

Aruba 303H Series Hospitality Access Points

Installation Guide

The Aruba 303H Series access point is a high-performance dual-radio wireless device for hospitality and branch deployments.

This access point uses Multiple-Input, Multiple-Output (MIMO) technology to provide secure wireless connectivity for both 2.4GHz 802.11 b/g/n and 5GHz 802.11 a/n/ac WiFi.

Alternatively, the wired Ethernet ports located on the bottom of the device allow users to connect to the device directly when linked by an Ethernet cable.

The 303H Series access point can be attached to a standard single-gang wall box using the mount provided, or converted into a desk-mounted remote access point for branch office deployments using the AP-303H-MNTD mount kit (sold separately).

The 303H Series access point provides the following capabilities:

- IEEE 802.11 a/b/g/n/ac operation as a wireless access point
- IEEE 802.11 a/b/g/n/ac operation as a wireless air monitor
- Compatibility with IEEE 802.3af/at PoE
- Central management configuration
- Supports PoE-in (E0 port)/PoE-out (E3 port)
- Support for selected USB peripherals
- Integrated Bluetooth Low Energy (BLE) radio

Package Contents

- 303H Series Access Point
- Single gang wall-box mounting bracket
- (2x) #6-32 slotted screws
- T8H Torx security screw

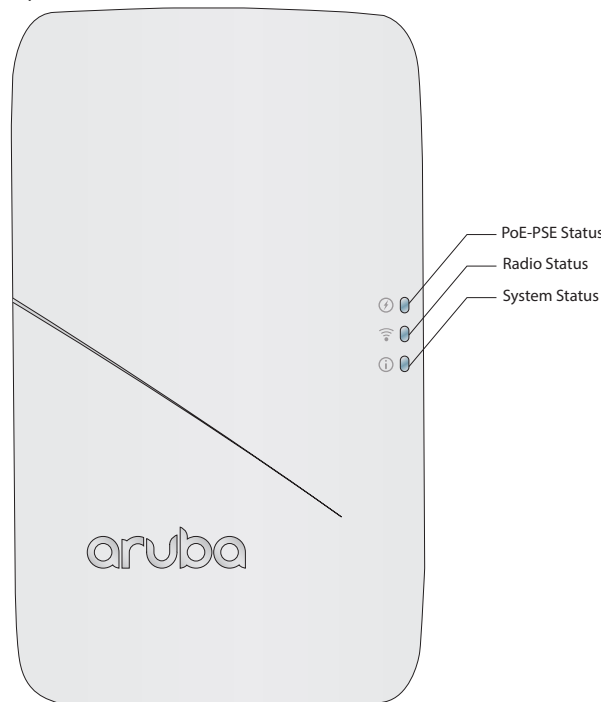


Inform your supplier if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use these materials to repack and return the unit to the supplier if needed.

Hardware Overview

The following sections outline the hardware components of the 303H Series access point.

Figure 1 303H Series (front view)



LED

The LED displays located on the front and bottom of the access point indicate the following functions:

System Status

The System Status LED indicates the operating condition of the access point, as shown in [Table 1](#).

Table 1 System Status LED

Color/State	Meaning
Off	Device is powered off
Green/solid	Device is ready; fully functional
Green/blinking ¹	Device is booting; not ready
Green/flashing ²	Device is ready; uplink negotiated at suboptimal speed (<1Gbps)
Amber/solid	Device is ready; operating in power-save mode (PoE source: 802.3af).
Amber/flashing	Device is ready; operating in power-save mode, with uplink negotiated at suboptimal speed (<1Gbps)
Red/solid	Error condition

1 blinking: 1s on/1s off

2 flashing: on/off repeated in less than 1s

Radio Status

The Radio Status LED indicates the operating mode of the access point's radios, as shown in [Table 2](#).

