

aruba R3J23A Instant On AP12 Access Point Installation Guide

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The Aruba Instant On AP12 dual-radio access point supports IEEE802.11ac Wave 2, delivering high performance with 3×3 MU-MIMO (Multi-user Multiple-in, Multiple-output) technology, while also supporting 802.11a/b/g/n wireless services. The AP12 access point is designed for ceiling and wall mount.

Package Contents

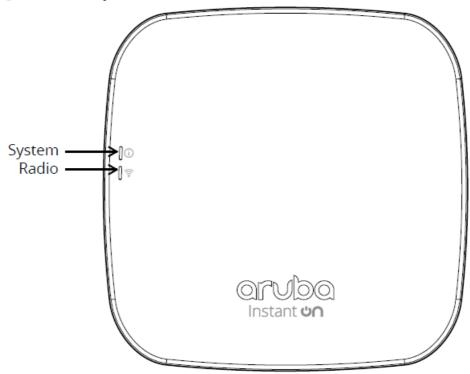
- 1 x AP12 access point
- 1 x Ceiling mount bracket (suspended ceiling rail)
- 1 x Wall/ceiling mount bracket (solid surface)
- 1 x Ethernet cable

NOTE:

- If you have ordered AP12 bundle, the package would also include a power adapter and cord to power the AP through an electrical power outlet.
- 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

Figure 1 AP12 (front view)



LEDs

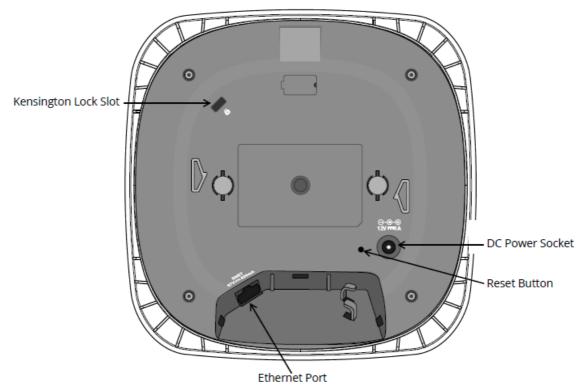
The AP12 access point has two LEDs that indicate the system and radio status of the device.

Table 1 AP12 Access Point LEDs Status

LED	Color/State	Meaning
System	No Lights	Device has no power
	Blinking Green	Device is starting
	Alternating Green/Amber	Device is ready for setup
	Solid Green	Device is ready
	Solid Amber	Device has detected a problem
	Solid Red	Device has an issue- immediate action required
Radio	No Lights	Wi-Fi is not ready, wireless clients cannot connect
	Solid Green	Wi-Fi is ready, wireless clients can connect

Ethernet Port

The AP12 is equipped with a 10/100/1000Base-T auto-sensing MDI/MDX Ethernet port. This port supports wired-network connectivity, in addition to Power over Ethernet (PoE) from IEEE 802.3af and 802.3at compliant power sources. This device accepts 56V DC (802.3at), or 48V DC (802.3af) nominal as a standard powered device (PD) from power sourcing equipment, including PoE midspan injector or a PoE-sourcing network infrastructure.



Kensington Lock Slot

The AP12 access point is equipped with a Kensington lock slot for additional security.

Reset Button

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

There are two ways to reset the access point to factory default settings:

Reset the AP during normal operation

Press and hold down the reset button using a small, narrow object such as a paper clip for more than 10 seconds during normal operation.

· Reset the AP while powering up

- 1. Press and hold down the reset button using a small, narrow object such as a paper clip while the access point is not powered on (either via DC power or PoE).
- 2. Connect the power supply (DC or PoE) to the access point while the reset button is being held down.
- 3. Release the reset button on the access point after 15 seconds.

To turn off/on the LED display, press and release the reset button using a small, narrow object, such as a paperclip for less than 10 seconds during normal operation of the access point.

Power

If PoE is not available, a proprietary Aruba 12V/30W power adapter can be used to power the AP12 access point. This power adapter is available in the box if you buy the AP12 and power adapter bundle. 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%) and at least 18W

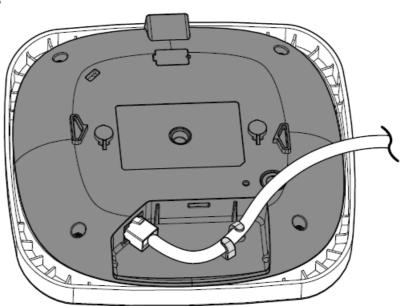
• Center-positive 2.1/5.5 mm circular plug, 9.5 mm length

When both 802.3at and DC power sources are available, the DC power source takes precedence. The access point simultaneously draws a minimal current from the PoE source. In the event that the DC source fails, the access point switches to the 802.3at source.

