

# Aruba 220 Series Access Points

## Installation Guide

The Aruba AP-224 and AP-225 wireless access points support the IEEE 802.11ac standard for high-performance WLAN. This access point uses MIMO (Multiple-in, Multiple-out) technology and other high-throughput mode techniques to deliver high-performance, 802.11n 2.4 GHz and 802.11ac 5 GHz functionality while simultaneously supporting existing legacy wireless services. The AP-220 Series access point works only in conjunction with an Aruba Controller.

The Aruba AP-220 Series access point provides the following capabilities:

- Wireless transceiver
- Protocol-independent networking functionality
- IEEE 802.11a/b/g/n/ac operation as a wireless access point
- IEEE 802.11a/b/g/n/ac operation as a wireless air monitor
- Compatibility with IEEE 802.3at PoE+ and 802.3af PoE
- Central management configuration and upgrades with an Aruba Controller

## Package Contents

The following materials are included with this product:

- AP-224 or AP-225 access point
- 9/16" and 15/16" Ceiling Rail Adapters



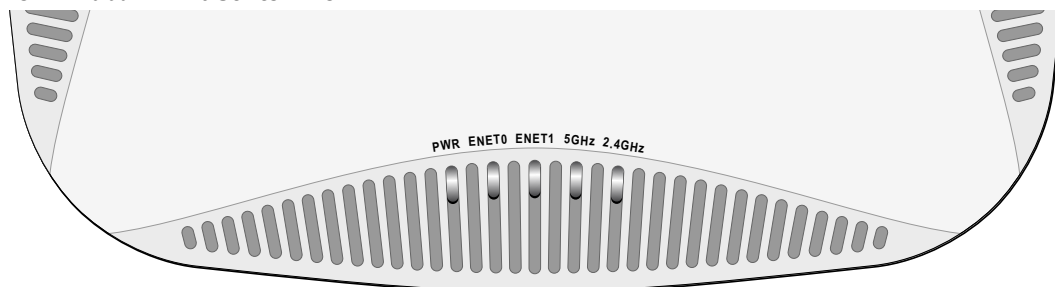
Inform your supplier if there are any incorrect, missing, or damaged parts. If possible, retain the carton, including the original packing materials. Use these materials to repack and return the unit to the supplier if needed.

## Hardware Overview

The following sections outline the hardware components of the 220 Series access point.

### LED

**Figure 1** Aruba AP-220 Series LEDs



The AP-220 Series is equipped with five LEDs that indicate the status of the various components of the AP.

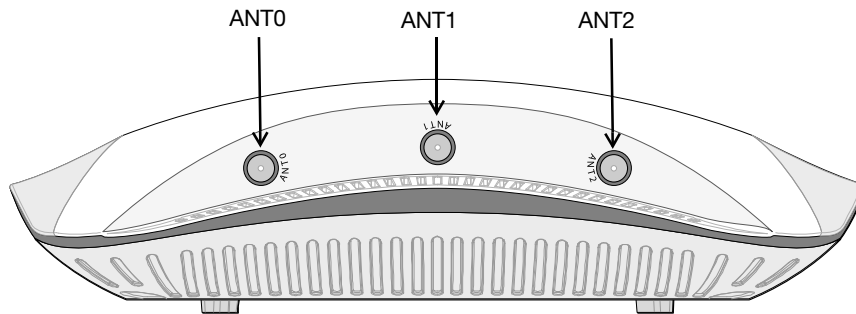
**Table 1** *AP-220 Series Series LED Meanings*

LED	Color/State	Meaning
PWR	Off	No power to the AP
	Red	Error Condition
	Flashing	Device booting, not ready
	Green	Device operating in unrestricted mode
	Orange	Device operating in power-saving mode
ENET0, ENET1	Off	Ethernet link unavailable
	Amber - Steady	10/100Mbps Ethernet link established
	Green - Steady	1000Mbps Ethernet link established
	Flashing	Ethernet link activity
5GHz	Off	5GHz radio disabled
	Amber - Steady	5Ghz radio enabled in non-HT WLAN mode
	Green - Steady	5Ghz radio enabled in HT WLAN mode
	Flashing - Green	5Ghz Air or Spectrum Monitor
2.4GHz	Off	2.4GHz radio disabled
	Amber - Steady	2.4Ghz radio enabled in non-HT WLAN mode
	Green - Steady	2.4Ghz radio enabled in HT WLAN mode
	Flashing - Green	2.4Ghz Air or Spectrum Monitor

