



# HPE Aruba Networking 9004- LTE Gateway



**Hewlett Packard**  
Enterprise

Installation Guide

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This document describes the hardware features of the HPE Aruba Networking 9004-LTE gateway. It provides a detailed overview of the physical and performance characteristics of the gateway and explains how to install the gateway and its accessories.

## Guide Overview

- [Chapter 1, “9004-LTE Gateway” on page 7](#) provides a detailed hardware overview of the HPE Aruba Networking 9004-LTE gateway and each of its components.
- [Chapter 2, “Installation” on page 17](#) describes how to install the HPE Aruba Networking 9004-LTE gateway.
- [Chapter 3, “Specifications, Safety, and Compliance” on page 37](#) lists the HPE Aruba Networking 9004-LTE gateway’s technical specifications and safety and regulatory compliance information.

## Related Documentation

The latest ArubaOS User Guide and ArubaOS CLI Reference Guide are required for the complete management of an HPE Aruba Networking gateway. The latest documentation can be found at <https://networkingsupport.hpe.com/home>.

## Contacting Support

**Table 1** *Contact Information*

Main Site	<a href="http://www.arubanetworks.com">www.arubanetworks.com</a>
Support Site	<a href="https://networkingsupport.hpe.com/home">https://networkingsupport.hpe.com/home</a>
Airheads Social Forums and Knowledge Base	<a href="http://www.community.arubanetworks.com">www.community.arubanetworks.com</a>
North American Telephone	1-800-943-4526 (US and Canada Toll Free)
International Telephones	<a href="https://www.arubanetworks.com/support-services/contact-support/">https://www.arubanetworks.com/support-services/contact-support/</a>
Software Licensing Site	<a href="https://licensemanagement.hpe.com">https://licensemanagement.hpe.com</a>
End-of-life information	<a href="https://networkingsupport.hpe.com/notifications">https://networkingsupport.hpe.com/notifications</a>
Security Incident Response Team (SIRT)	Site: <a href="https://support.hpe.com/connect/s/securitybulletinlibrary">https://support.hpe.com/connect/s/securitybulletinlibrary</a> Email: <a href="mailto:aruba-sirt@hpe.com">aruba-sirt@hpe.com</a>



The HPE Aruba Networking 9004-LTE gateway is a dual purpose gateway that supports both SD-WAN and wireless LAN capabilities. The gateway has the ability to directly connect a branch to cloud, provide resilient connectivity from the cloud, and centralized control for policy management across all branches. The wireless LAN connects, controls, and intelligently integrates wireless Access Points (APs), Managed Devices, and Air Monitors (AMs).

The HPE Aruba Networking 9004-LTE gateway has the following port configuration:

**Table 2** HPE Aruba Networking 9004-LTE Gateway Port Configuration

Model	Ports	Number of APs Supported	Number of Users Supported
9004-LTE	<ul style="list-style-type: none"> <li>4 x 10/100/1000BASE-T ports</li> <li>1 x USB 3.0 port</li> <li>RJ45 console port</li> <li>Micro USB console port</li> </ul>	32	2048



The HPE Aruba Networking 9004-LTE gateway supports the SD-Wan 2.1.0.0 or later versions.

## Package Checklist

Inform your supplier if there are any incorrect, missing, or damaged parts. To return this product, repack this unit and other materials included into the original packaging, before returning it to the supplier.

**Table 3** Package Contents

Item	Quantity
HPE Aruba Networking 9004-LTE gateway	1
Micro USB (type B) connector cable	1
Power adapter	1
Adapter cable saddle	1
SIM tray ejector pin	1
LTE antenna	2
HPE Aruba Networking 9004-LTE Gateway Start-up Guide (Printed)	1
Safety, Compliance, and Warranty Information (Printed)	1

## HPE Aruba Networking 9004-LTE Gateway Additional Accessories List

**Table 4** The HPE Aruba Networking 9004-LTE Gateway also has additional accessories provided for replacing damaged equipments or extending the device functionalities. The list of HPE Aruba Networking accessories kit compatible with the HPE Aruba Networking 9004-LTE Gateway are mentioned below:

**Table 5** *Additional Accessory Kits*

Part Number	Accessory Kit Name
R3W17A	HPE Aruba Networking 9004-LTE-MNT-19 Rack Mount Kit
R4Y91A	HPE Aruba Networking 90xx-LTE Indoor Ant Ext Kit-20ft
R4Y92A	HPE Aruba Networking 90xx-LTE Indoor Ant Ext Kit-40ft
R4Y93A	HPE Aruba Networking 90xx-LTE Outdoor Ant Ext Kit-35ft
R4Y94A	HPE Aruba Networking 90xx-LTE Spare Indoor Antenna
R4Y95A	HPE Aruba Networking 90xx-LTE Spare SIM Tray Kit
R6M37A	HPE Aruba Networking 90xx-LTE Spare Outdoor Antenna



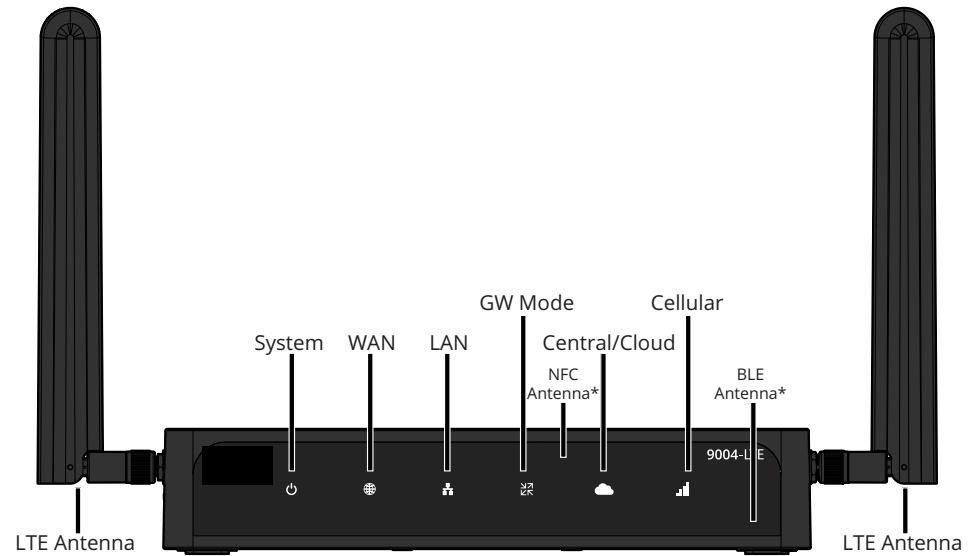
Optional accessories available for use with the HPE Aruba Networking 9004-LTE gateway are sold separately. Contact your HPE Aruba Networking sales representative for details and assistance.

## HPE Aruba Networking 9004-LTE Gateway Components

This section introduces the different component and its location in the HPE Aruba Networking 9004-LTE gateway. [Figure 1](#) shows the front panel of the HPE Aruba Networking 9004-LTE gateway and [Figure 2](#) shows the back panel of the HPE Aruba Networking 9004-LTE gateway.

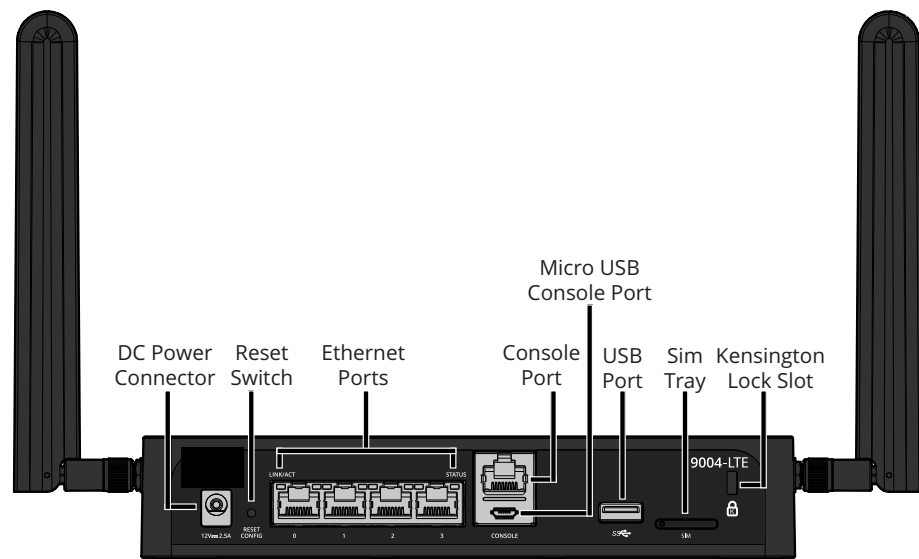


**Figure 1** *Front Panel of the HPE Aruba Networking 9004-LTE gateway*

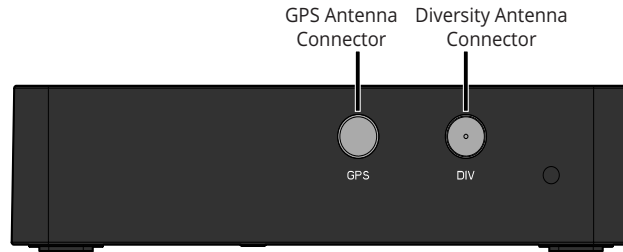


\* The antenna is integrated within the hardware and is not displayed on the front panel.