Cable Clips

The cable clips on the rear of the access point is used to organize Ethernet cables, as shown in Figure 3. The use of the cable clips is optional and does not support all types of cables and plugs.

Figure 3 Cable Clips



Before You Begin

Refer to the sections below before beginning the installation process.

NOTE:

The AP12 access point is designed in compliance with governmental requirements so that only authorized network administrators can change the settings.

Identifying Specific Installation Locations

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.

CAUTION:

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

CAUTION:

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.

Access Point Installation

CAUTION:

- 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.

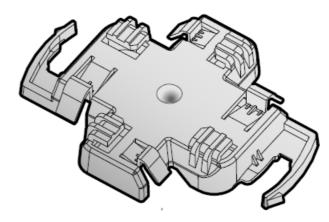
The AP12 access point ships with the following two mount brackets. You can choose one of them to install the AP:

- A ceiling mount bracket (see Figure 4) to attach the AP to a 9/16" or 15/16" flat T-bar drop-tile ceiling.
- A wall/ceiling mount bracket (see Figure 8) to attach the AP to a solid, flat surface, such as a wall or ceiling.

The following sections provide instructions on how to use these mount brackets.

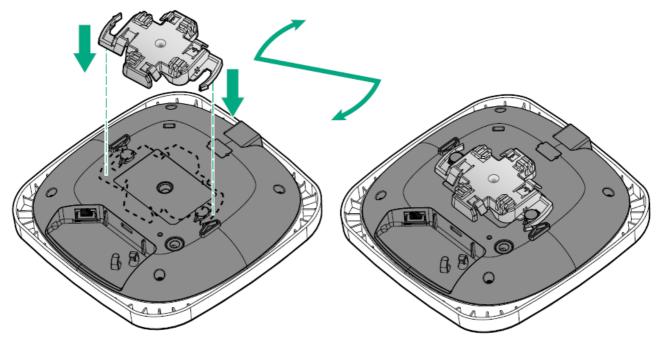
Using the Ceiling Mount Bracket

Figure 4 Ceiling Mount Bracket



- 1. Pull the necessary cables through a prepared hole in the ceiling tile near where the access point will be placed.
- 2. Place the mount bracket against the back of the access point with the mount bracket at an angle of approximately 30 degrees to the tabs (see Figure 5).
- 3. Twist the mount bracket clockwise until it snaps into place in the tabs (see Figure 5).

Figure 5 Attaching the Ceiling Rail Adapter to the AP



- 4. Hold the access point next to the ceiling tile rail with the mounting slots at approximately a 30-degree angle to the ceiling tile rail (see Figure 6 and Figure 7). Make sure that any cable slack is above the ceiling tile.
- 5. Pushing toward the ceiling tile, rotate the access point clockwise until the device clicks into place on the ceiling tile rail.

Figure 6 Mounting the AP to a 15/16" Ceiling Rail

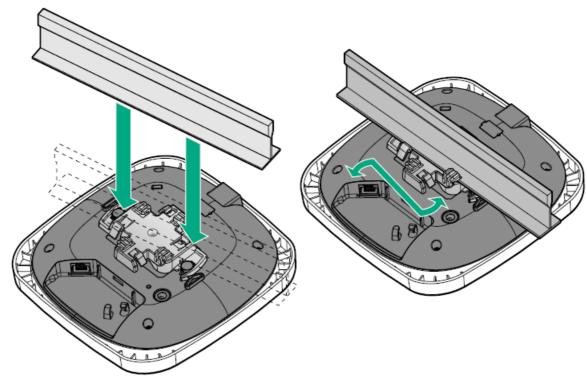
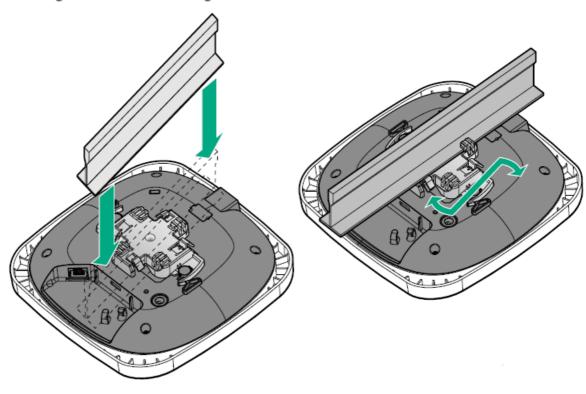
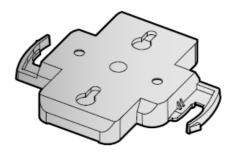


