHS material content declaration Türkiye Cumhuriyeti: AEEE Yönetmeliğine Uygundur.