Table 2 Radio Status LED

Color/State	Meaning
Off	Meets one of the following conditions: • both radios are disabled • device is powered off
Green/solid	Both radios enabled in access mode
Green/blinking ¹	One radio enabled in access mode; one radio disabled
Amber/solid	Both radios enabled in monitor mode
Amber/flashing	Device ready; operating in power-save mode, with uplink negotiated at suboptimal speed (<1Gbps)
Alternating ³	Error condition

Network Status (E1-E3)

The Network Status LED, located on the sides of the E1-E3 ports, indicates activity transmitted to/from the wired ports, as shown in [Table 3](#).

Table 3 Network Status LED

Color/State	Meaning
Off	Meets one of the following conditions: • device is powered off • port is disabled • no link/activity
Green/solid	Link established at max speed (1Gbps)
Green/blinking	Activity detected across a max speed link
Amber/solid	Link established at reduced speed (10/100Mbps)
Amber/blinking	Activity detected across a reduced speed link

PoE-PSE Status (E3)

The PoE-PSE LED located above the E3 port and indicates when the access point is operating as Power Sourcing Equipment (PSE), providing Power over Ethernet (PoE) to an external device that is physically connected to the E3 port by Ethernet cable, as shown in [Table 4](#).

Table 4 PoE-PSE Status LED

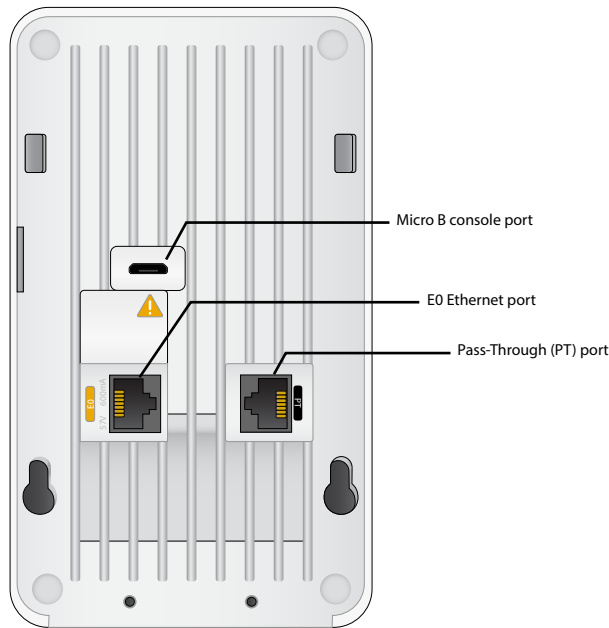
Color/State	Meaning
Off	Access point not supplying PoE, or powered off
Green/solid	Access point supplying power to a connected device
Green/blinking	Negotiating PoE power supplied to a connected device

LED Display Settings

The LEDs have three operating modes that can be selected in the system management software:

- Default mode: Refer to [Tables 1-3](#)
- Off mode: LEDs are off
- Blink mode: LEDs blink green

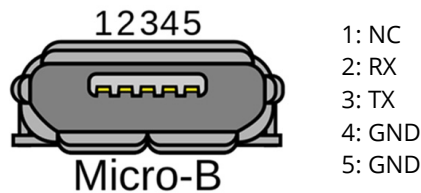
Figure 2 303H Series (rear view)



Console Port

The 5-pin Micro-B connector located on the back of this device. Use an AP-CBL-SERU cable for direct management of this device when connected to a laptop or serial console. For pin-out details, refer to [Figure 3](#).

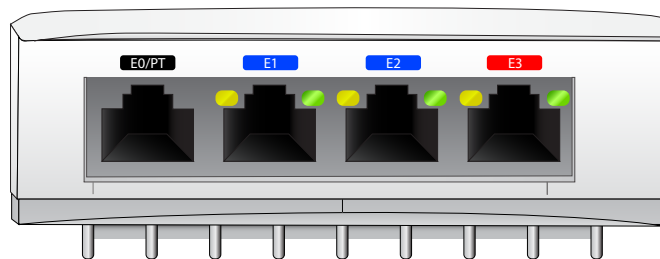
Figure 3 Console Port Pin-out



Ethernet Ports

The 303H Series access point is equipped with four active Ethernet ports (E0/PT-E3), shown in [Figure 4](#).

