

Aruba Instant On AP12 Access Point

Installation Guide

The Aruba Instant On AP12 dual-radio access point supports IEEE802.11ac Wave 2, delivering high performance with 3x3 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



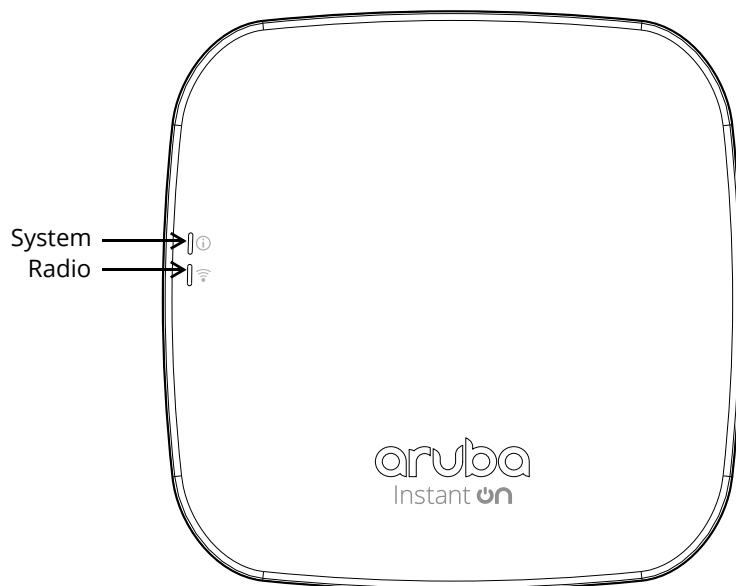
If you have ordered AP12 bundle, the package would also include a power adapter and cord to power the AP through an electrical power outlet.



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.