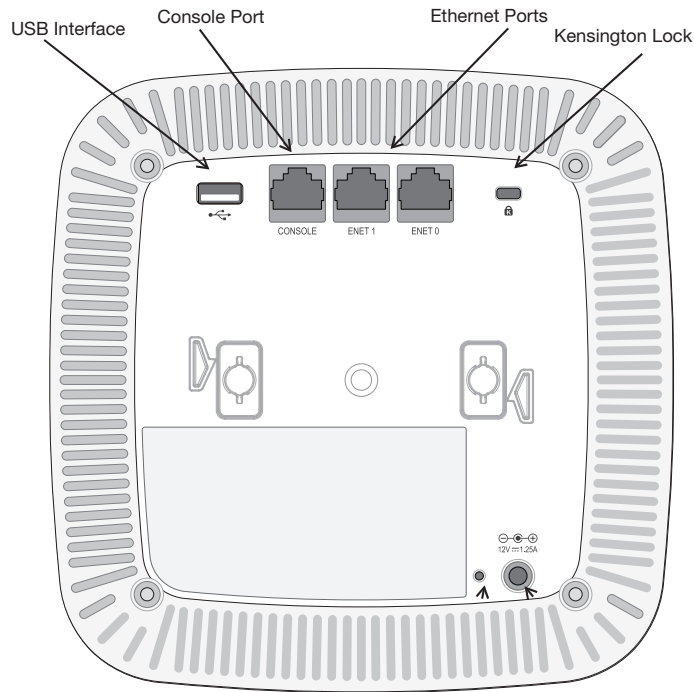
## External Antenna Connectors

The AP-224 is equipped with three external antenna connectors. The connectors are labeled ANT0, ANT1, and ANT2, and correspond to radio chains 0, 1, and 2.

**Figure 2** *AP-224 External Antenna Connectors*



**Figure 3** *External Antenna Connectors*



External antennas for this device must be installed by an Aruba Certified Mobility Professional (ACMP) or other Aruba-certified technician, using manufacturer-approved antennas only. The Equivalent Isotropically Radiated Power (EIRP) levels for all external antenna devices must not exceed the regulatory limit set by the host country/domain. Installers are required to record the antenna gain for this device in the system management software.



**CAUTION**

Les antennes externes pour cet appareil doivent être installées par un professionnel de la mobilité certifié Aruba (ACMP) ou un autre technicien certifié Aruba, en utilisant uniquement des antennes approuvées par le fabricant. Les niveaux équivalents de puissance à rayonnement isotrope (EIRP) pour tous les périphériques d'antenne externe ne doivent pas dépasser la limite réglementaire définie par le pays hôte / domaine. Les installateurs doivent enregistrer le gain d'antenne pour cet appareil dans le logiciel de gestion du système.

## USB Interface

The AP-220 Series is equipped with a USB interface for connectivity with cellular modems.



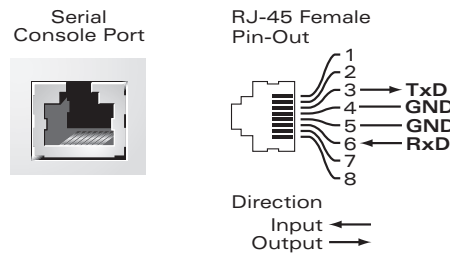
**NOTE**

The USB interface is disabled when the AP-220 Series is powered from 802.3af PoE.

## Console Port

The serial console port allows you to connect the AP to a serial terminal or a laptop from direct local management. This port is an RJ45 female connector with the pinouts described in [Figure 4](#). Connect it directly to a terminal or terminal server using an Ethernet cable.