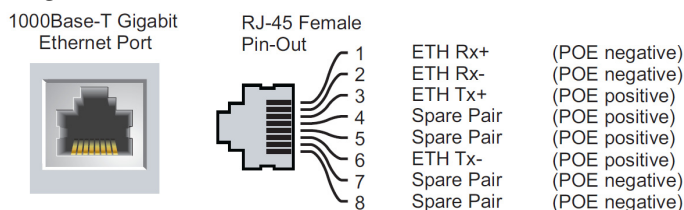
Figure 4 303H Series (bottom)



The E0/PT port, located at the bottom of the access point is 10/100/1000Base-T, auto-sensing, MDI/MDX wired-network uplink connectivity RJ45 port. It supports IEEE 802.3af/802.3at PoE as a standard Powered Device (PD) from Power Sourcing Equipment (PSE), such as a midspan injector or a network infrastructure that supports PoE.

The E1-E3 ports, located at the bottom of the access point are 10/100/1000Base-T auto-sensing, MDI/MDX wired-network downlink connectivity RJ45 ports. These ports are used to provide secure network connectivity to wired devices when physically linked using an Ethernet cable. Refer to [Figure 5](#) for port pin-out information. Additionally, the E3 port supports PoE-out functionality, and is capable of supplying up to 15.4W to PSE when the access point is operating in 802.3at PoE mode, or powered by a DC source.

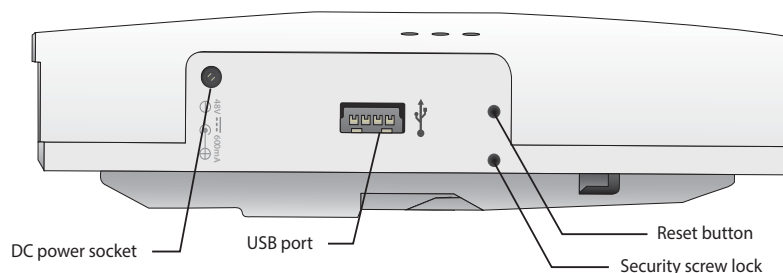
Figure 5 Gigabit Ethernet Port Pin-Out



USB Interface

The 303H Series access point is equipped with a USB port that is compatible with cellular modems and Bluetooth Low Energy (BLE) dongles. When active, the USB port can supply up to 5W/1A to a connected device.

Figure 6 303H Series Side View



Push Button

The push button located on the right side of the device can be used to reset the access point to factory default settings or turn off/on the LED display.

- To reset the access point to factory default settings:
 1. Power off the access point.
 2. Press and hold the push button using a small, narrow object, such as a paperclip.
 3. Power-on the access point without releasing the push button. The system status LED will flash within 5 seconds.
 4. Release the push button.

The system status LED will flash again within 15 seconds indicating that the reset is completed. The access point will now continue to boot with the factory default settings.

- To turn off/on the LED display:

During the normal operation of the access point, press and release the push button using a small, narrow object, such as a paperclip.

Power

The 303H Series access point supports up to 48V DC when using an AP-AC-48V36C power adapter (sold separately). The power connector port is located on the side of the device, as shown in [Figure 6](#).

The PoE-in (PoE-PD) allows the E0/PT port to draw power from an 802.3at (preferred) source, or an 802.3af (optional) source.

When powered by an 802.3at or DC power source, the PoE-out (PoE-PSE) functionality is enabled on port E3, supplying a maximum output of 15.4W to the wired device.

Refer to [Table 4](#) for power output details. PoE-PSE and USB settings can be enabled/disabled through the software's WebUI and CLI.

Before You Begin

Refer to the sections below before beginning the installation process.

Pre-Installation Checklist

Before installing the 303H Series access point, be sure that you have the following:

- Pre-installed wall box
- Cat5E UTP cable with network access installed in the wall box
- One of the following power sources:
 - IEEE 802.3af/at-compliant Power over Ethernet (PoE) source
 - Aruba AP AC-DC adapter kit (sold separately)

One of the following network services:

- Aruba Discovery Protocol (ADP)
- DNS server with an "A" record
 - DHCP Server with vendor-specific options



This device is in compliance with governmental requirements, and is designed so that only authorized network administrators can change the settings. For more information about access point configuration, refer to the *ArubaOS Quick Start Guide* and *ArubaOS User Guide*.

