

AP4020FX Installation

Installation Workflow

Access points are automatically added to your network when the DHCP and DNS prerequisites have been met. But you can save time and configure the AP before you install it with the pre-provision mode. You can revert the AP to production mode when you are ready for deployment.

**Note**

Confirm that Domain Name System (DNS), Network Time Protocol (NTP), and the firewall ports are configured and available before deployment. Create a firewall rule to allow outbound traffic from Extreme Networks devices. For more information about firewalls, see [Firewall Configuration Guides](#).

You should configure the DHCP options on your DHCP server to assign an allowed NTP server to Extreme Networks devices. Both DNS and NTP are critical for country and region detection and certificate validation. For more information about DNS and NTP, see *ExtremeCloud IQ Controller Deployment Guide* for Cloud deployment and *Extreme Campus Controller Deployment Guide* for Campus or on-premises deployment.

For more information on deployment, see the Knowledge Base article [How to deploy a new Access Point or replace a faulty Access Point to your ExtremeCloud IQ Controller](#). AP deployment is also documented in [ExtremeCloud IQ Controller documentation](#) and the [IQ Engine documentation](#).

Use the information in the following table to help you install your access point.

Table 17: Installation Work flow

Steps	Action	Purpose
1	Verify the box contents .	Confirm that your AP and accessories arrived complete and undamaged.
2	Install the access point to one of the following: • Wall or flat ceiling • Wall with AH-ACC-BKT-AX-WL Bracket • Standard ceiling • Nonstandard Ceiling or Wall • Wall with AH-ACC-BKT-AX-WL • Silhouette ceiling • Interlude ceiling • 15/16-inch T-bar • Junction Box • Beam	Install the AP on a ceiling or wall, and connect the network cable. If you use Power over Ethernet (PoE), then the AP powers up. The AP begins a discovery process to determine its own IP address and the IP address of the controller. When the discovery process is successful, the AP registers with the controller. For more information, see the following articles: • Access points failing the Wireless Controller discovery process • How to Onboard, Switch, and Troubleshoot the Universal AP modes between IQE (ExtremeCloud IQ Engine) and WiNG modes?
3	(Optional) Connect to a power supply .	Connect to an external 12-volt DC power supply if you are not using Power over Ethernet (PoE). Note: Your Extreme AP must be grounded so it can be used safely. Consider this requirement when you plan your deployment.
4	(Optional) Lock the access point .	Secure the AP and prevent someone from removing it.

Table 17: Installation Work flow (continued)

Steps	Action	Purpose
5	(Optional) Onboard the AP with the ExtremeCloud IQ Mobile Onboarding application.	Scan the QR code or bar code on the back of the device and begin the onboarding process.
6	Confirm that the LED is white.	A white LED indicates that your AP has powered up and registered with the Cloud. An amber light indicates a technical issue that requires a resolution. See the Led Descriptions section in the "Overview" chapter for an explanation of the LED states.

Pre-Installation Tasks

Extreme Networks Access Points have been designed for quick and easy deployment. But you can make the process even easier with a little preparation.

Site Survey

Before you install your AP, do a site survey and coverage map so you have identified and addressed any potential issues.

Ask yourself the following questions:

- What is the WLAN's purpose?
- What applications will be used over the WLAN?
- Who will use the WLAN?
- What devices will be connecting to the WLAN?
- Are there any mounting or aesthetic restrictions?

Consider the following items as you plan your deployment:

- Capacity and coverage requirements.
- Existing issues such as RF interference and dead zones
- Existing networks or devices that can interfere with your network. There could be interference from floors above and below, or from outside sources such as nearby office buildings.
- Antenna radiation patterns. Consider the patterns as you decide where to place your APs, their orientation, and their configuration.

For more information on site surveys, see the Knowledge Base article [What is Wireless Site Survey and why is it important?](#)

Other

Perform the following tasks:

- If you plan to use Power over Ethernet (PoE) then confirm that it meets the AP's requirements. See [Power Profile](#).
- Document the switch and ports used by the AP with LLDP protocol.

- Confirm cables meet or exceed the required specifications.
- Check that the AP power ups correctly.