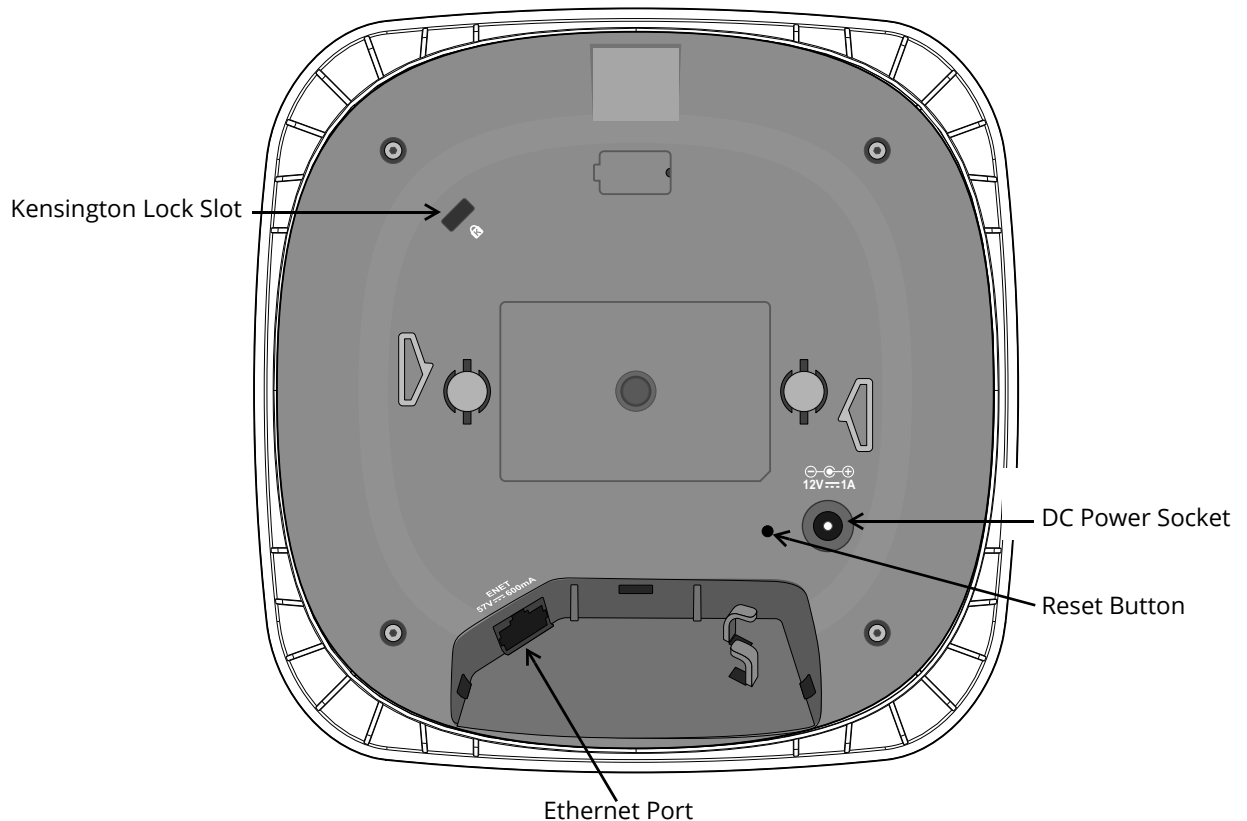
Table 1 AP12 Access Point LEDs Status

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.

Figure 2 Back Panel



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:

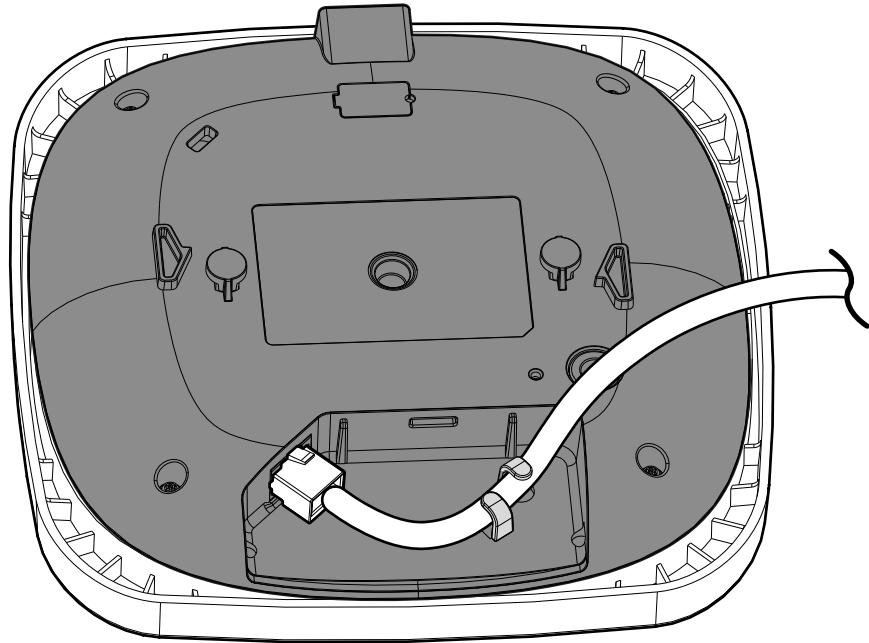
- 12 Vdc (+/- 5%) and at least 18W
- Center-positive 2.1/5.5 mm circular plug, 9.5 mm length

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.



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.



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.

Access Point Installation



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.

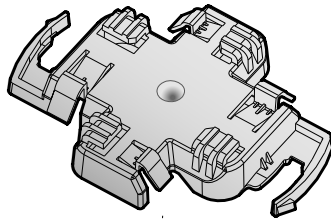
The AP12 access point ships with the following two mount brackets. You can choose one of them to install the AP:

- 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.