Identifying Specific Installation Locations

The 303H Series access point must be secured to an Aruba-approved wall or to a desk mount kit. This access point should be oriented vertically, with Ethernet ports facing downward to facilitate maximum antenna gain. Use the access point placement map generated by Aruba's RF Plan software application to determine the proper installation location(s). Each location should be as close as possible to the center of the intended coverage area and should be free from obstructions or obvious sources of interference. These RF absorbers/reflectors/interference sources will impact RF propagation and should be accounted for during the planning phase and adjusted for in RF plan.

Identifying Known RF Absorbers/Reflectors/Interference Sources

Identifying known RF absorbers, reflectors, and interference sources while in the field during the installation phase is critical. Make sure that these sources are taken into consideration when you attach an access point to its fixed location.

RF absorbers include:

- Cement/concrete—Old concrete has high levels of water dissipation, which dries out the concrete, allowing for potential RF propagation. New concrete has high levels of water concentration in the concrete, blocking RF signals.
- Natural Items—Fish tanks, water fountains, ponds, and trees
- Brick

RF reflectors include:

- Metal Objects—Metal pans between floors, rebar, fire doors, air conditioning/heating ducts, mesh windows, blinds, chain link fences (depending on aperture size), refrigerators, racks, shelves, and filing cabinets.
- Do not place an access point between two air conditioning/heating ducts. Make sure that access points are placed below ducts to avoid RF disturbances.

RF interference sources include:

- Microwave ovens and other 2.4 or 5 GHz objects (such as cordless phones)
- Cordless headset such as those used in call centers or lunch rooms

Installing the Access Point

The 303H Series is designed to mount into a variety of electrical gang boxes.

All Aruba access points should be professionally installed by an Aruba-Certified Mobility Professional (ACMP). The installer is responsible for ensuring that grounding is available and meets applicable national and electrical codes. Failure to properly install this product may result in physical injury and/or damage to property.



Tous les points d'accès Aruba doivent impérativement être installés par un professionnel agréé. Ce dernier doit s'assurer que l'appareil est mis à la terre et que le circuit de mise à la terre est conforme aux codes électriques nationaux en vigueur. Le fait de ne pas installer correctement ce produit peut entraîner des blessures corporelles et / ou des dommages matériels.

Use the steps below to install your 303H Series.

1. Begin by removing the existing data wall plate (if applicable).
2. Remove any existing RJ45 connectors (typically snap-in) or cut/remove the UTP cable.
3. Use a short Ethernet cable (sold separately) to connect the E0 port to an RJ45 connector or crimp an RJ45 plug (not supplied) on the cable and insert in the E0 port. Do the same for the PT port, if used.
4. Align the mounting holes of the 303H Series mounting bracket with mounting holes in your gang box, as shown in [Figure 7](#) and [Figure 8](#). For worldwide single gang outlet box, the mounting bracket has two sets of mounting holes to meet the individual installation position requirement.

The applicable standards for the wall boxes are:

- IEC 60670-1, GB17466, BS4662 and DIN49073 for Worldwide
- ANSI/NEMA OS 1 and OS 2 for US

Figure 7 Bracket to Gang Box (US Single Gang Outlet Box Shown)