Box Contents

Your Extreme access point ships with everything that you need for a basic installation. All optional brackets and accessories are sold separately.

Confirm that you have received the following items before you install your device.

Table 18: Hardware

Quantity	Item
1	Extreme AP4020FX access point
1	Regulatory document for your access point
1	AH-ACC-BKT-AX-TB mounting bracket
2	Phillips pan head wood screws
2	Phillips head plastic screw-in anchors

Position the Access Point before Installation

About This Task

Use the red dot on the back of the access point and the bracket to help you with installation.

Procedure

Line up the red dot on the access point and the bracket for ease of installation.

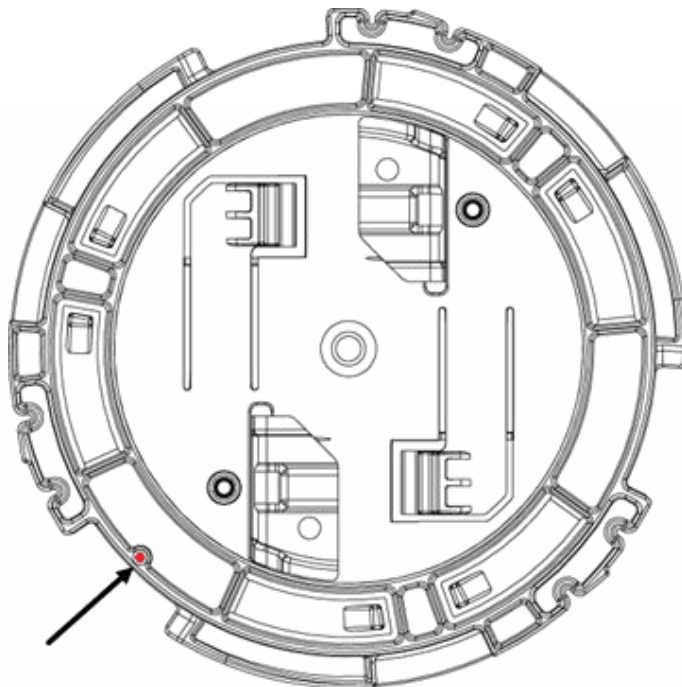


Figure 23: AH-ACC-BKT-AX-TB bracket red dot

Install the Access Point on a Wall or a Flat Ceiling

Before You Begin

Confirm that you have the following items:

- The access point
- One (1) AH-ACC-BKT-AX-TB mounting bracket. The bracket is used for flat surface wall or solid ceiling installation.
- Two (2) M3.5 pan head wood screws and two screw-in anchors.

About This Task

Follow these steps when you install the access point on a wall or solid ceiling.

Procedure

1. Mark and drill two mounting holes.
Use the AH-ACC-BKT-AX-TB mounting bracket as a template.
2. Attach the bracket to the wall.
Use the two M3.5 pan head screws. Use push-in anchors or screw-in anchors for drywall or plastic board installations.
3. Attach the access point to the bracket.
Align the red dots on the bracket and the access point base.
4. Press and rotate the AP one-sixth turn clockwise.
The AP clicks into place on the bracket.

5. Attach the network cable and power-up the AP.

If you use Power over Ethernet (PoE) then attach the network cable to the ETH0 port. If you use Power Sourcing Equipment (PSE), then connect the power supply and attach the network cable to the ETH0 port.

Install the Access Point to a Wall with AH-ACC-BKT-AX-WL

Before You Begin

You need the following items:

- AP4020FX
- One (1) AH-ACC-BKT-ASM wall accessory, purchased separately.
- Four (4) shoulder M5 bolts.
- Four (4) M5 mount screws and screw-in anchors, provided by the installer.

About This Task

Use the AH-ACC-BKT-AX-WL bracket when you need a 1.25 inch space between the wall and the access point. If you want less space, use the AH-ACC-BKT-AX-TB that comes with the AP.

Procedure

1. Using the -WL bracket as a template, mark and drill mounting holes on the wall.
2. Bring the LAN cable from the wall through the bracket hole.

Align the cable before attaching the bracket to the wall.



Note

A standard Ethernet cable can be used if you do not mind the cable being visible. To hide the Ethernet cable, a flat cable and a cable cap are required.