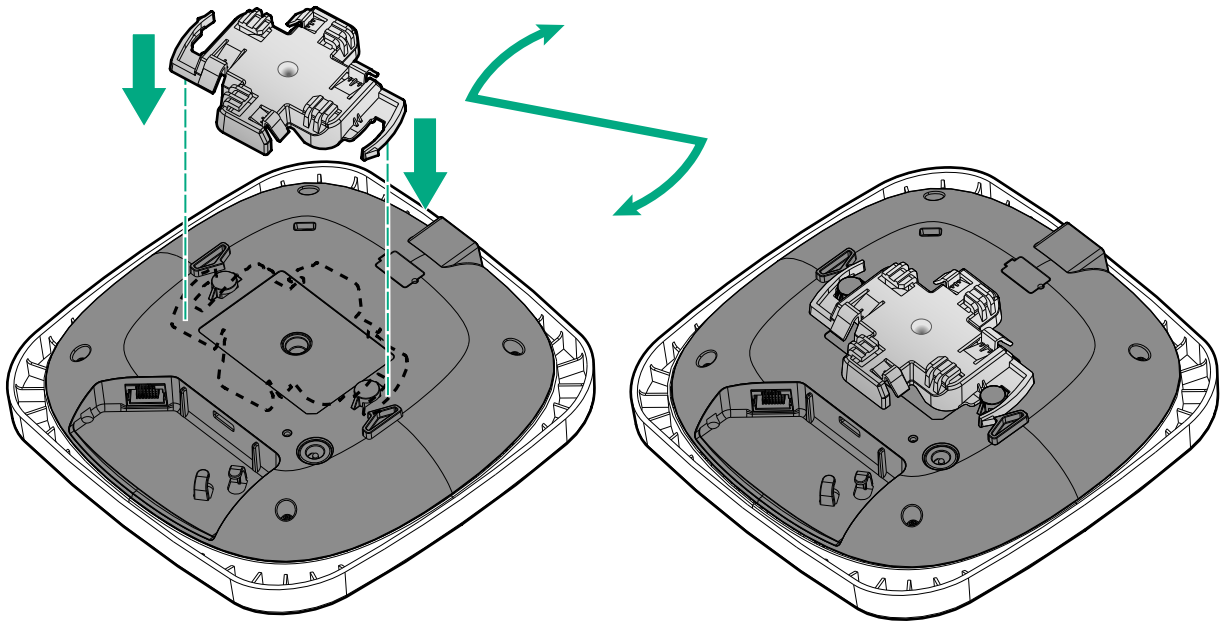
Using the Ceiling Mount Bracket

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

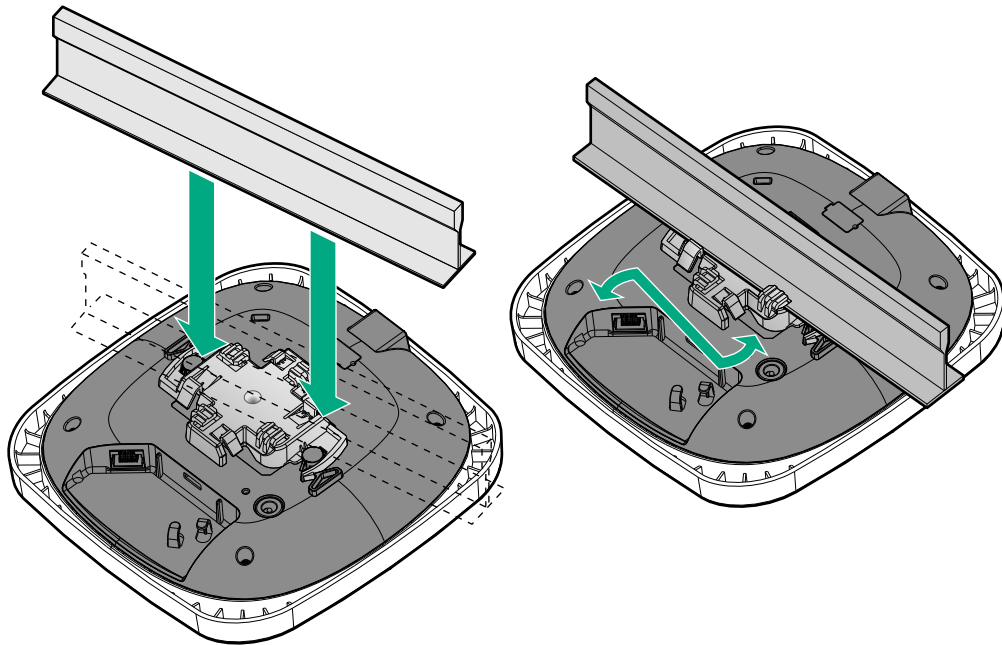
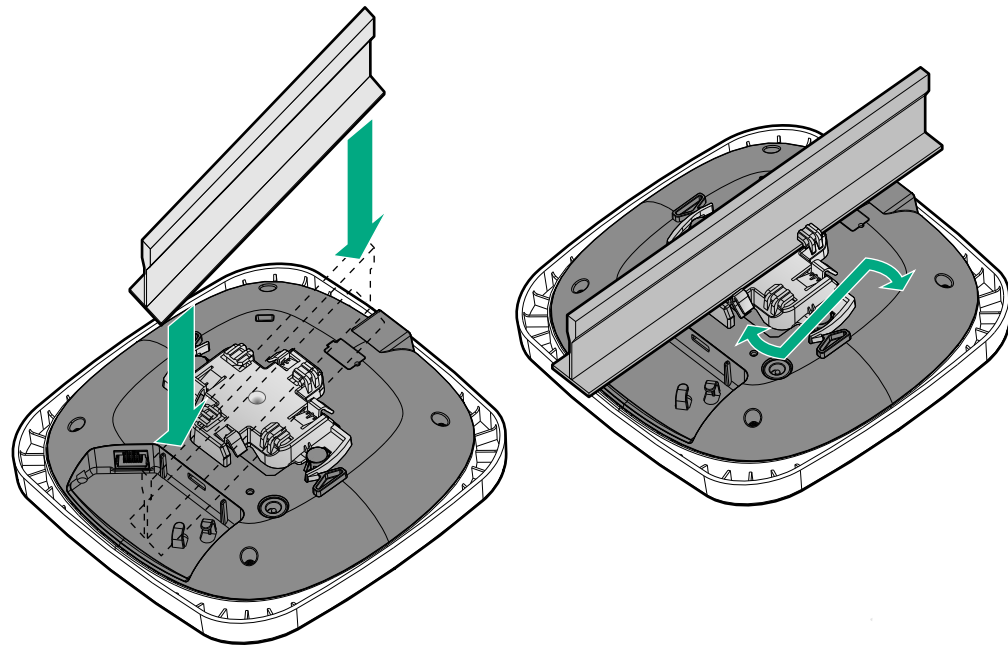
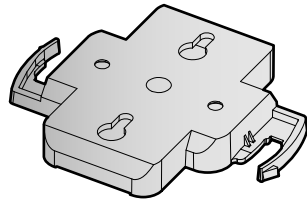