**Figure 4** *Micro-B Port Pin-out*



## Ethernet Ports

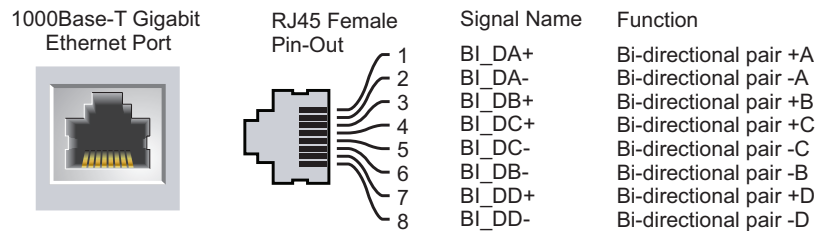
AP-220 Series is equipped with two 10/100/1000Base-T (RJ45) auto-sensing, MDI/MDX wired-network connectivity port. These ports support IEEE 802.3af and 802.3at Power over Ethernet (PoE) compliance, accepting 48 VDC (nominal) as a standard defined Powered Device (PD) from a Power Sourcing Equipment (PSE) such as a PoE midspan injector, or network infrastructure that supports PoE.



When operating on 802.3af, only the port connected to power is usable. For example, if the source of power is connected to ENET0, ENET1 will not work.

The 10/100/1000 Mbps Ethernet ports are on the bottom of the AP. These ports have RJ45 female connectors with the pin-outs shown in [Figure 5](#).

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



## Kensington Lock Slot

The 220 Series is equipped with a Kensington lock slot for additional security

## Reset Button

The reset button can be used to return the AP to factory default settings. To reset the AP:

1. Power off the AP.
2. Press and hold the reset button using a small, narrow object, such as a paperclip.
3. Power-on the AP without releasing the reset button. The power LED will flash within 5 seconds.
4. Release the reset button.

The power LED will flash again within 15 seconds indicating that the reset is completed. The AP will now continue to boot with the factory default settings.

## DC Power Socket

If PoE is not available, an optional Aruba AP AC-DC adapter kit (sold separately) can be used to power the AP-220 Series.

Additionally, a locally-sourced AC-to-DC adapter (or any DC source) can be used to power this device, as long as it complies with all applicable local regulatory requirements and the DC interface meets the following specifications:

- 12 VDC (+/- 5%)/18W
- Center-positive 1.7/4.0 mm circular plug, 9.5 mm length

## Power Modes

The AP-220 Series can operate in two power modes. The AP's mode is not configurable and is determined by the AP based on the amount of power available. The two modes are as follows:

- Full Power: The AP is receiving power from an 802.3at PoE source or is powered using the optional AC-DC adapter kit. In this mode, all AP functionality is available.
- PoE Power Saving: The AP is receiving power from an 802.3af PoE source. In this mode, the AP has limited functionality: the Ethernet port not connected to the PoE source is disabled, the USB port is disabled, the AP operates in 1x3 RF chain for 2.4 GHz. The behavior of 5 GHz radio depends on the ArubaOS version running on the access point:
  - 6.3.0.x: 2x3 RF chain
  - 6.3.1.x or later: 3x3 RF chain

## Before You Begin

Refer to the sections below before beginning the installation process.

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**FCC Statement:** Improper termination of access points installed in the United States configured to non-US model controllers will be in 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).

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CAUTION

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**EU Statement:** Low power radio LAN product operating in 2.4GHz and 5 GHz bands. Refer to the *ArubaOS User Guide* for details on restrictions.

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Produit réseau local radio basse puissance opérant dans la bande fréquence 2.4 GHz et 5 GHz. Merci de vous référer au *ArubaOS User Guide* pour les détails des restrictions.

Low Power FunkLAN Produkt, das im 2.4 GHz und im 5 GHz Band arbeitet. Weitere Informationen bezüglich Einschränkungen finden Sie im *ArubaOS User Guide*.

Apparati Radio LAN a bassa Potenza, operanti a 2.4 GHz e 5 GHz. Fare riferimento alla *ArubaOS User Guide* per avere informazioni dettagliate sulle restrizioni.

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## Pre-Installation Network Requirements

After WLAN planning is complete and the appropriate products and their placement have been determined, the Aruba controller(s) must be installed and initial setup performed before the Aruba APs are deployed. For initial setup of the controller, refer to the *ArubaOS Quick Start Guide* for the software version installed on your controller.