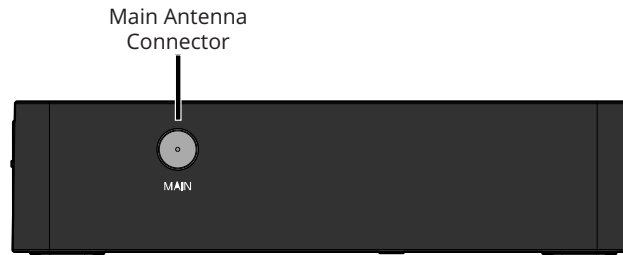
**Figure 2** *Back Panel of the HPE Aruba Networking 9004-LTE Gateway*



**Figure 3** *Right Side View of the HPE Aruba Networking 9004-LTE Gateway*



**Figure 4** *Left Side View of the HPE Aruba Networking 9004-LTE Gateway*



## Front Panel LEDs

The front panel LEDs show the System, WAN, and LAN status including various other features. These front panel LEDs provide basic monitoring information of the overall status of the HPE Aruba Networking 9004-LTE gateway. The following table describes the LED indicators and their corresponding status:

**Table 6** *LED Status*

LED	Function	Indicator	Status
System	System status	Green (Solid)	Powered and Operational
		Green (Blinking)	Loading Software
		Amber (Solid)	Critical Alarm
		Amber (Blinking)	Major Alarm
		Off	Power Off
WAN	WAN Connectivity Status	Green (Solid)	All WAN Ports Established
		Green (Blinking)	Transmitting or Receiving Traffic
		Amber (Solid)	No WAN Ports Established
		Amber (Blinking)	One or More WAN Ports Not Established
LAN	Link Status	Green (Solid)	One or More LAN Ports Established
		Amber (Solid)	No LAN Ports Established

**Table 6** LED Status

LED	Function	Indicator	Status
GW Mode	WLAN Gateway mode / SDWAN Gateway mode	Green (Solid)	The WLAN / SD-WAN Gateway is Up and Functioning
		Green (Blinking)	The WLAN / SD-WAN Gateway is Booting
Central/Cloud	Central Connectivity Status	Blue (Solid)	Connected to Central
		Blue (Blinking)	Connecting to Central
Cellular	Link Status <b>NOTE:</b> The link status is applicable to cellular uplink and is independent of the hardware, that is, either the internal LTE module or the external LTE dongle.	Green (Solid)	Modem Initialized and Connected to the Network. Good Signal Strength. Signal Strength Threshold: > -65 dBm
		Green (Blinking)	Modem Initializing
		Green + Amber (Greenish Yellow) (Solid)	Modem Initialized and Connected to the Network. Average Signal Strength. Signal Strength Threshold: < -65 dBm > -80 dBm
		Amber (Solid)	Modem Initialized and Connected to the Network. Poor Signal Strength. Signal Strength Threshold: < -80 dBm
		Amber (Blinking)	Network Connection Failure. SIM Removal. Modem not Responding to Web Commands.
		Red (Solid)	Modem Lost IP Address or Disconnected from the Network. Acting as a Backup Uplink.
		Red (Blinking)	Hardware Failure. USB Failure. Unsupported USB Device Attached.

## DC Power Connector

The AC-DC adapter kit with the following specification is used to power the HPE Aruba Networking 9004-LTE gateway:

- 12V/2.5A power interface
- Center-positive 2.1/5.5 mm circular plug, 9.5 mm length

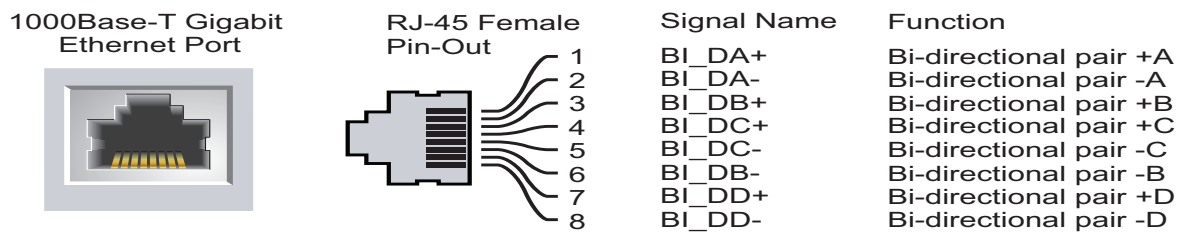
## Reset Switch

The HPE Aruba Networking 9004-LTE gateway includes a recessed button for resetting the gateway configurations. Insert a pin into the Reset Switch hole until you feel the pin touch a surface. Push and hold the pin for two seconds to reset the gateway configuration.

## Ethernet Ports

The HPE Aruba Networking 9004-LTE gateway is equipped with four 10/100/1000BASE-T Gigabit Ethernet ports (0 to 3). Gigabit Ethernet uses all eight wires and each pair is bidirectional, which means, the same pair is used for both data transmission and reception. [Figure 5](#) illustrates the Gigabit Ethernet port pin-out for an RJ-45 connector. The pins paired on a 10/100/1000Base-T Gigabit Ethernet port are: 1/2, 3/6, 4/5, and 7/8.

**Figure 5** *Figure 3 Gigabit Ethernet Port Pin-Out*



## Ethernet Port LEDs

Each 10/100/1000BASE-T Ethernet port is equipped with two LEDs that allow basic monitoring of link/act and status activities.

- **LINK/ACT:** Placed on the left side of the port, and displays the link status and activity of the port.
- **STATUS:** Placed on the right side of the port, and displays the status of the port based on the CLI.

The following table describes the LED behavior for each mode:

**Table 7** *10/100/1000BASE-T Ethernet Port LEDs*

LED	Function	Mode	Indicator	Status
LINK/ACT	Link status	NA	Green (Solid)	Link established
			Green (Blinking)	Port is transmitting or receiving data
			Off	No link
STATUS	Port status	Speed	Green (Solid)	Link at 1000 Mbps
			Off	Link at 10/100 Mbps

## Micro-USB Console Port

The HPE Aruba Networking 9004-LTE gateway is equipped with a Micro-USB (type B) connector that provides direct local console access. If both Micro-USB and RJ-45 console ports are connected, the Micro-USB connection takes precedence over the RJ-45 console connection.

## Using the Micro-USB Console Port

To use the micro-USB port, follow these steps:

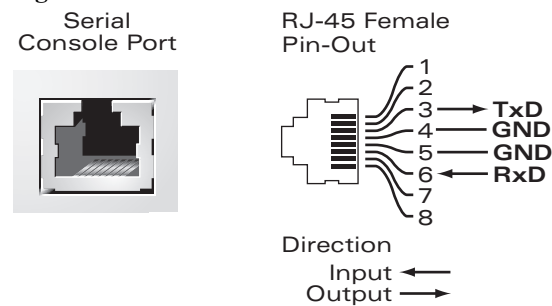
1. Download and install the USB driver file as follows:

- a. Go to <https://asp.arubanetworks.com>.
  - b. Click on the **Software & Document** tab.
  - c. Choose the **Mobility Controller**.
  - d. Search “driver” in the search box.
  - e. In the search result, according to your operating system, choose the **Windows Driver for USB Console port** or **MacBook Driver for USB Console port** to download and install it to your PC.
2. Use the Micro-USB (type B) 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 B connector to the micro USB console port on the gateway.

## RJ-45 Console Port

The serial console port allows connecting a gateway to a serial terminal or a laptop for direct local management. This port is a RJ-45 female connector with the pin-outs described in [Figure 6](#). Connect it directly to a terminal or terminal server using an Ethernet cable.

**Figure 6** Serial Console Port Pin-Out



The communication settings for the RJ-45 console port is shown in the following table:

**Table 8** RJ-45 Console Terminal Settings

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



CAUTION

The RJ-45 CONSOLE port is compatible only with RS-232 devices. Non-RS-232 devices, such as APs, are not supported.



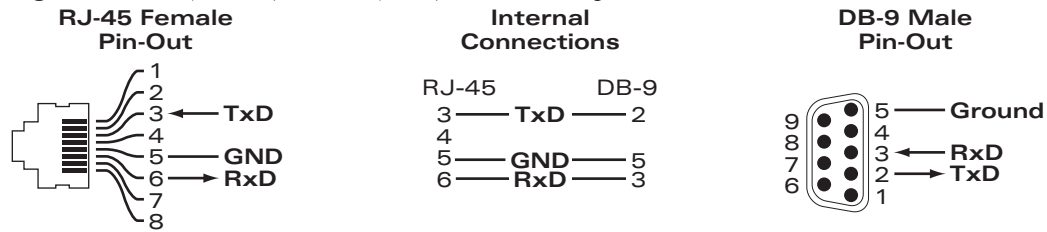
CAUTION

Do not connect the RJ-45 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 female RJ-45 connector to a male DB9 connector. See [Figure 7](#) for complete details.

**Figure 7** RJ-45 (Female) to DB9 (Male) Modular Adapter Conversion



## USB Port

The HPE Aruba Networking 9004-LTE gateway is equipped with one USB 3.0 interfaces. A USB storage device can be used to save and upload configurations to the gateway.

The HPE Aruba Networking 9004-LTE gateway also provides support for USB LTE Modems.

If the HPE Aruba Networking 9004-LTE gateway has an active SIM card installed in the SIM card slot during boot up, then gateway does not initialize the external modem (even if the external modem is inserted before booting up the device). In cases where the internal LTE module fails to connect due to the absence of an active SIM, or any other reasons, then the gateway boots up with the external modem connectivity since the external modem is already connected to the gateway before boot up.

However, if the device is already powered on and the external modem is plugged in to the USB slot runtime, the external modem does not work and requires the device to reboot to become functional.