Figure 7 Mounting the AP to a 9/16" Ceiling Rail



Using the Wall/Ceiling Mount Bracket

Figure 8 Wall/Ceiling Mount Bracket



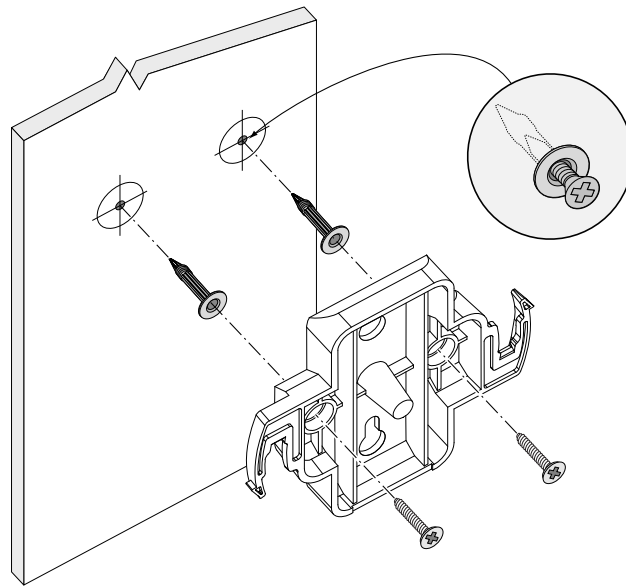
There are two ways to use the wall/ceiling mount bracket to mount the AP to a solid surface:

- [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

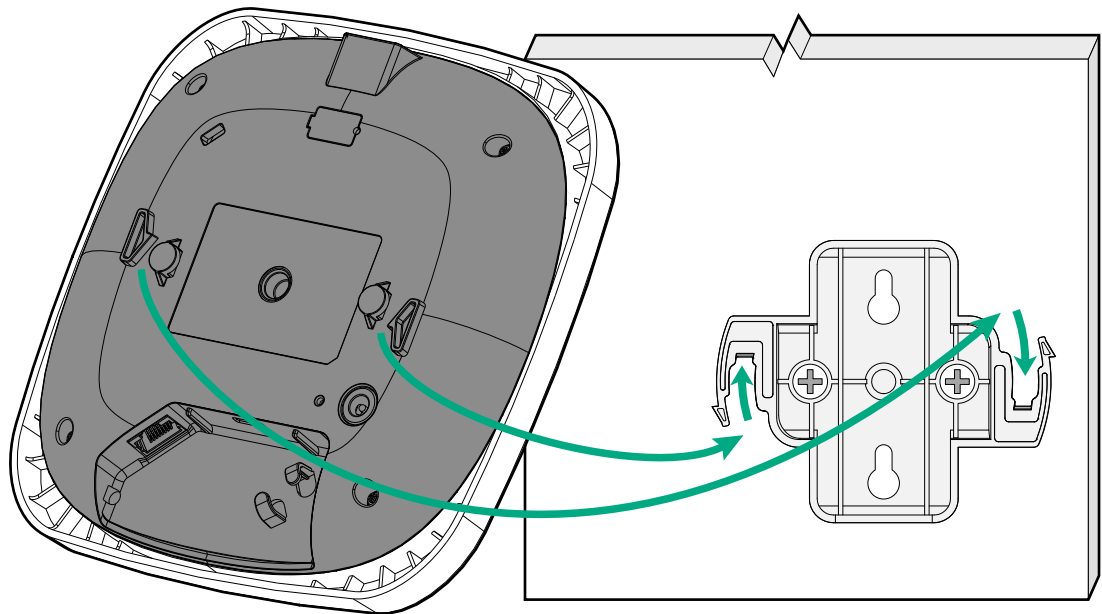
1. Attach the plastic mount bracket to any solid surface, such as a wall or ceiling, as shown in [Figure 9](#).
 - a. Install any necessary wall anchors. Wall anchors are not included in the package.
 - b. Align the screw holes in the mount bracket with the previously installed anchors or demarcated 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 its 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