## Pre-Installation Checklist

Before installing your Aruba 220 Series access point, be sure that you have one of the following:

- Cat5E or CAT6 UTP cable of required length
- One of the following power services:
  - IEEE 802.3at or 802.3af-compliant Power over Ethernet (PoE) source. The POE source can be any power source equipment (PSE) controller or midspan PSE device
  - Aruba AP AC-DC adapter kit (sold separately)
- Aruba Controller provisioned on the network:
  - Layer 2/3 network connectivity to your access point
  - One of the following network services:
    - Aruba Discovery Protocol (ADP)
    - DNS server with an "A" record
    - DHCP server with vendor-specific options



Aruba Networks, Inc., in compliance with governmental requirements, has designed the 220 Series access points so that only authorized network administrators can change the settings. For more information about access point configuration, refer to the *ArubaOS Quick Start Guide/Instant Quick Start Guide* and *ArubaOS User Guide/Instant User Guide*.

## Summary of the Setup Process

Successful setup of an AP-220 Series access point consists of five tasks, which must be performed in this order:

1. Verify pre-installation connectivity.
2. Identify the specific installation location for each AP.
3. Install each AP.
4. Verify post-installation connectivity.
5. Configure each AP.

## Verifying Pre-Installation Connectivity

Before you install APs in a network environment, make sure that the APs are able to locate and connect to the controller after power on.

Specifically, you must verify the following conditions:

- When connected to the network, each AP is assigned a valid IP address
- APs are able to locate the controller

Refer to the *ArubaOS Quick Start Guide* for instructions on locating and connecting to the controller.

## Identifying Specific Installation Locations

You can mount the AP-220 Series access point on a wall or on the ceiling. Use the AP 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 have been accounted for during the planning phase and adjusted for in RF plan.



Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

## 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



Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the access point. Otherwise, degradation of the performance of this equipment could result.



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 13.78 inches (35cm) 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.

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 35 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.

## Access Point Installation

The AP-220 Series ships with two ceiling rail adapters for 9/16" and 15/16" ceiling rails. Additional wall mount adapters and ceiling rail adapters for other rail styles are available as accessory kits.

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.



The installer is responsible for securing the access point onto the ceiling tile rail in accordance with the steps below. Failure to properly install this product may result in physical injury and/or damage to property.

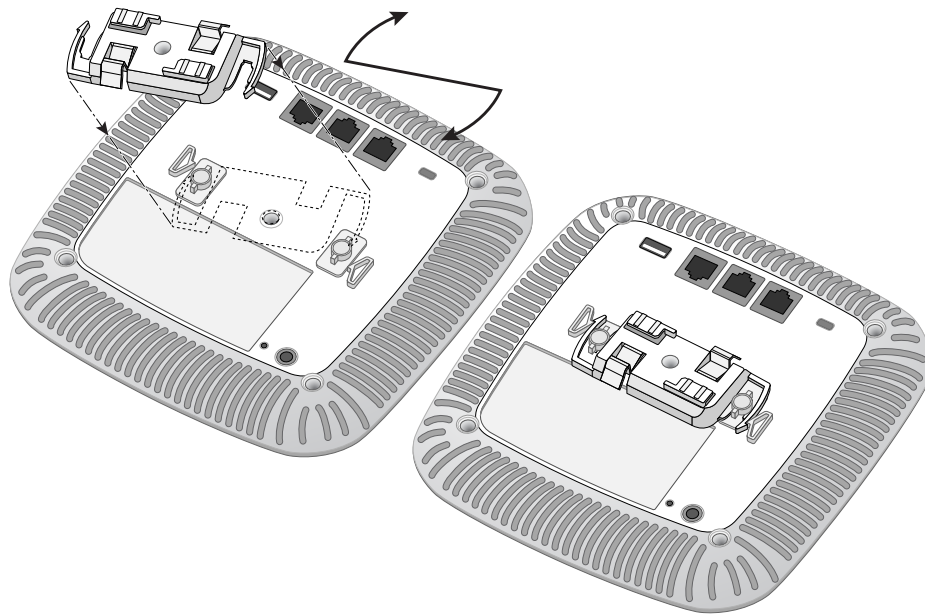


Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

Use the steps in this section to install the 220 Series access point.