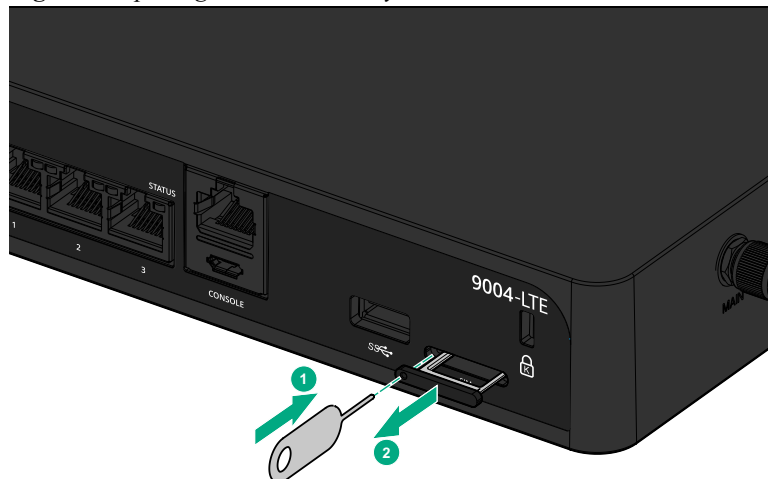
## SIM Tray

The 9004-LTE gateway is equipped with a dual nano-SIM tray. At any given time, only one SIM card is active and functional, the SIM 1 and SIM 2 can not be used simultaneously.

To install a SIM card into the SIM tray, perform the following steps:

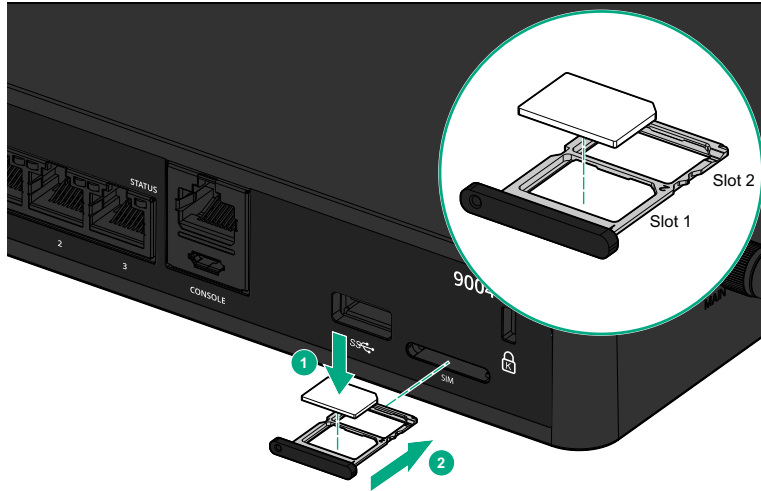
1. Insert the SIM ejector needle (provided with package contents) into the small hole on the SIM Tray. The card tray will pop open. See [Figure 8](#).

**Figure 8** Opening a SIM Card Tray



2. Pull out the SIM card tray and insert a SIM card, gold contact facing downwards, into the SIM tray.
3. Push the SIM tray back into the slot. See [Figure 9](#).

**Figure 9** *Inserting a SIM Card*



In case the SIM tray gets damaged or dysfunctional, you can order a spare SIM tray available for use with the HPE Aruba Networking 9004-LTE gateway. The spare SIM tray is sold separately. Contact your HPE Aruba Networking sales representative for details and assistance.

## Kensington Lock Slot

The HPE Aruba Networking 9004-LTE gateway is equipped with a Kensington security slot for additional security.

## LTE Antennas

The HPE Aruba Networking 9004-LTE gateway is equipped with 3 antenna options, see [Figure 3](#) and [Figure 4](#). The options include:

- **MAIN:** Main LTE Antenna
- **DIV:** Diversity LTE Antenna
- **GPS:** GPS Antenna

**Table 9** *LTE Antenna Types and Functionality*

Antenna Type	Description	Mode
Main	Supports: <ul style="list-style-type: none"> <li>• 1 x TX</li> <li>• 1 x RX</li> <li>• Works independently as a 1x1 SISO even if Diversity antenna is not connected.</li> </ul>	LTE
Diversity	Supports: <ul style="list-style-type: none"> <li>• 1 x RX</li> </ul> <b>NOTE:</b> Does not work independently when the Main antenna is not connected.	LTE

**Table 9** *LTE Antenna Types and Functionality*

Antenna Type	Description	Mode
GPS	<p>Supports:</p> <ul style="list-style-type: none"><li>• 1 x RX</li><li>• Works independently even if Main or Diversity antennas are not connected.</li></ul> <p><b>NOTE:</b> Ensure that the GPS antenna is placed in an open space with clear access to the sky, or ensure that the device is placed closer to the window for the GPS functionality to work properly.</p>	GPS



The GPS antenna is not included in the package. It is an additional accessory that can be ordered separately. Both, HPE Aruba Networking 90xx-LTE Spare Indoor Antenna and the HPE Aruba Networking 90xx-LTE Spare Outdoor Antenna can be used as GPS antennas along with the three extender kits available for 9004-LTE gateways. Refer [on page 8](#) for the types of extender kits. Contact your HPE Aruba Networking sales representative for details and assistance.





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

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This chapter describes how to install the indoor LTE antennas on the HPE Aruba Networking 9004-LTE gateway.

You can mount the HPE Aruba Networking 9004-LTE gateway on any flat surface such as a desktop, or a shelf. Or you can mount the gateway in a standard, 19-inch telco rack or on a wall using the various accessory kit (not included in box) provided by HPE Aruba Networking.

This section also provides details of extending the antenna placements using the antenna extender kits (additional accessories), or place the antennas outdoor using the Outdoor Omni antenna along with the extender kit (additional accessory).

## Installation Recommendations

- For proper air circulation, leave at least 10 cm (4 inches) clearance on the left, right, front, and rear side of the gateway.
- Leave additional space in front and rear side of the gateway to access power cords, network cables, and indicator LEDs.
- Avoid placing anything on top of the gateway as it can lead to overheating of the gateway.
- Avoid placing this gateway on any other device as the heat dissipated from the other device can over heat the gateway.
- Ensure that the rack is correctly and securely installed to prevent it from falling or becoming unstable.

## Precautions

- Dangerous voltage above 240 V AC is always present while the HPE Aruba Networking Power Supply Module is plugged into an electrical outlet. Remove all rings, jewelry, and other potentially conductive material before working with this device.
- Never insert foreign objects into the chassis, 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 anti-static 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.
- This product, power cords, and all interconnected cables are for indoor use only.

## Antenna Mounting Instructions

The HPE Aruba Networking 9004-LTE gateway supports 3 antenna options, Main, Diversity, and GPS. Each of these antennas can be either connected directly to the device, or can be connected using extension cables (additional accessories, not provided in the package) for proper placement.

To install a Main or Diversity antenna on an HPE Aruba Networking 9004-LTE gateway, perform the following steps:

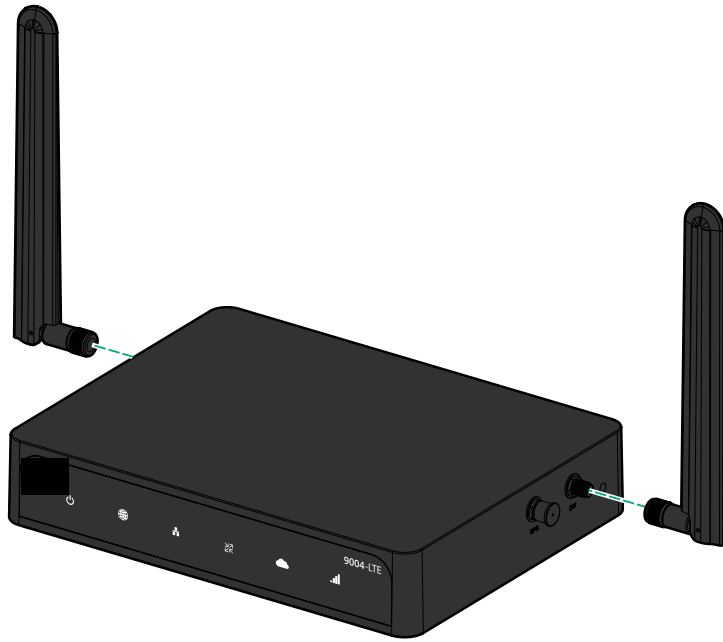
1. Remove the protection caps from MAIN and DIV antenna connector. See [Figure 10](#).

**Figure 10** *Removing MAIN and DIV Antenna Connector Caps*



2. Align the LTE antenna connector with the connector provided on the device.
3. Secure the LTE antenna by screwing it tightly to the connectors on the device. See [Figure 11](#) and [Figure 12](#).

**Figure 11** *Connecting External Antennas*



**Figure 12** *Connecting External Antenna*



Your LTE antenna installation is now complete.

## Cable Saddle Installation Instructions

The HPE Aruba Networking 9004-LTE gateway provides the option of attaching a cable saddle to the device to secure the power cable with the device.

To attach a cable saddle to the 9004-LTE gateway, perform the following steps:

1. Align the cable saddle with the slot on the side of the gateway and push the cable saddle into the unit to secure it. See [Figure 13](#).

**Figure 13** *Attaching a Cable Saddle*



2. Insert the cable into the cable saddle and attach it to the power connector slot. This secures the cable and keeps it in place. See [Figure 14](#).

**Figure 14** *Securing a Cable*

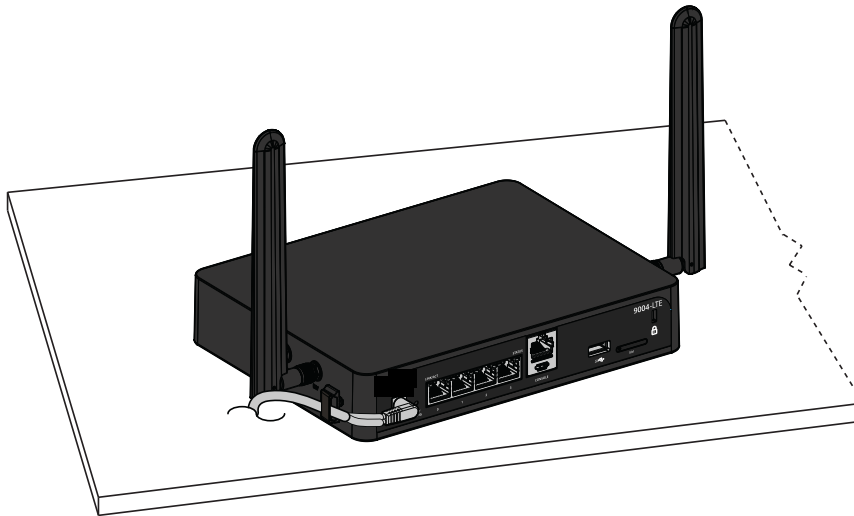


Your cable saddle installation is now complete.