AP-to-Bracket Option

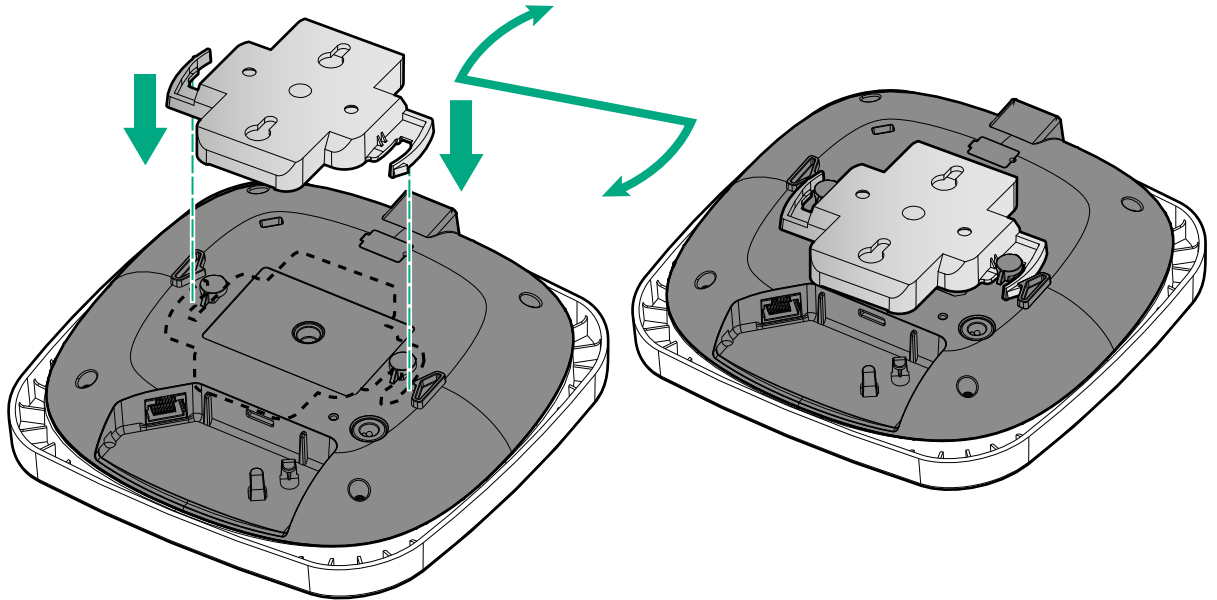


This mounting option works only with a wall.

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](#)).