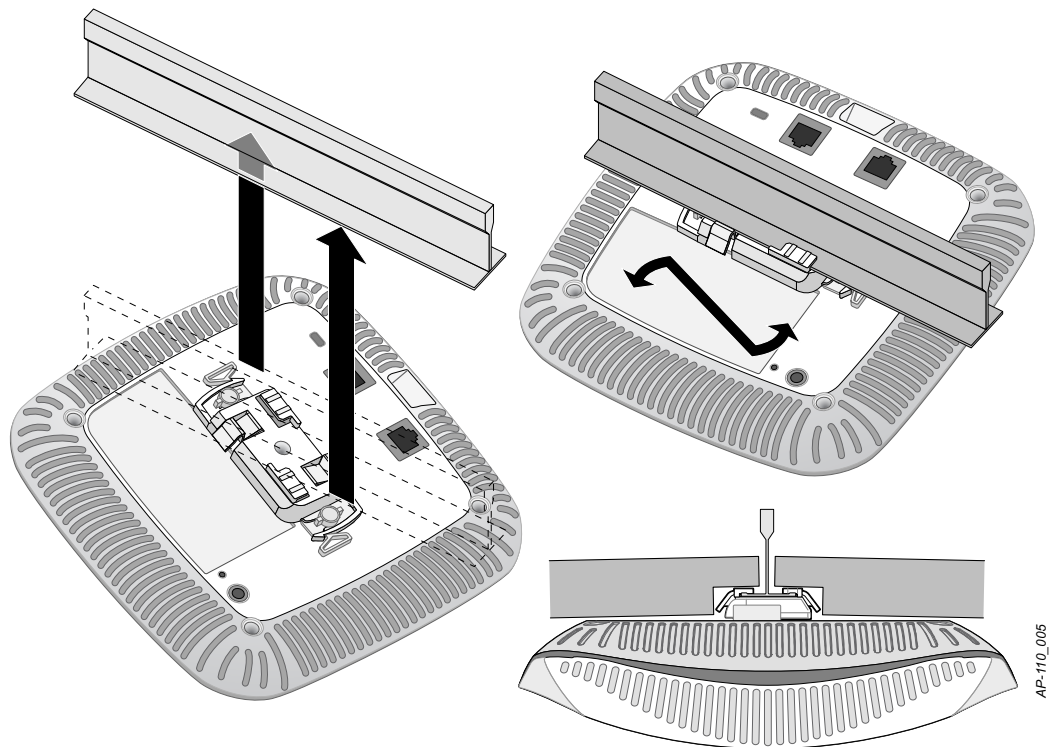
1. Pull the necessary cables through a prepared hole in the ceiling tile near where the AP will be placed.
2. Place the adapter against the back of the AP with the adapter at an angle of approximately 30 degrees to the tabs (see [Figure 6](#)).
3. Twist the adapter clockwise until it snaps into place in the tabs (see [Figure 6](#)).

**Figure 6** Attaching the Ceiling Rail Adapter



4. If necessary, connect the console cable to the console port on the back of the AP.
5. Hold the AP next to the ceiling tile rail with the ceiling tile rail mounting slots at approximately a 30-degree angle to the ceiling tile rail (see [Figure 7](#)). Make sure that any cable slack is above the ceiling tile.
6. Pushing toward the ceiling tile, rotate the AP clockwise until the device clicks into place on the ceiling tile rail.

**Figure 7** Mounting the AP



7. On the AP-224, install the external antennas according to the manufacturer's instructions, and connect the antennas to the antenna interfaces of the AP.

## Connecting Required Cables

Install cables in accordance with all applicable local and national regulations and practices.



## Power Connection

The AP-220 Series has a single 12V DC power jack socket to support powering through an AC-to-DC power adapter.



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If both PoE and DC power are available, the AP draws power from the PoE source.

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## Software

Aruba 220 Series requires ArubaOS 6.3.0.0 or later.

For instructions on choosing operating modes and initial software configuration, refer to the Access Point Software Quick Start Guide.



Aruba access points are classified as radio transmission devices, and are subject to government regulations of the host country. The network administrator(s) is/are responsible for ensuring that configuration and operation of this equipment is in compliance with their country's regulations. For a complete list of approved channels in your country, refer to the *Aruba Downloadable Regulatory Table* at [support.arubanetworks.com](http://support.arubanetworks.com).