## Desktop Installation Instructions

The HPE Aruba Networking 9004-LTE gateway can be kept on a desktop or any flat surface after the antenna and cable saddle installations are done. Just place the device on an open surface with the antennas pointing upright. See [Figure 15](#).

**Figure 15** *Desktop Mounting*



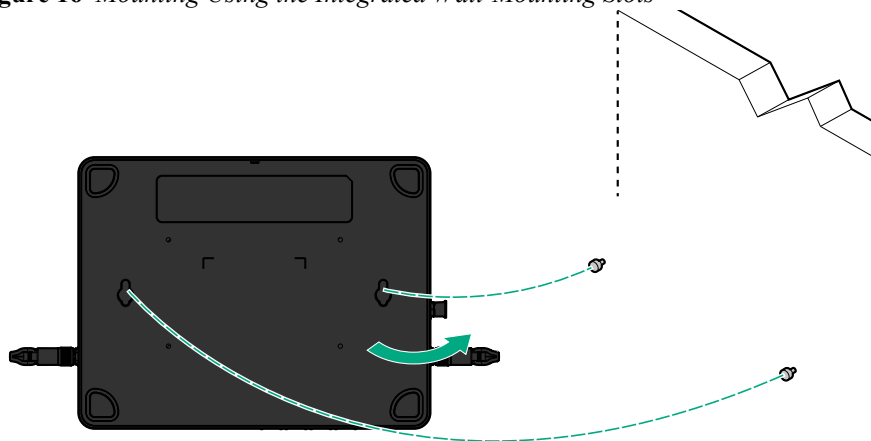
## Wall Mounting Installation Instructions

The keyhole-shaped slots on the bottom of the gateway can be used to attach the device upright (back port facing downwards) to an indoor wall or shelf. Make sure to mount the gateway in such a way that there is a clear path to the Ethernet port, such as a predrilled hole in the mounting surface to pass the wire.

To mount the 9004-LTE gateway to a wall, perform the following steps:

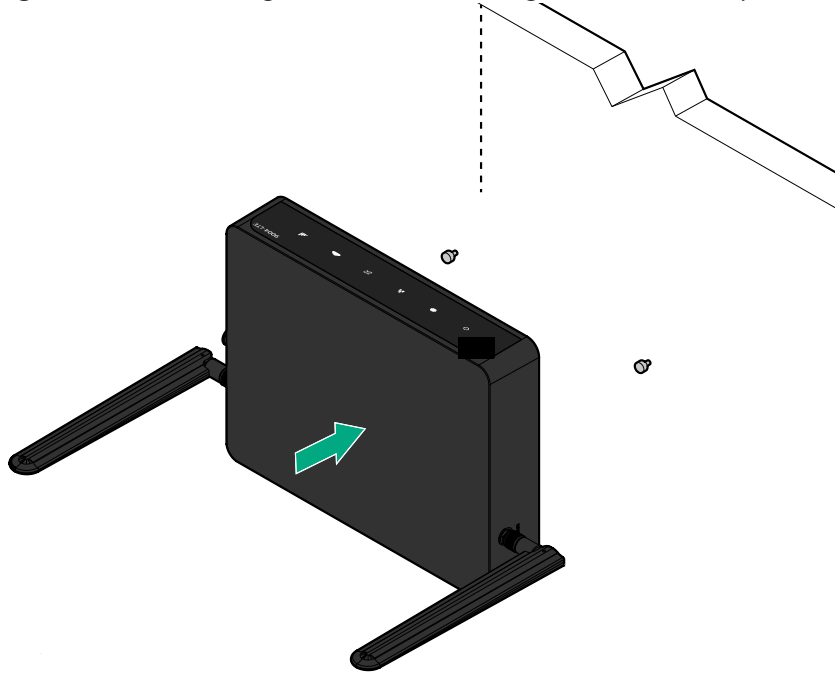
1. At the mounting location, install two screws on the wall or shelf, 145.35 mm apart. If you are attaching the device to drywall, it is recommended that you use appropriate wall anchors (not included). See [Figure 16](#).
  - Use 3/4 inch long #6 pan head wood screws for mounting 9004-LTE unit on wood.
  - Use 3/4 inch long #6 pan head wood screws with plastic screw anchor #6-8 x 1 inch on dry wall or concrete wall.
  - Required quantity: 2 screws per unit

**Figure 16** *Mounting Using the Integrated Wall-Mounting Slots*



2. Align the mounting slots on the bottom of the gateway over the screws and slide the unit into place. See [Figure 17](#).

**Figure 17** Wall Mounting HPE Aruba Networking 9004-LTE Gateway



You wall mounting installation is now complete.

## Rack Mounting Installation Instructions

This mounting option allows mounting the HPE Aruba Networking 9004-LTE gateway in a two-post 19-inch Telco rack with either the front panel facing outward or the rear panel facing outward using the HPE Aruba Networking 9004-LTE-MNT-19 Rack Mount Kit (additional accessory).



Each 9004-LTE gateway should have its own mounting equipment. Do not place other networking equipment directly on top of a mounted gateway. Failure to do so can damage the device.

### Required Tools and Equipment

The following tools and equipment are required for installing a 9004-LTE gateway:

- Rack mount tray (x1) for rack mounting installation
- Rubber clamps (x2) for securing the power adapter on the rack mount tray (included in the kit)
- Wire saddle (x4) to route the antenna wires on the rack mount tray (included in the kit)
- M3 x 5 mm flat head screws (x4) for securing the gateway on the rack mount tray (included in the kit)
- M6 x 15 mm Phillips pan head screws (x4) for rack mount (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 9004-LTE gateway kit. Ensure that you have the correct screws before installing the device.

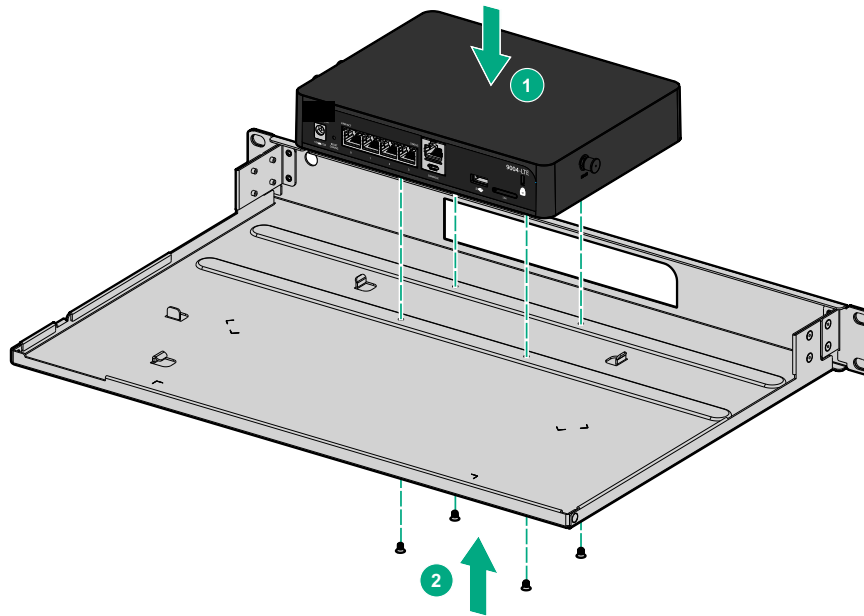
### Installation Steps

To install a 9004-LTE gateway into a two-post 19-inch Telco rack, perform the following steps:

1. Align the 9004-LTE gateway to the screw hole provided on the rack mount tray. See [Figure 18](#).

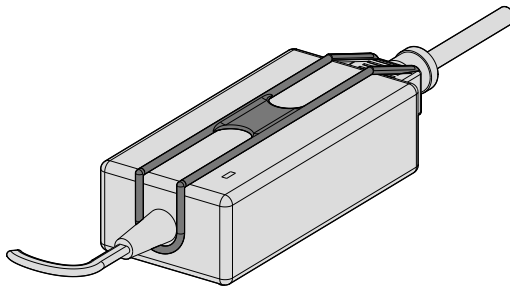
2. Align the screws under the rack mount tray and tighten the screws to secure the 9004-LTE gateway on the rack mount tray. See [Figure 18](#).

**Figure 18** *Aligning the 9004-LTE Gateway with the Rack Mount Tray*



3. Use the rubber clamps provided with the kit to secure the power cable with the power adapter.
4. Pass one end of the rubber clamp through the DC cable of the adapter. Pass the power cable plug through the other end of the rubber clamp before attaching it with the adapter. See [Figure 19](#).