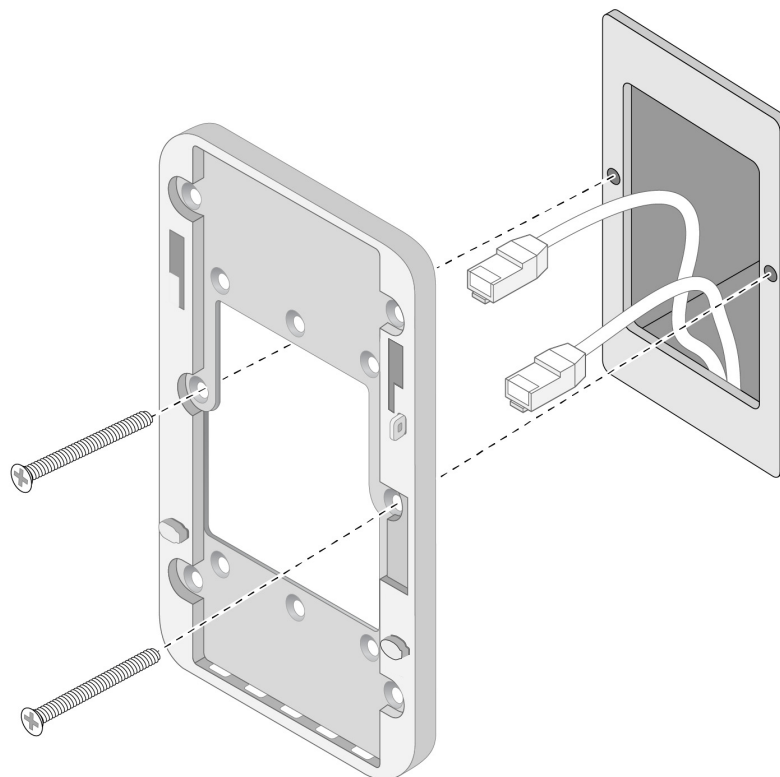
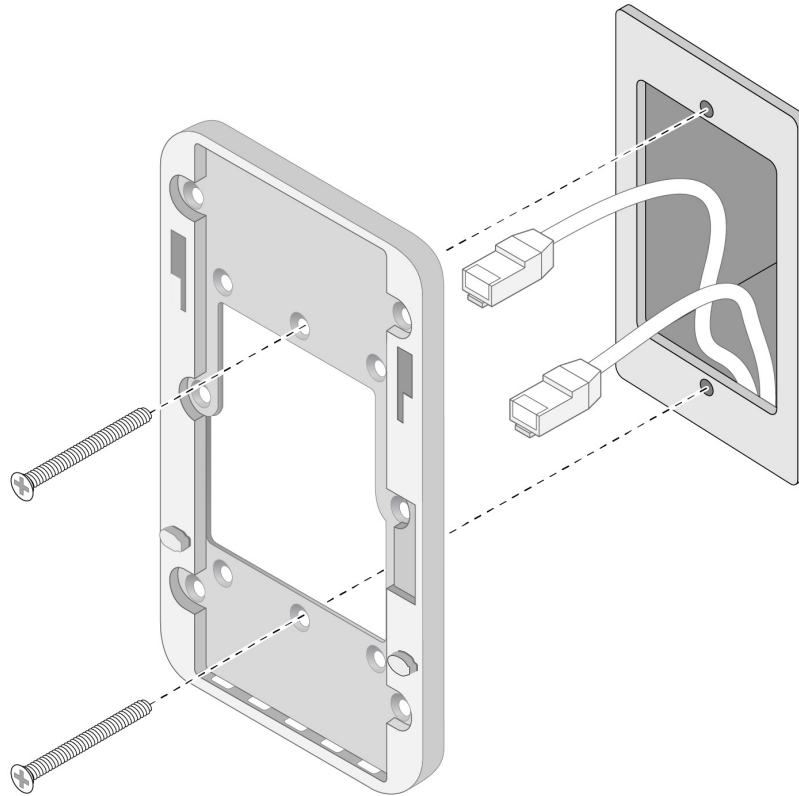
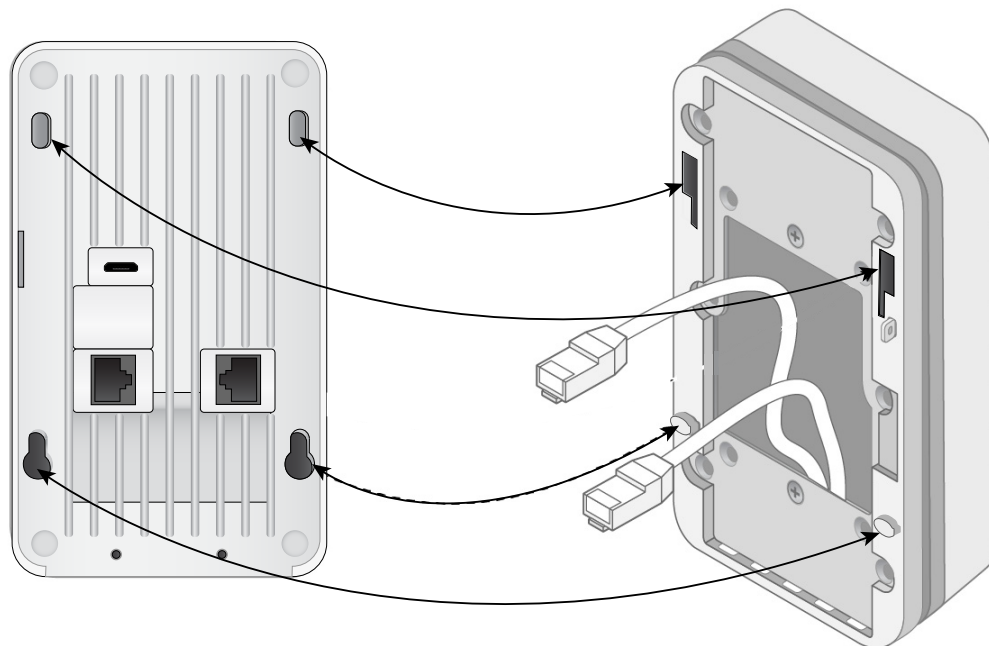