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## Verifying Post-Installation Connectivity

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

## Environmental and Electrical Specifications

For additional specifications on this product, please refer to the product data sheet at [support.arubanetworks.com](http://support.arubanetworks.com)

### Environmental

- Operating:
  - Temperature: 0°C to +50°C (+32°F to +122°F)
  - Humidity: 5% to 93% non-condensing
- Storage and transport:
  - Temperature: -40°C to +70°C (-40°F to +158°F)
  - Humidity: 5% to 93% non-condensing

### Electrical

- Ethernet:
  - 2 x 10/100/1000Base-T auto-sensing Ethernet RJ-45 Interfaces
  - MDI/MDX
  - IEEE 802.3 (10Base-T), IEEE 802.3u (100Base-T), IEEE 802.3ab (1000Base-T)
  - Power over Ethernet (IEEE 802.3at compliant), 48V DC (nominal) and 56V DC (maximum)/350mA (see [Figure 5](#) for pin configuration)
- Power:
  - 12 VDC power interface, supports powering through an AC-to-DC power adapter
  - POE support on Ethernet ports: 802.3at-compliant POE sourcing devices
  - Connect Only to IEC 60950-1 or IEC 60601-1 3rd edition products and power sources.



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If a power adapter other than the one provided by Aruba Networks is used in the US or Canada, it must be cULus (NRTL) Listed, with an output rated 12 VDC, minimum 1.25A, marked "LPS" or "Class 2," and suitable for plugging into a standard power receptacle in the US and Canada.

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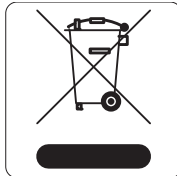
## Proper Disposal of Aruba Equipment

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](http://www.arubanetworks.com).



The expected service life for this device is 10 years.

## Waste of Electrical and Electronic Equipment



Aruba 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 2002/96EC on Waste of Electrical and Electronic Equipment (WEEE).



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.

## China RoHS

Aruba products also comply with China environmental declaration requirements and are packaged with the "EFUP10" label shown below.

### 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 Substance)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr <sup>6+</sup> )	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板 (PCA Boards)	×	○	○	○	○	○
机械组件 (Mechanical Sub-Assemblies)	×	○	○	○	○	○

○: 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。  
Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

×: 表示该有毒有害物质至少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。  
Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard.

对销售之日的所售产品, 本表显示, 供应链的电子信息技术产品可能包含这些物质。  
**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.



## Taiwan RoHS

Table-APIN0224/APIN0225-20180220

無線接收盒 : 802.11a/b/g/n/ac Wireless LAN Access Point

Type Designation: APIN0224\_APIN0225

### 台灣限用物質含有情況標示

單元	限用物質及其化學符號					
	鉛 (Pb)	汞 (Hg)	鎘 (Cd)	六價鉻 (Cr(VI))	多溴聯苯 (PBB)	多溴二苯醚 (PBDE)
傳輸線和網路線	○	○	○	○	○	○
斷路器	—	○	○	○	○	○
冷卻及加熱系統	○	○	○	○	○	○
磁碟控制器	—	○	○	○	○	○
外殼	—	○	○	○	○	○
風扇	○	○	○	○	○	○
液晶顯示器	—	○	○	○	○	○
存取裝置(HDD)	—	○	○	○	○	○
液壓/氣壓系統	○	○	○	○	○	○
鍵盤	○	○	○	○	○	○
影音設備 (CD/DVD/光碟機)	○	○	○	○	○	○
記憶體	○	○	○	○	○	○
滑鼠	○	○	○	○	○	○
其他機械組裝設備	—	○	○	○	○	○
變壓器/電源供應器	—	○	○	○	○	○
印刷電路零組件 (PCAs)	—	○	○	○	○	○
無線網路線	—	○	○	○	○	○
備考1. “○” 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。						

## European Union RoHS

Aruba products comply with the EU Restriction of Hazardous Substances Directive 2011/65/EC (RoHS). EU RoHS restricts the use of specific hazardous materials in the manufacture of electrical and electronic equipment. Specifically, restricted materials under the RoHS Directive are Lead (including Solder used in printed circuit assemblies), Cadmium, Mercury, Hexavalent Chromium, and Bromine. Some Aruba products are subject to the exemptions listed in RoHS Directive Annex 7 (Lead in solder used in printed circuit assemblies).