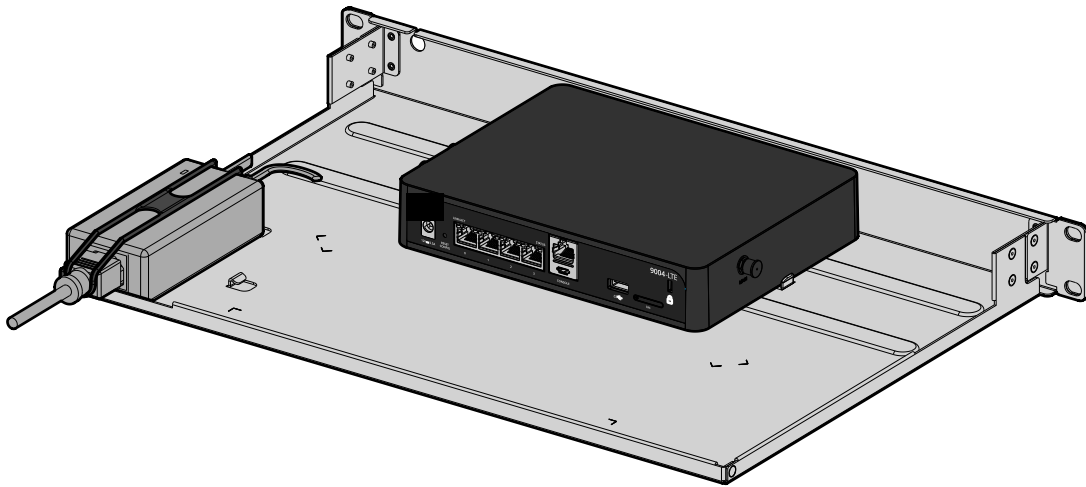
**Figure 19** *Attaching Rubber Clamp to the DC Power Adapter*



Leave a minimum of 10 cm (4 inches) of space on the left and right side of the device for proper air flow and ventilation. Leave additional space in the front and the back of the device to access network cables, LED status indicators, and power cord.

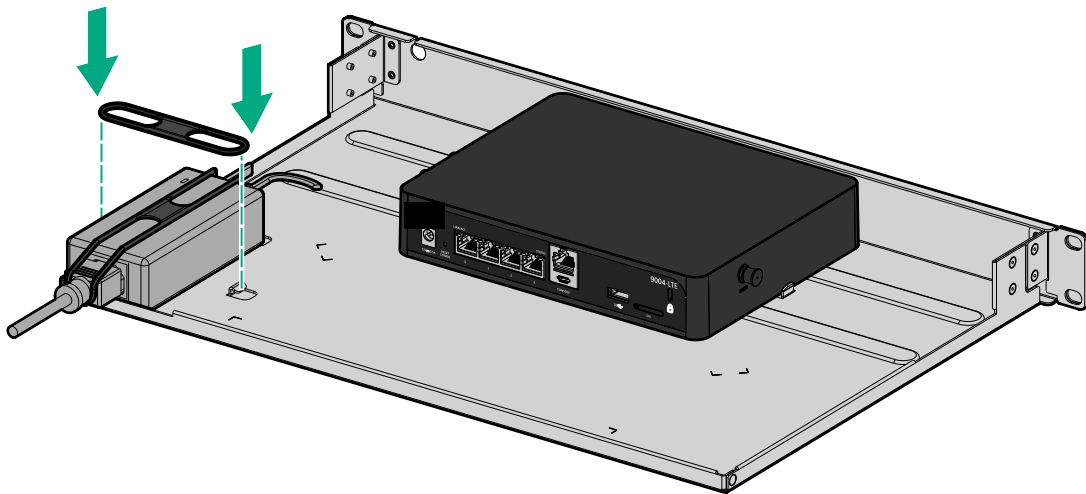
5. Place the power adapter on the rack mount tray aligning it with the placement tabs provided. See [Figure 20](#).

**Figure 20** *Power Adapter Mounting*



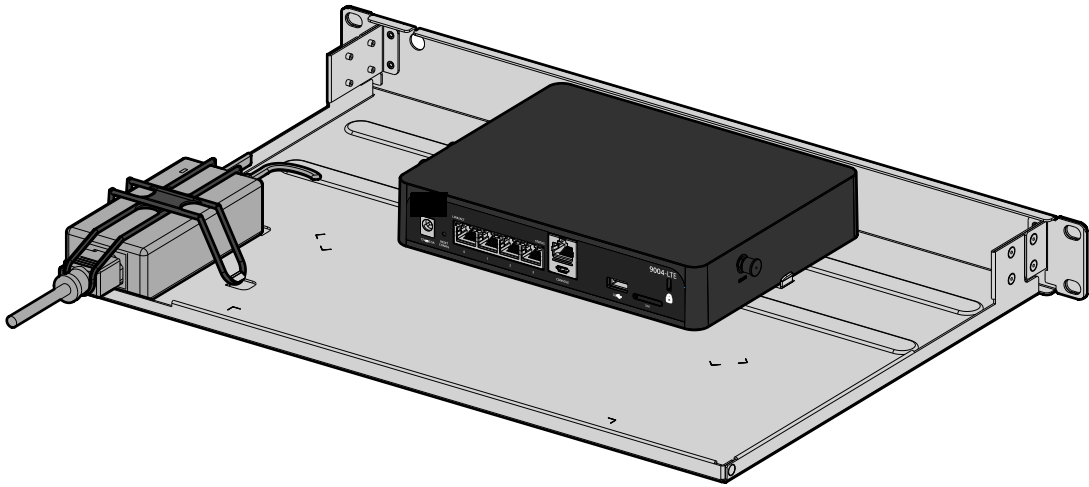
6. Use the other rubber clamp provided with the mounting kit to secure the adapter on the rack mount tray. Hook one end of the clamp into the left hook provided on the tray, pull the other end and hook it to the right hook provided on the tray to secure the adapter completely. See [Figure 21](#) and [Figure 22](#).

**Figure 21** *Securing Power Adapter on the Rack Mount Tray*



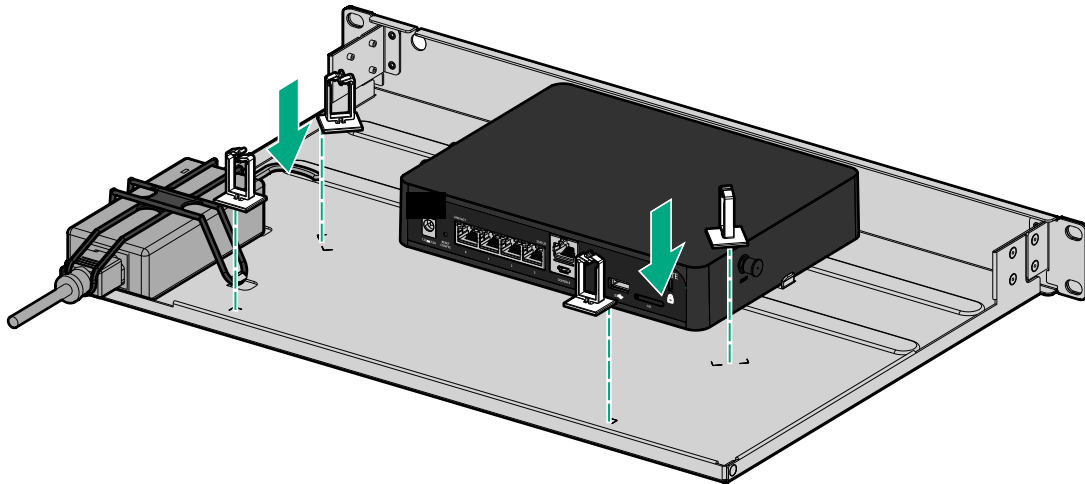


**Figure 22** *Securing Power Adapter on the Rack Mount Tray*

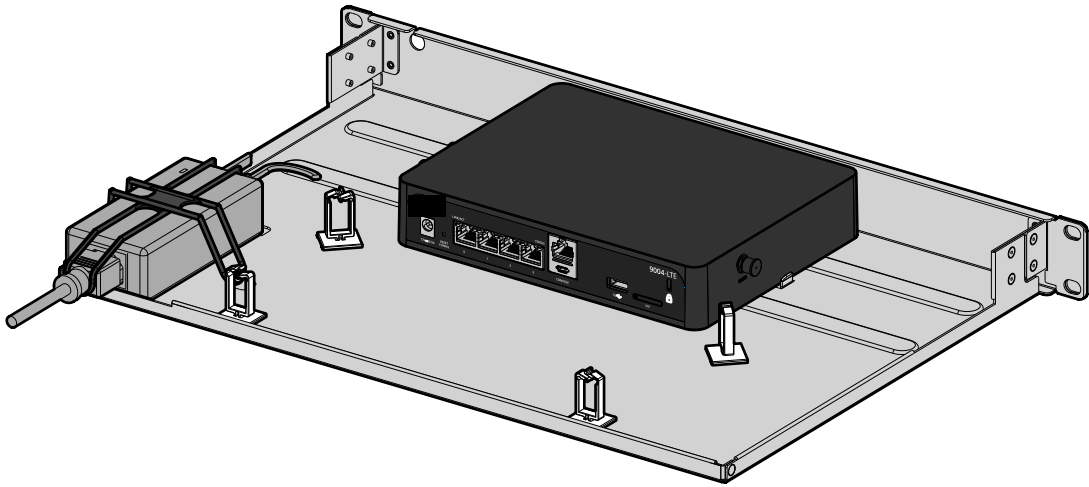


7. Connect the DC power plug into the DC power connector provided on the back panel of the 9004-LTE gateway.
8. Align the wire saddles with the “L” shaped inscription on the rack. Remove the adhesive liner from the bottom of the wire saddles and attach each of the four wire saddles with the tray to secure them with the rack. See [Figure 23](#) and [Figure 24](#).