Figure 7 Mounting the AP to a 9/16" Ceiling Rail



Using the Wall/Ceiling Mount Bracket

Figure 8 Wall/Ceiling Mount Bracket



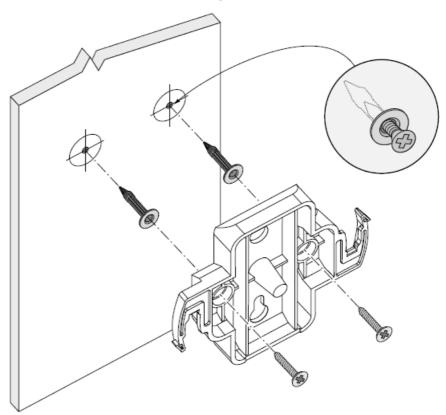
There are two ways to use the wall/ceiling mount bracket to mount the AP to a solid surface:

- Bracket-to-Solid Surface Option (Install the bracket to a solid surface and then attach the AP)
- AP-to-Bracket Option (Attach the bracket to the AP and then attach it to a wall)

Bracket-to-Solid Surface Option

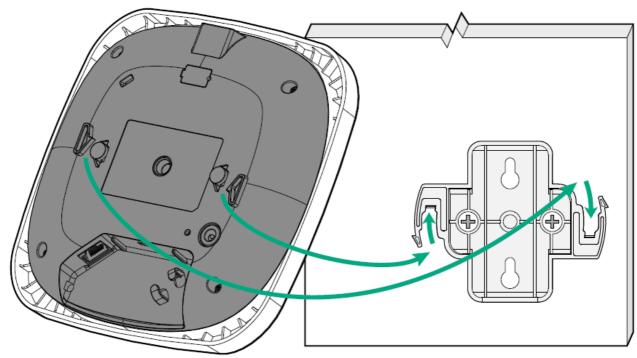
- 1. Attach the plastic mount bracket to any solid surface, such as a wall or ceiling, as shown in Figure 9.
 - a. Install any necessary wall anchors. Wall anchors are not included in the package.
 - **b.** Align the screw holes in the mount bracket with the previously installed anchors or demarcated screw points.
 - c. Insert two screws to secure the mount bracket. Screws are not included in the package.

Figure 9 Attaching the Mount Bracket to a Solid Surface



- 2. Attach the AP to the secured mount bracket as shown in Figure 10.
 - **a**. Align the AP with the mount bracket, placing the AP so that it's mounting tabs are at an angle of approximately 30 degrees to the mount bracket.
- 3. Pushing towards the solid surface, rotate the AP clockwise until it clicks into place (see Figure 10). Figure 10 Attaching the AP to the Mount Bracket

Figure 10 Attaching the AP to the Mount Bracket



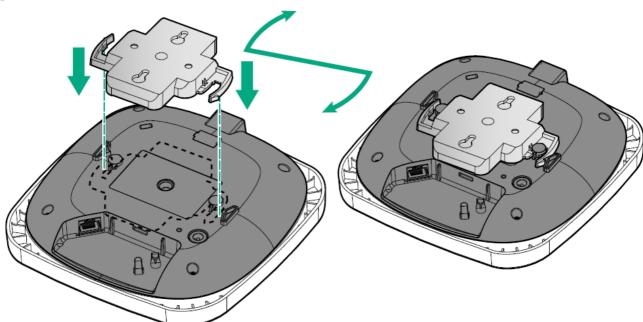
AP-to-Bracket Option

NOTE:

This mounting option works only with a wall.

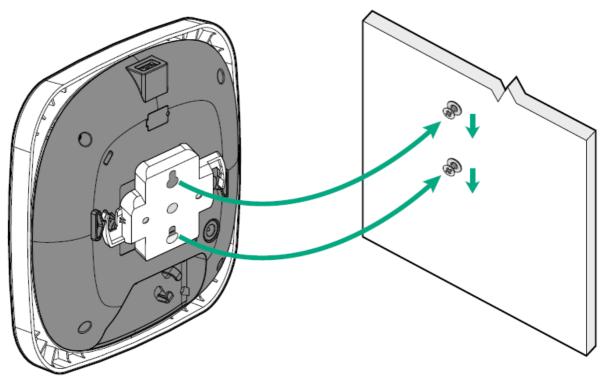
- 1. Place the mount bracket against the back of the AP with the bracket at an angle of approximately 30 degrees to the tab (see Figure 11).
- 2. Twist the bracket clockwise until it snaps into place in the tabs (see Figure 11).