## 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.

## Turkey RoHS

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

## Ukraine RoHS

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057

## Regulatory Information

For the purpose of regulatory compliance certifications and identification, this product has been assigned a unique regulatory model number. The regulatory model number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to this regulatory model number. The regulatory model number is not the marketing name or model number of the product.

- AP-224: APIN0224
- AP-225: APIN0225

The equipment name for the 220 Series access points is 802.11a/b/g/n/ac Wireless LAN Access Point.



CAUTION

Changes or modifications to this unit not expressly approved by the party responsible for regulatory 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.

## Federal Communication Commission

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, 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 into an outlet on a circuit that is different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.



CAUTION

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.

## European Union

The Declaration of Conformity made under RED Directive 2014/53/EU is available for viewing at: [support.arubanetworks.com](http://support.arubanetworks.com), then navigate to the **Declarations of Conformity > Access Point** folder, select the document that corresponds to your device's model number as it is indicated on the product label.

## Wireless Channel Restrictions

5150-5350MHz band is limited to indoor only in the following countries; Austria (AT), Belgium (BE), Bulgaria (BG), Croatia (HR), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (GR), Hungary (HU), Iceland (IS), Ireland (IE), Italy (IT), Latvia (LV), Liechtenstein (LI), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SL), Spain (ES), Sweden (SE), Switzerland (CH), Turkey (TR), United Kingdom (UK).

Frequency Range MHz	Max EIRP
2412-2472	20 dbm

Frequency Range MHz	Max EIRP
5150-5250	23 dbm
5250-5350	23 dbm
5470-5725	30 dbm
5725-5850	N/A for EU

Lower power radio LAN product operating in 2.4 GHz and 5 GHz bands. Please refer to the ArubaOS User Guide/Instant User Guide for details on restrictions.



Produit réseau local radio basse puissance operant dans la bande fréquence 2.4 GHz et 5 GHz. Merci de vous référer au ArubaOS User Guide/Instant User Guide pour les details des restrictions.

Low Power FunkLAN Produkt, das im 2.4 GHz und im 5 GHz Band arbeitet. Weitere Informationen bezüglich Einschränkungen finden Sie im ArubaOS User Guide/Instant User Guide.

Apparati Radio LAN a bassa Potenza, operanti a 2.4 GHz e 5 GHz. Fare riferimento alla ArubaOS User Guide/Instant User Guide per avere informazioni dettagliate sulle restrizioni.

## Industry Canada

This Class B digital apparatus meets all of the requirements of the Canadian Interference-Causing Equipment Regulations.

In accordance with Industry Canada regulations, this radio transmitter and receiver may only be used with an antenna, the maximum type and gain of which must be approved by Industry Canada. To reduce potential radio interference, the type of antenna and its gain shall be chosen so that the equivalent isotropic radiated power (EIRP) does not exceed the values necessary for effective communication.

This device complies with Industry Canada's license-exempt RSS regulations. Operation of this device 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.

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 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.

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.

## Japan

ご使用になっている装置に VCCI マークが付いていましたら、次の説明文をお読み下さい。

この装置は、クラス B 情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

## Brazil

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

## 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.

## Morocco



## Нормативные требования Евразийского Экономического Союза



'HPE Russia': ООО '«Хьюлетт Паккард Энтерпрайз», 125171, Россия, Москва, Ленинградское шоссе, 16А, стр. 3 Тел./факс: +7 (499) 403 4248

'HPE Belarus': ИООО «Хьюлетт-Паккард Бел», 220030, Беларусь, г. Минск, ул. Интернациональная, 36-1, офис 722-723, тел.: +375 (17) 392 28 18, факс: +375 (17) 392 28 18

'HPE Kazakhstan': ТОО «Хьюлетт-Паккард (К)», 050040, Казахстан, г. Алматы, Бостандыкский район, проспект Аль-Фараби, 77/7, тел./факс: +7 (727) 355 35 50

## Korean

B급 기기 (가정용 방송통신기기)	이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.
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이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

=> 사용자 안내문은 " 업무용방송통신기자재 " 에만 해당된다

## 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。

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  $1 \text{ mW/cm}^2$ , 送測產品實測值為 :  $0.717 \text{ mW/cm}^2$

## 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.