**Figure 23** *Aligning the Wire Saddle*

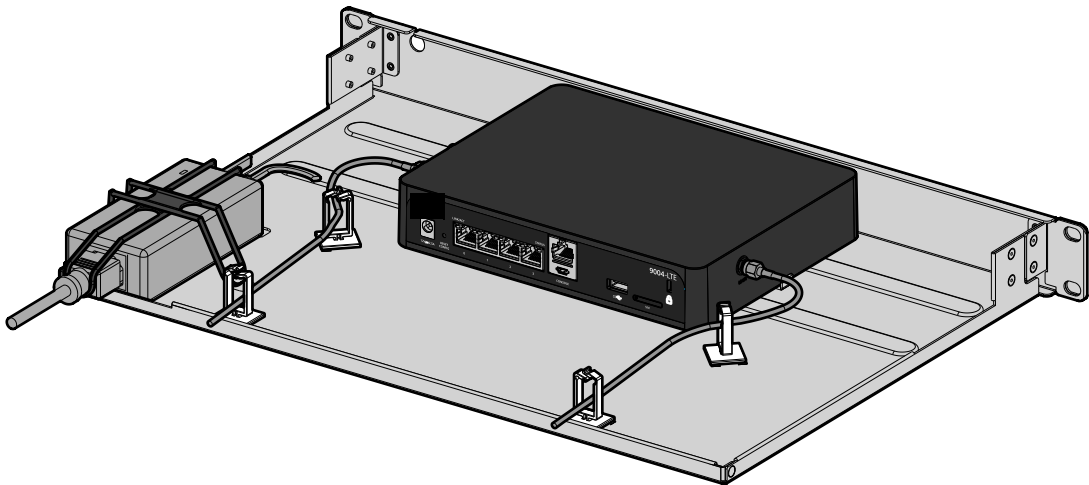


**Figure 24** *Aligning the Wire Saddle*



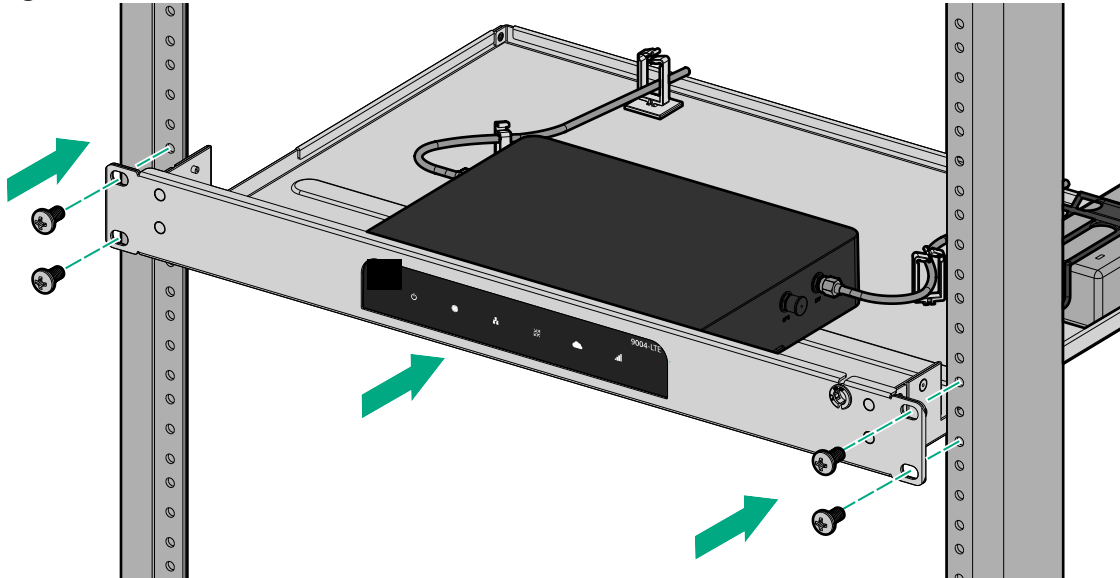
9. Insert the antenna wires into the wire saddles and attach it to the antenna connectors provided on the sides of the 9004-LTE gateway. This secures the wires within the wire saddle to keep it in place. See [Figure 25](#).

**Figure 25** *Securing the Antenna Wires*



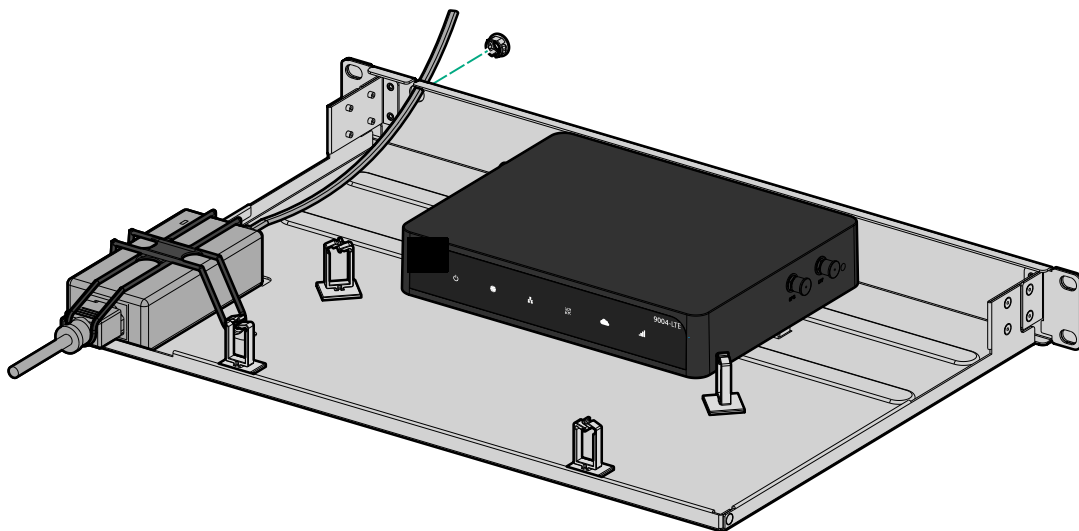
10. Mount the rack mount tray within the two-post 19-inch rack using four M6 x 15 mm Phillips pan head screws and a suitable screwdriver. See [Figure 26](#).

**Figure 26** *Rack Mount Installation*



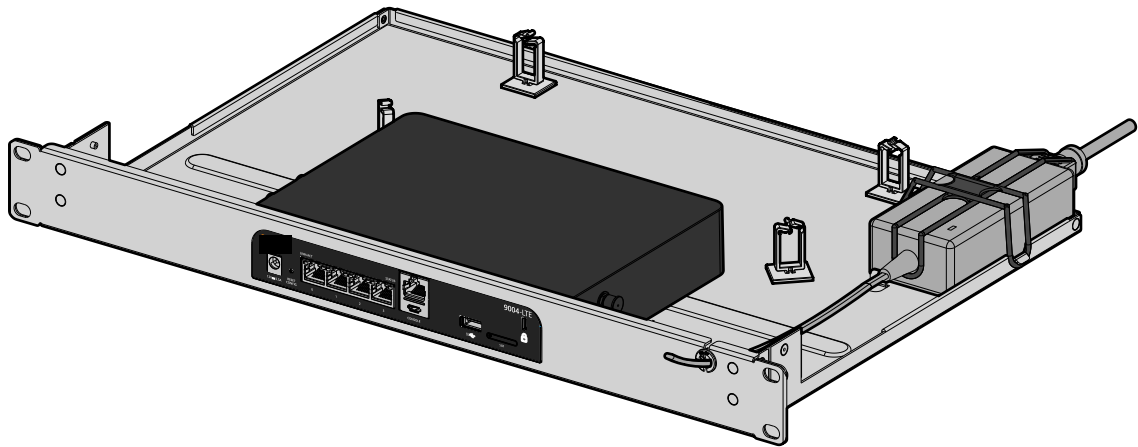
11. In case of mounting the unit with the rear panel facing outwards, the DC cable should be routed through the outlet hole provided on the rack panel.
12. Remove the cable grommet from the outlet hole and insert the DC cable into the cable grommet through the slit provided. See [Figure 27](#).

**Figure 27** *Routing the DC Cable through the Outlet Hole*



13. Reinsert the cable grommet into the outlet hole on the rack mount tray. See [Figure 28](#).
14. Connect the DC cable into the DC jack on the device.
15. Insert the antenna wires into the wire saddles and attach it to the antenna connectors provided on the sides of the 9004-LTE gateway. This secures the wires within the wire saddle to keep it in place.

**Figure 28** *Inserting the DC cable into the Cable Grommet*



Rack mount installation of the 9004-LTE gateway is now complete.

## Antenna Extension Instructions

### Indoor Antenna Extension Instruction: HPE Aruba Networking 90xx-LTE Indoor Ant Ext Kit-20ft and HPE Aruba Networking 90xx-LTE Indoor Ant Ext Kit-40ft

The HPE Aruba Networking 9004-LTE gateway provides the option of using additional accessory kits to extend the Main, Diversity, or GPS antenna mounting for better placement and coverage. You can use the extension kits (HPE Aruba Networking 90xx-LTE Indoor Ant Ext Kit-20ft or HPE Aruba Networking 90xx-LTE Indoor Ant Ext Kit-40ft) provided as additional accessories to extend the antenna placement and mount it on any flat surface such as desktops, shelves, etc., that provide better LTE signal. Or you can wall mount the LTE antennas using the mounting brackets provided in the antenna extender kits.

This section provides the detailed instructions for mounting the LTE antenna to a wall using the wall mounting brackets provided in the kit.

The LTE antenna mounting instructions are recommended for indoor use only.



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Ensure that the Main and Diversity antennas are placed at least 15 cm apart, in case of extended antenna placements. The greater the distance between the two antennas, the better will be their RF performances.

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For best results, place the GPS antenna close to a window or any place with open access to the sky.