Figure 8 Bracket to Gang Box (Worldwide Single Gang Outlet Box Shown)



5. Insert the two included machine screws and tighten them to secure the mounting bracket.
6. Connect any required cables to the back of the 303H Series.
7. Align the mounting slots on the back of the 303H Series with the corresponding mounting posts on the wall mount as shown in [Figure 9](#).
8. Push the access point against the posts and downward until the posts engage the slots at the top of the slots.

Figure 9 Attaching 303H Series to Bracket



9. Once the access point is fastened onto the wall mount, insert the T8H Torx security screw into the hole located on the right side of the wall mount and tighten.

10. (Optional) Connect the AC-DC power adapter (sold separately) to the DC power socket located on the right side of the 303H Series.

Verifying Post-Installation Connectivity

The integrated LED on the access point can be used to verify that the access point access point is receiving power and initializing successfully (see [Table 1](#)). Refer to the *ArubaOS Quick Start Guide* for further details on verifying post-installation network connectivity.

Electrical and Environmental Specifications

For additional specifications on this product, please refer to the product data sheet at www.arubanetworks.com/safety_addendum.

Electrical

- Ethernet:
 - 100/1000 Base-T auto-sensing Ethernet RJ45 interface
 - IEEE 802.3u (100 Base-T). IEEE 802.3ab (1000 Base-T)
 - Power over Ethernet IEEE 802.3at 56VDC (nominal) and 802.3af 48VDC (maximum).
- Power:
 - 48VDC power interference, when powered by an AP-AC-48V36C power cable
 - Maximum power consumption with a full PoE-PSE and USB load: 25W (PoE) or 31W (DC)



If a power adapter other than the Aruba-approved adapter is used in the US or Canada, it should be NRTL listed, without an output rated 48VDC, minimum 2A, marked "LPS" and "Class 2", and suitable for plugging into a standard power receptacle in the US and Canada.

Environmental

- Operating:
 - Temperature: 0°C to +40°C (+32°F to +104°F)
 - Humidity: 5% to 93% non-condensing
- Storage and transport:
 - Temperature: -40°C to +70°C (-40°F to +158°F)

Proper Disposal of Aruba Equipment

Dispose of Aruba products per local regulation. For the most current information about Global Environmental Compliance and Aruba products, see our website at www.arubanetworks.com.

Regulatory Information

The regulatory model name for 303H Series/IAP-303H access point is APINH303. Aruba provides a multi-language document that contains country-specific restrictions and additional safety and regulatory information for all Aruba access points. This document can be viewed or downloaded at www.arubanetworks.com.



Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Toute modification effectuée sur cet équipement sans l'autorisation expresse de la partie responsable de la conformité est susceptible d'annuler son droit d'utilisation.

FCC

Improper termination of access points installed in the United States configured to a non-US model controller is a violation of the FCC grant of equipment authorization. Any such willful or intentional violation may result in a requirement by the FCC for immediate termination of operation and may be subject to forfeiture (47 CFR 1.80).

The network administrator(s) is/are responsible for ensuring that this device operates in accordance with local/regional laws of the host domain.



RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 10.63 inches (27cm) between the radiator and your body for 2.4 GHz and 5 GHz operations. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. When operated in 5.15 to 5.25 GHz frequency range, this device is restricted to indoor use to reduce the potential for harmful interference with co-channel Mobile Satellite Systems.



Déclaration sur les limites d'exposition aux radiofréquences : cet équipement est conforme aux limites d'exposition aux rayonnements radioélectriques spécifiées par la FCC. Il doit être installé et utilisé à une distance minimale de 27 cm par rapport à votre corps pour les fréquences de 2,4 et 5 GHz. Cet émetteur-récepteur ne doit pas être utilisé ou situé à proximité d'autres antennes ou émetteurs-récepteurs. En cas d'utilisation dans la plage de fréquences de 5,15 à 5,25 GHz, cet appareil doit uniquement être utilisé en intérieur afin de réduire les risques d'interférence avec les systèmes satellites mobiles partageant le même canal.

Canada

User manuals for licence-exempt radio apparatus shall contain the following text, or an equivalent notice that shall be displayed in a conspicuous location, either in the user manual or on the device, or both: This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Déclaration d'Industrie Canada

Conformément aux réglementations d'Industrie Canada, cet émetteur-récepteur radio doit être utilisé uniquement avec une antenne dont le type et le gain maximal doivent être approuvés par Industrie Canada. Pour réduire les interférences radio potentielles, le type d'antenne et son gain doivent être choisis de façon à ce que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas les valeurs nécessaires à une communication efficace.

Ce périphérique est conforme aux règlements RSS exempts de licence d'Industrie Canada. L'utilisation de ce périphérique est soumise aux deux conditions suivantes : (1) ce périphérique ne doit pas provoquer d'interférences, et (2) ce périphérique doit accepter toute interférence, y compris les interférences susceptibles de provoquer un dysfonctionnement.

Medical

1. Equipment not suitable for use in the presence of flammable mixtures.
2. Connect to only IEC 60950-1 or IEC 60601-1 3rd edition certified products and power sources. The end user is responsible for the resulting medical system complies with the requirements of IEC 60601-1 3rd edition.
3. Wipe with a dry cloth, no additional maintenance required.
4. No serviceable parts, the unit must be sent back to the manufacturer for repair.
5. No modifications are allowed without Aruba approval.

Taiwan

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。



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Main Site	www.arubanetworks.com
Support Site	http://support.arubanetworks.com
Airheads Social Forums and Knowledge Base	http://community.arubanetworks.com/
North America Telephone	1-800-943-4526 (toll free) 1-408-754-1200
International Telephone	http://arubanetworks.com/support-services/contact-support/
Software Licensing Site	http://hpe.com/networking/support
End-of-Life Information	http://arubanetworks.com/support-services/end-of-life/
Security Incident Response Team (SIRT)	Site: arubanetworks.com/support-service/security-bulletins/ Email: sirt@arubanetworks.com

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Open Source Code

This product includes code licensed under the GNU General Public License, the GNU Lesser General Public License, and/or certain other open source licenses.

A complete machine-readable copy of the source code corresponding to such code is available upon request. This offer is valid to anyone in receipt of this information and shall expire three years following the date of the final distribution of this product version by Hewlett Packard Enterprise Company.

To obtain such source code, send a check or money order in the amount of US

\$10.00 to:

Hewlett Packard Enterprise Company

Attn: General Counsel

3000 Hanover Street

Palo Alto, CA 94304

USA

Warranty

This hardware product is protected by an Aruba warranty. For more details visit www.hpe.com/us/en/support.html