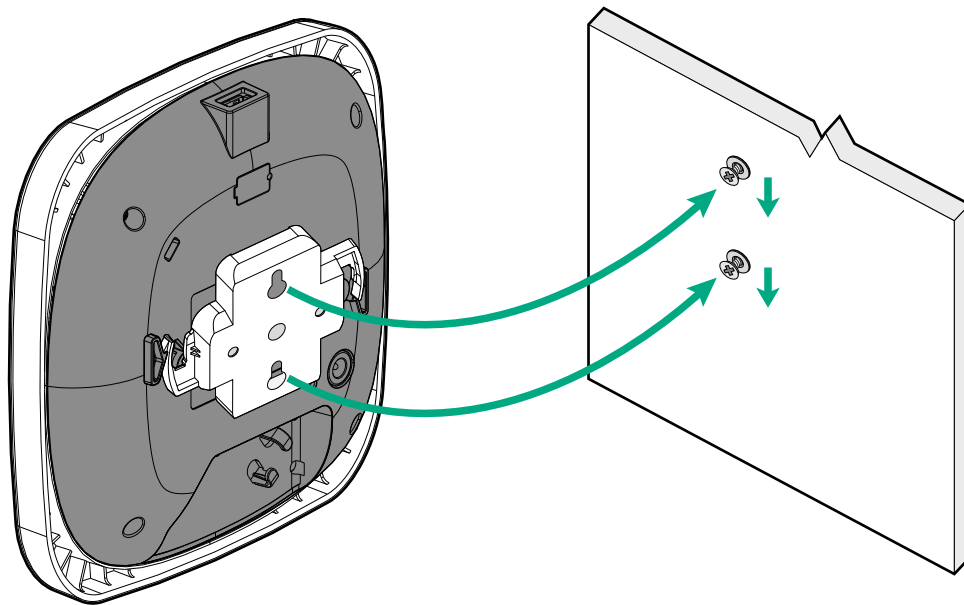
2. Twist the bracket clockwise until it snaps into place in the tabs (see [Figure 11](#)).

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*

aruba Instant on

Electrical and Environmental Specifications



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.



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.

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



If a power adapter other than the Aruba-approved adapter is used in the US or Canada, it should be NRTL listed, with an output rated 12Vdc, 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 +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)

Regulatory Model Number

- AP12 RMN: APIN0305

Safety and Regulatory Compliance



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 7.87 inches (20cm) 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 spécifiés par la FCC. Il doit être installé et utilisé à une distance minimale de 20 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.



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.



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.

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 equipment complies with IC RSS-102 RF exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body.



Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

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 the 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.



Under Industry Canada regulations, when operated in 5150 to 5250 MHz frequency range, this device is restricted to indoor use to reduce the potential for harmful interference with co-channel Mobile Satellite Systems. Users are advised that high power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850MHz and that these radars could cause interference and/or damage to LE-LAN devices.



Conformément aux réglementations d'Industrie Canada, en cas d'utilisation dans la plage de fréquences de 5150 à 5250 MHz, cet appareil doit uniquement être utilisé en intérieur afin de réduire les risques d'interférence avec les systèmes satellites mobiles partageant le même canal. Les utilisateurs êtes avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL

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	N/A for EU

Medical

1. Equipment not suitable for use in the presence of flammable mixtures.
2. Connect to only IEC 60950-1 or IEC 60601-1 certified products and power sources. The end user is responsible for the resulting medical system complies with the requirements of IEC 60601-1.
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.



This device is intended for indoor use in professional healthcare facilities.



This device has no IEC/EN60601-1-2 essential performance.



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.



Compliance is based on the use of Aruba approved accessories.



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.

Brazil



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

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

México

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

Russia



'НРЕ 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

'НРЕ Belarus': ИООО «Хьюлетт-Паккард Бел», Республика Беларусь, 220030, г. Минск, ул. Интернациональная, 36-1, Телефон/факс: +375 17 392 28 20

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

Kazakhstan

ЖШС "Хьюлетт Паккард Энтерпрайз" Ресей Федерациясы, 125171, Мәскеу, Ленинград тас жолы, 16А блок 3, Телефон: +7 499 403 4248 Факс: +7 499 403 4677

«HEWLETT-PACKARD Bel» ЖШС, Беларусь Республикасы, 220030, Минск қ., Интернациональная көшесі, 36/1, Телефон/факс: +375 17 392 28 20

ЖШС «Хьюлетт-Паккард (К)», Қазақстан Республикасы, 050040, Алматы қ., Бостандық ауданы, Әл-Фараби даңғылы, 77/7, Телефон/факс: +7 (727) 355 35 50

Taiwan



R30001
RoHS

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。

Ukraine

Hereby, Hewlett Packard Enterprise Company declares that the radio equipment type APIN0303 is in compliance with Ukrainian Technical Regulation on Radio Equipment, approved by resolution of the CABINET OF MINISTERS OF UKRAINE dated May 24, 2017, No. 355. The full text of the UA declaration of conformity is available at the following internet address: <https://certificates.ext.hpe.com/public/certificates.html>

Hong Kong



Philippines



Singapore



Contact Aruba

Main Site	https://www.ArubaInstantOn.com
Support Site	https://support.ArubaInstantOn.com
Aruba Instant On Community	https://community.ArubaInstantOn.com
North America Telephone	1-800-943-4526 1-408-754-1200
International Telephone	https://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://support.ArubaInstantOn.com>.