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### Required Tools and Equipment

The following tools and equipment are required for installing an LTE antenna:

- Mounting bracket for wall mount installation.
- Use 3/4 inch long #6 pan head wood screws for mounting 9004-LTE unit on wood (not included in the kit).
- Use 3/4 inch long #6 pan head wood screws with plastic screw anchor #6-8 x 1 inch on dry wall or concrete wall (not included in the kit).
- Required quantity: 2 screws per bracket
- Suitable screwdrivers (not included in the kit)

## Installation Steps - Horizontal

To install an LTE antenna to the wall using a 20 feet or a 40 feet cable, perform the following steps:

1. Remove the protection caps from the LTE antenna connector. See [Figure 29](#).

**Figure 29** *Removing the Antenna Connectors*



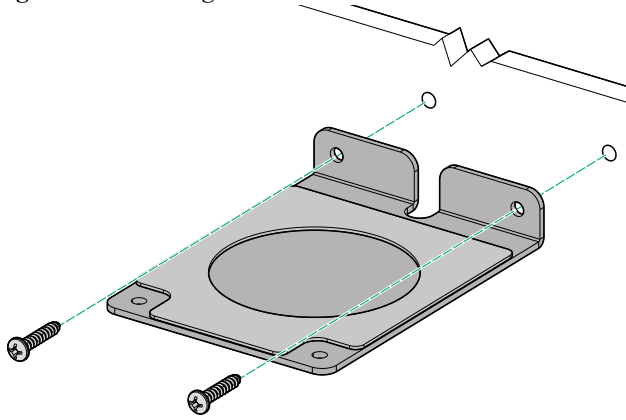
2. Use the appropriate extension cable (HPE Aruba Networking 90xx-LTE Antenna Extender Kit-20ft or HPE Aruba Networking 90xx-LTE Antenna Extender Kit-40ft antenna kit) to connect the LTE antenna with the device. See [Figure 30](#).

**Figure 30** *Attaching Extension Cables*



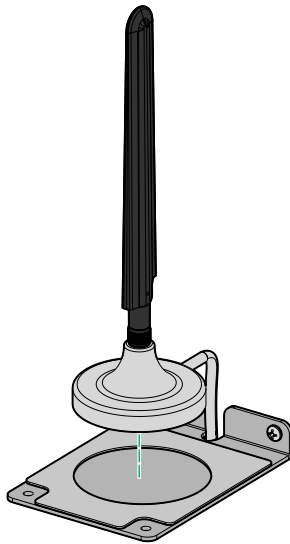
3. Align one end of the extension cable with the LTE connector on the device and secure the cable with the connector.
4. Mark the screw hole locations on a wall by aligning with the mounting holes provided in the mounting brackets for horizontal orientation.
5. Align the mounting bracket to the screw hole on the wall. Secure the bracket with the screws on the wall. See [Figure 31](#).

**Figure 31** *Installing the Wall Mount Brackets*



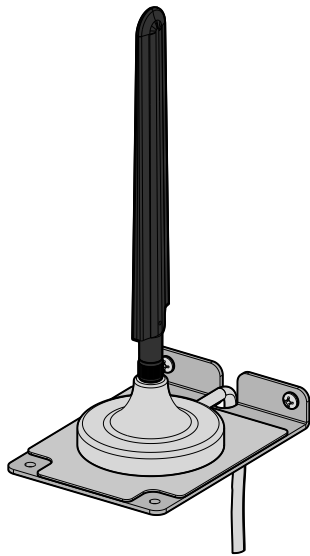
6. Fix the antenna to the magnetic mounting base.
7. Pass the attached cable through the U-slot provided in the mounting bracket.
8. Align the antenna's magnetic mounting base with the wall mounted bracket. The base of the LTE antenna is magnetic, and will attach with the wall mounted bracket automatically. Ensure that the base is placed in the circular space provided in the wall mount bracket. See [Figure 32](#).

**Figure 32** *Mounting the LTE Antenna on the Bracket*



9. Route the cable along the wall using required methods to ensure safety of the mounted antenna. Ensure that the antenna orientation is upright. See [Figure 33](#).

**Figure 33** *Antenna Mounting*



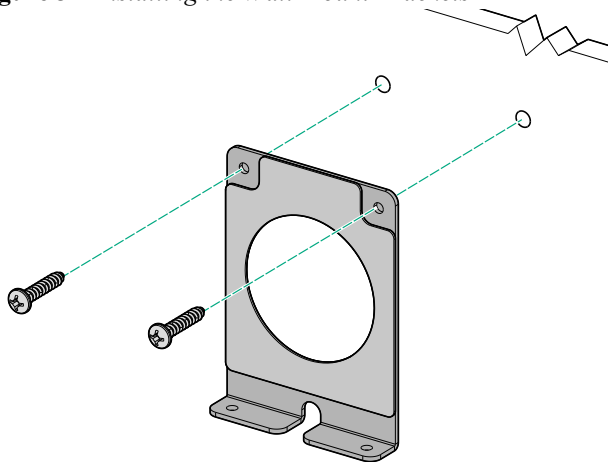
The antenna mounting is now complete.

### Installation Steps - Vertical

To install an LTE antenna to the wall using a 20 feet or a 40 feet cable, perform the following steps:

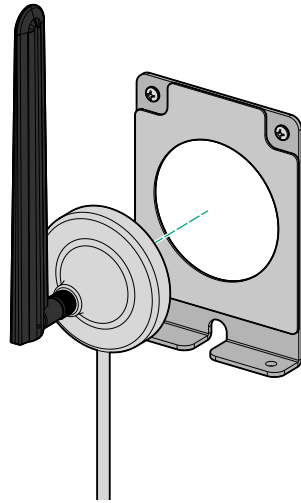
1. Remove the connector caps from the LTE antenna connectors and secure the extension cable with the LTE connector on the device. See [step 1 on page 29](#) through [step 3 on page 29](#) for details.
2. Mark the screw hole locations on a wall by aligning with the mounting holes provided in the mounting brackets for vertical orientation.
3. Align the mounting bracket to the screw hole on the wall. Secure the bracket with the screws on the wall. See [Figure 34](#).

**Figure 34** *Installing the Wall Mount Brackets*



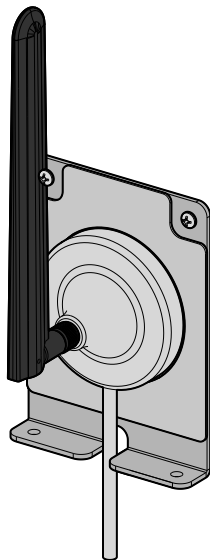
4. Fix the antenna to the magnetic mounting base.
5. Align the antenna's magnetic mounting base with the wall mounted bracket. The base of the LTE antenna is magnetic, and will attach with the wall mounted bracket automatically. Ensure that the base is placed in the circular space provided in the wall mount bracket. Pass the attached cable through the U-slot provided in the mounting bracket. See [Figure 35](#).

**Figure 35** *Mounting the LTE Antenna on the Bracket*



6. Route the cable along the wall using required methods to ensure safety of the mounted antenna. Ensure that the antenna orientation is upright. See [Figure 36](#).

**Figure 36** *Mounted LTE Antenna*



Your wall mounted antenna extension is now complete.

### **Outdoor Omni Antenna Extension Instructions: HPE Aruba Networking 90xx-LTE Outdoor Ant Ext Kit-35ft**

The HPE Aruba Networking 9004-LTE gateway provides the option of using additional accessory kits to extend the Main, Diversity, or GPS antenna mounting for better placement and coverage. This mounting option allows mounting the Outdoor Omni antenna to a wall or a pole using the provided mounting kits (Aruba 90xx-LTE Outdoor Ant Ext Kit-35ft).

#### **Required Tools and Equipment - Wall Mounting**

The following tools and equipment are required for installing an Outdoor Omni antenna:

- Mounting bracket, nut, and washer (attached to the surge protector).
- Use 3/4 inch long #6 pan head wood screws for mounting 9004-LTE unit on wood (not included in the kit).



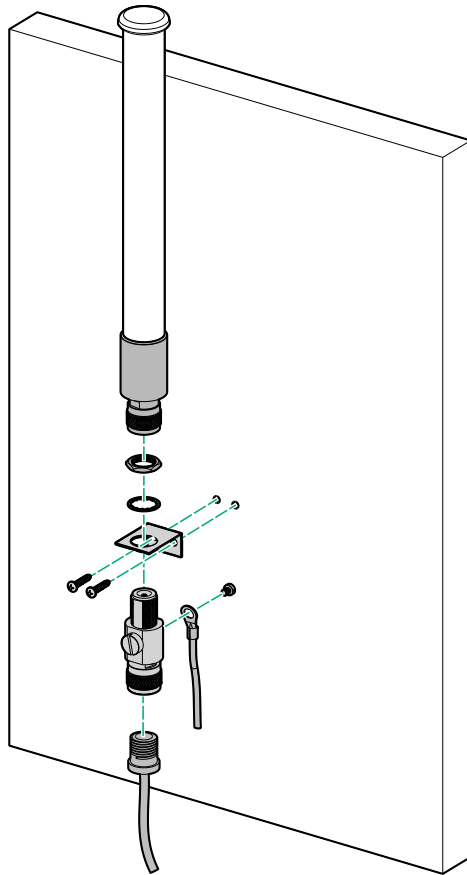
- Use 3/4 inch long #6 pan head wood screws with plastic screw anchor #6-8 x 1 inch on dry wall or concrete wall (not included in the kit).
- Required quantity: 2 screws per bracket
- Suitable screwdrivers (not included in the kit)

### Installation Steps - Wall Mounting

To install an Outdoor Omni antenna to the wall, perform the following steps:

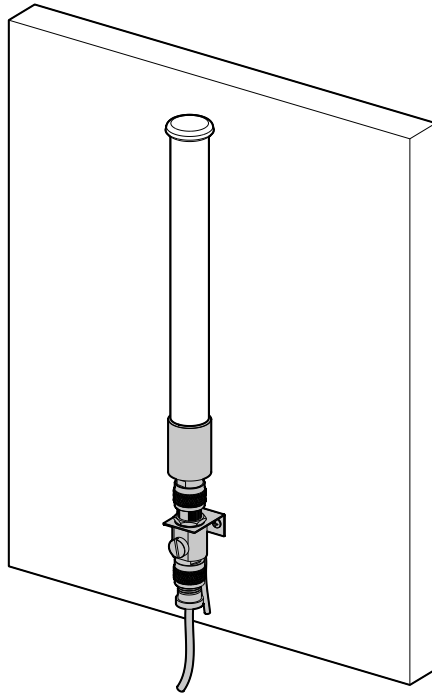
1. Remove the connector caps from the LTE antenna connectors and secure the extension cable with the LTE connector on the device. See [step 1 on page 29](#) through [step 3 on page 29](#) for details.
2. Remove the wall mounting bracket from the surge protector. Ensure that you keep the nut and washer secure for installation.
3. Mark the screw hole locations on a wall by aligning with the mounting holes provided in the wall mounting bracket.
4. Align the mounting bracket to the screw hole on the wall. Secure the bracket with the screws on the wall. See [Figure 37](#).