Figure 11 Bracket Installation



- 3. Install two screws (and wall anchors if necessary), one above the other. Do not fully insert the screws into the wall. Leave enough space between the screw head and the wall for the bracket.
- 4. Align the keyhole slots on the back of the bracket with the screws installed in step 3.
- 5. Place the larger opening on the keyhole slot over the screw and pull the AP down until it is securely attached to the screws (see Figure 12).

Figure 12 AP-Bracket Wall Installation



Verifying Post-Installation Connectivity

The integrated LEDs on the access point can be used to verify that the access point is receiving power and initializing successfully (see Table 1).

Mobile Application Installation

Search for "Aruba Instant On" app within the Apple App Store or Google Play to download and install the Aruba Instant On mobile app to your phone. Launch the app and follow the instructions to complete the setup. For more details, please refer to the User Guide.

Log in to Instant-On Portal

Alternately, you can set up the Aruba Instant On access point from a web browser. Open a web browser and enter https://portal.ArubaInstantOn.com in the address bar to access the Aruba Instant On portal login screen. In the login screen, enter your Instant On account credentials to access your site.

Figure 13 Instant On Portal Login Screen



Enter your Instant On account credentials to access your site. Email Password Forgot your password? Log in Don't have an account? Create an account first.

Electrical and Environmental Specifications

Electrical

• Ethernet:

One 100/1000 Base-T auto-sensing Ethernet RJ45 interface

Power over Ethernet IEEE 802.3at 56VDC (nominal) and 802.3af 48VDC (nominal).

• Power:

Direct DC source: 12Vdc nominal, +/- 5%

Power over Ethernet (PoE): 802.3at and 802.3af complaint source

Environmental

· Operating:

Temperature: -40°C to +50°C (-40°F to +122°F)

Humidity: 5% to 93% non-condensing

· Storage and transport

Temperature: -40° C to $+70^{\circ}$ C (-40° F to $+158^{\circ}$ F)

Regulatory Model Number

AP17 RMN: APEX017

Safety and Regulatory Compliance

CAUTION:

RF Radiation Exposure Statement: This equipment complies with 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.

CAUTION:

- 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.
- The device could automatically discontinue transmission in case of absence of information to transmit, or
 operational failure. Note that this is not intended to prohibit transmission of control or signaling information or
 the use of repetitive codes where required by the technology.

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 manufacturer's 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 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.

Industry Canada

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

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.

Professional Installation Instruction

This product is designed for specific application and needs to be installed by a qualified personal who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.

European Union Regulatory Conformance

The Declaration of Conformity made under Radio Equipment Directive 2014/53/EU is available for viewing at: www.hpe.com/eu/certificates. 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
2402-2480	9 dBm
2412-2472	20 dBm
5150-5250	23 dBm
5250-5350	23 dBm
5470-5725	30 dBm
5725-5850	14 dBm

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.

NOTE:

- This device is intended for indoor use in professional healthcare facilities.
- This device has no IEC/EN60601-1-2 essential performance.
- Compliance is based on the use of Aruba approved accessories.

CAUTION:

- 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.
- 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.

Hong Kong



Philippines



Singapore

Complies with IDA Standards DB100427

Contact Aruba

Main Site	https://www.ArubalnstantOn.com
Support Site	https://support.ArubalnstantOn.com
Aruba Instant On Community	https://community.ArubalnstantOn.com
	1-800-943-4526
North America Telephone	1-408-754-1200
International Telephone	https://support.ArubalnstantOn.com
international releptione	intps://support.Arubainstanton.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

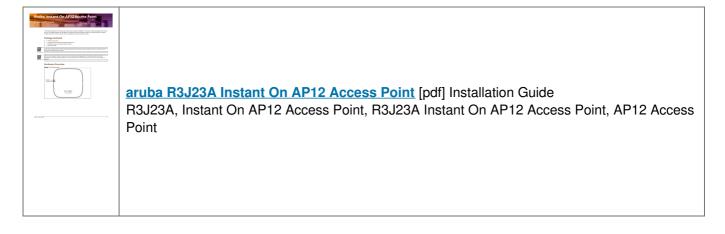
Attn: General Counsel

6280 America Center Drive San Jose, CA 95002 USA

Warranty

This hardware product is protected by an Aruba warranty. For details, visit https://www.ArubalnstantOn.com/docs.

Documents / Resources



Manuals+, home privacy