**Figure 37** *Installing the Wall Mount Brackets*



5. Connect the earthing lug provided with the surge protector to a grounding wire.
6. Connect the 35 feet cable's N-Type female connector with the N-Type male connector of the surge protector. See [Figure 38](#).
7. Assemble the surge protector's female end with the mounting bracket using the nut and washer. See [Figure 38](#).
8. Assemble the Outdoor Omni antenna with the female end of the surge protector. See [Figure 38](#).

**Figure 38** *Wall Mounted Outdoor Omni Antenna*



The Outdoor Omni antenna wall mounting is now complete.

### **Required Tools and Equipment - Pole Mounting**

The following tools and equipment are required for installing an Outdoor Omni antenna:

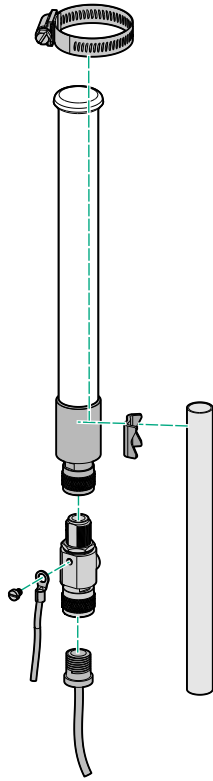
- Pole mounting kit
- Suitable screwdrivers (not included in the kit)

### **Installation Steps - Pole Mounting**

To install an Outdoor Omni antenna to a pole, perform the following steps:

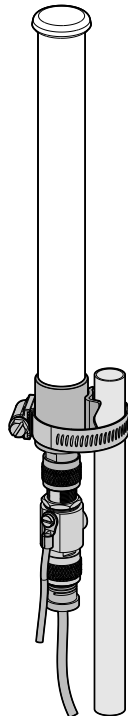
1. Remove the connector caps from the LTE antenna connectors and secure the extension cable with the LTE connector on the device. See [step 1 on page 29](#) through [step 3 on page 29](#) for details.
2. Remove the wall mounting bracket from the surge protector. Ensure that you keep the nut and washer secure for future wall mounting installation if required.
3. Assemble the Outdoor Omni antenna with the female end of the surge protector.
4. Align the antenna with the pole and secure it using the pole mounting kit. See [Figure 39](#).

**Figure 39** Pole Mounting the Outdoor Omni Antenna



5. Connect the earthing lug provided with the surge protector to a grounding wire. See [Figure 40](#).
6. Connect the 35 feet cable's N-Type female connector with the N-Type male connector of the surge protector. See [Figure 40](#).

**Figure 40** Pole Mounted Outdoor Omni Antenna



The Outdoor Omni antenna pole mounting is now complete.



## HPE Aruba Networking 9004-LTE Gateway Specifications

### Physical

- Device Dimensions:
  - Without LTE antenna connectors (HxWxD): 3.82 cm x 19.85cm x 15.31 cm
  - With LTE antenna connectors (HxWxD): 3.82 cm x 21.66 cm x 15.31 cm
- Device Weight: 2.363 lbs (1.072 kg) approx.

### Electrical

- Ethernet
  - 4 x 10/100/1000BASE-T auto-sensing Ethernet RJ-45 ports
  - MDI/MDX
- 1 x USB A 3.0 port
- 1 x RJ-45 console port
- 1 x Micro USB console port
- BLE
- Power
  - 12V DC power interface, supports powering through a 12V DC, 2.5A AC-to-DC power adapter

### Antenna Connectors

- Three (female) SMA connectors for LTE Main, LTE Diversity, and GPS Antenna.

### 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
  - 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 [www.arubanetworks.com](http://www.arubanetworks.com)

## Safety and Regulatory Compliance

HPE Aruba Networking, a Hewlett Packard Enterprise company, provides a multi-language document that contains country-specific restrictions and additional safety and regulatory information for all

HPE Aruba Networking products. This document can be viewed or downloaded from the following location: [www.arubanetworks.com/safety\\_addendum](http://www.arubanetworks.com/safety_addendum)



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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.

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RF Radiation Exposure Statement: This equipment complies with RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 7.874 inches (20cm) between the radiator and your body for 2.4 GHz operations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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Déclaration sur les limites d'exposition aux radiofréquences : cet équipement est conforme aux limites d'exposition aux rayonnements radioélectriques spécifiées. Il doit être installé et utilisé à une distance minimale de 20 cm par rapport à votre corps pour les fréquences de 2,4 GHz. Cet émetteur-récepteur ne doit pas être utilisé ou situé à proximité d'autres antennes ou émetteurs-récepteurs.

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## FCC Class B Part 15

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.



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

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This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause interference harmful to radio communications.

If this equipment does cause interference, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

## Canada

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference
2. This device must accept any interference, including interference that may cause undesired operation of the device

Cet appareil contient des émetteurs / récepteurs exempts de licence qui sont conformes au (x) RSS (s) exemptés de licence d'Innovation, Sciences et Développement économique Canada. L'opération est soumise aux deux conditions suivantes: (1) Cet appareil ne doit pas causer d'interférences (2) Cet appareil doit accepter toute interférence, y compris les interférences pouvant provoquer un fonctionnement indésirable de l'appareil.

## EU Regulatory Conformance



The Declaration of Conformity made under RED Directive 2014/53/EU is available for viewing 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.

## Wireless Channel Restrictions

**Table 10** *Frequency Range Table*

Frequency Range MHz	Max EIRP
2402-2480	4 dBm

## 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 [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate) 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.

## Thailand

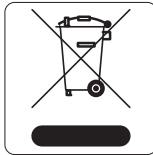


### Regulatory Model Name

The regulatory model name for the HPE Aruba Networking 9004-LTE Gateway is ARCN9004LTE.

## Proper Disposal of HPE Aruba Networking Equipment

### Waste of Electrical and Electronic Equipment



(WEEE).

HPE Aruba Networking, a Hewlett Packard Enterprise company 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 wheeled 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

### India RoHS

This product complies with RoHS requirements as prescribed by E-Waste (Management & Handling) Rules, governed by the Ministry of Environment & Forests, Government of India.


### China RoHS



HPE Aruba Networking, a Hewlett Packard Enterprise company products also comply with China environmental declaration requirements and are labeled with the “EFUP 50” label shown at the left.



## 有毒有害物质声明 Hazardous Materials Declaration

部件名称 (Parts)	有毒有害物质或元素 (Hazardous Substances)					
	铅 Lead (Pb)	汞 Mercury (Hg)	镉 Cadmium (Cd)	六价铬 Chromium VI Compounds (Cr <sup>6+</sup> )	多溴联苯 Polybrominated Biphenyls (PBB)	多溴二苯醚 Polybrominated Diphenyl Ether (PBDE)
电路板 PCA Board	X	O	O	O	O	O
机械组件 Mechanical Subassembly	X	O	O	O	O	O
电源适配器 Power Adaptor	X	O	O	O	O	O
O: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006标准规定的限量要求以下。 This component does not contain this hazardous substance above the maximum concentration values in homogeneous materials specified in the SJ/T11363-2006 Industry Standard.						
X: 表示该有毒有害物质在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。 This component does contain this hazardous substance above the maximum concentration values in homogeneous materials specified in the SJ/T11363-2006 Industry Standard.						
对销售之日的所售产品, 本表显示, 供应链的电子产品信息可能包含这些物质。 This table shows where these substances may be found in the supply chain of electronic information products, as of the date of sale of the enclosed product.						
此标志为针对所涉及产品的环保使用期标志。 某些零部件会有一个不同的环保使用期(例如, 电池单元模块)贴在其产品上。 此环保使用期限只适用于产品是在产品手册中所规定的条件下工作。 The Environment-Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here. The Environment-Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.						

## Korean

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

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

## Taiwan

**警告使用者：**  
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

1. 應避免影響附近雷達系統之操作。
2. 高增益指向性天線只得應用於固定式點對點系統
3. 電磁波暴露量 MPE 標準值 1 mW/cm<sup>2</sup>, 送測產品實測值為 : 0.223mW/cm<sup>2</sup>

所有技術文件皆必須秀出廠牌 / 型號，而使用手冊必須再補上警語，其警語內容如下：依據低功電波射性電機管辦法第十二條

經型式認證合格之低功率射頻電機，非經許可，公司，商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

## Нормативные требования Евразийского Экономического Союза

### Russia



HPE Russia: ООО "Хьюлетт Паккард Энтерпрайз" Российская Федерация, 125171, г. Москва, Ленинградское шоссе, 16А, стр.3, Телефон: +7 499 403 4248 Факс: +7 499 403 4677

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### Mexico

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

### Brazil

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.