3. Attach the wall bracket to the wall using three M3.5 screws and three screw-in anchors.
4. Align the access point red dot against the three red dots on the -WL bracket.
5. Press and rotate the access point clockwise about one-sixth turn until it locks into place on the bracket.
6. Attach the network cable.

Install the Access Point on a Standard Flat Ceiling Rail with Sculpted Ceiling Tiles

Before You Begin

The following hardware is required for a standard ceiling rail installation:

- An access point
- One AH-ACC-BKT-AX-TB mounting bracket for prelude T-bar ceiling installation, that is shipped with the access point

About This Task

The access points ship with a mounting bracket for standard 15/16" (24mm) wide t-bars or 9/16" (14mm) wide t-bar rails. For non-standard ceiling rail installations, see [Non-Standard Ceiling Grid or Wall Installation](#).

Procedure

1. Remove the ceiling tiles.
2. Align the bracket on the ceiling rail in such a way that the bracket metal hinges are almost parallel to the sides of the ceiling rail.
3. Rotate the accessory clockwise until the metal hinges hook over the edge of the rail and the white tabs click in place.



Note

There are two white tabs on the back of the bracket that holds on to the ceiling rail. Use your finger to push and unhook one side of the white tab if you want to remove the bracket from the ceiling rail.

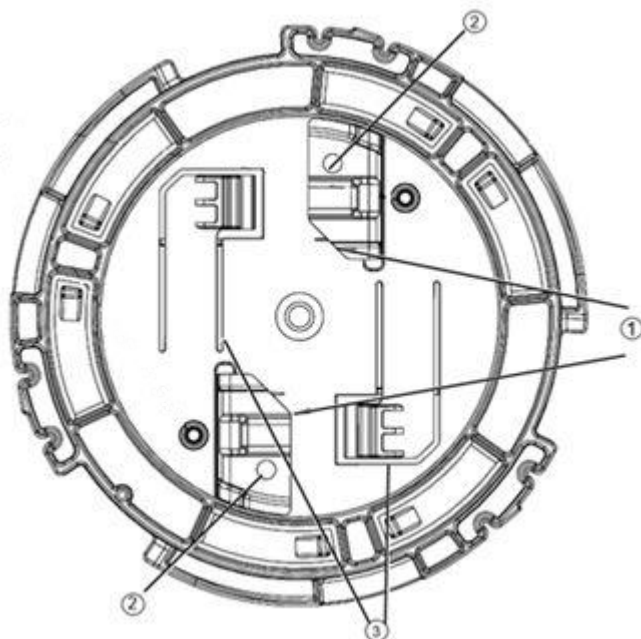


Figure 24: AH-ACC-BKT-AX-TB bracket

Table 19: AH-ACC-BKT-AX-TB bracket parts description

Callout	Description
1	Metal hinges on the AH-ACC-BKT-AX-TB bracket
2	Mounting holes for wall mounting
3	White tab on the AH-ACC-BKT-AX-TB bracket

4. Attach the LAN cable Ethernet plug to the appropriate AP Ethernet receptacle.

5. Align the red dot on the back of the access point against the bracket red dot.

**Note**

The bracket has a circular tip that fits into the circular depression on the back of the access point.

6. Press and rotate the access point 1/8th turn clockwise until it clicks into place on the bracket.

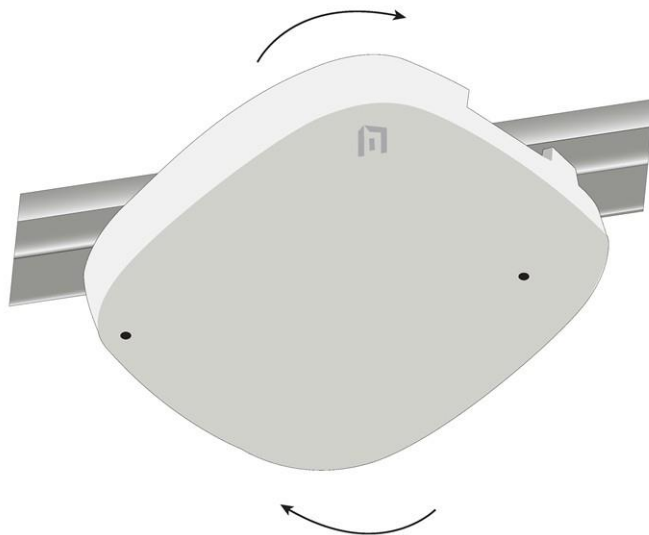


Figure 25: Access point ceiling install

7. Attach the Cat6 RJ45 cable to the ETH0 or ETH1 port.
8. Replace the ceiling tiles.

Install the Access Point on a Silhouette Ceiling

Before You Begin

You need the following items:

- One access point
- One AH-ACC-BKT-AX-SL bracket

About This Task

You can mount the access point to a ceiling grid with 1/8 in. or 1/4 in. bottom opening.

Silhouette is an Armstrong Ceiling Solutions name.

Procedure

1. Remove the ceiling tiles.
2. Place the bracket on the ceiling rail in such a way that the accessory metal hinges are almost perpendicular to the sides of the ceiling rail with the ceiling rail over the center hole.

3. Lightly push onto to the ceiling rail and rotate the accessory clockwise until the hinges hook over the edge of the rail and the white tabs click in place.



Note

There are two white tabs in the back of the bracket that holds on to the ceiling rail. Use your finger to pull and unhook one side of the white tab if you want to remove the accessory from the ceiling rail.

Gently rotate the bracket counterclockwise and if there is resistance, the other white tab in the back of the accessory must also be released.

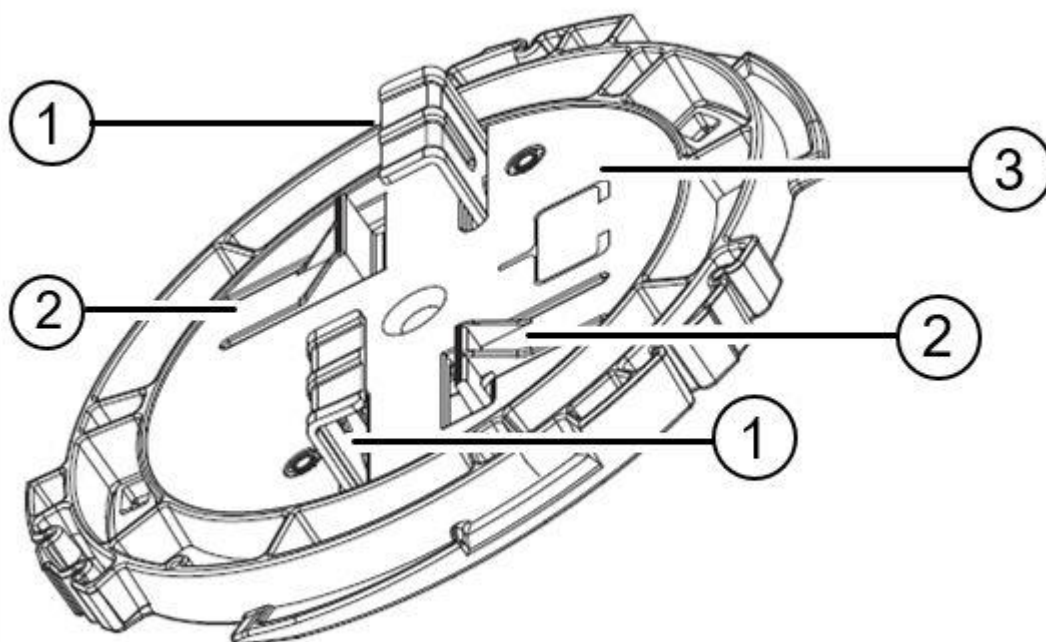


Figure 26: AH-ACC-BKT-AX-SL Accessory Bracket

Call out	Description
1	Metal hinges on the AH-ACC-BKT-AX-SL bracket.
2	White tabs on the AH-ACC-BKT-AX-SL bracket.
3	Drawing of 1/8 in. or 1/4 in. ceiling grid, for your reference.

4. Align the red dot on the back of the access point against the accessory bracket red dot.



Note

The accessory has a circular tip that fits into the circular depression on the back of the access point.

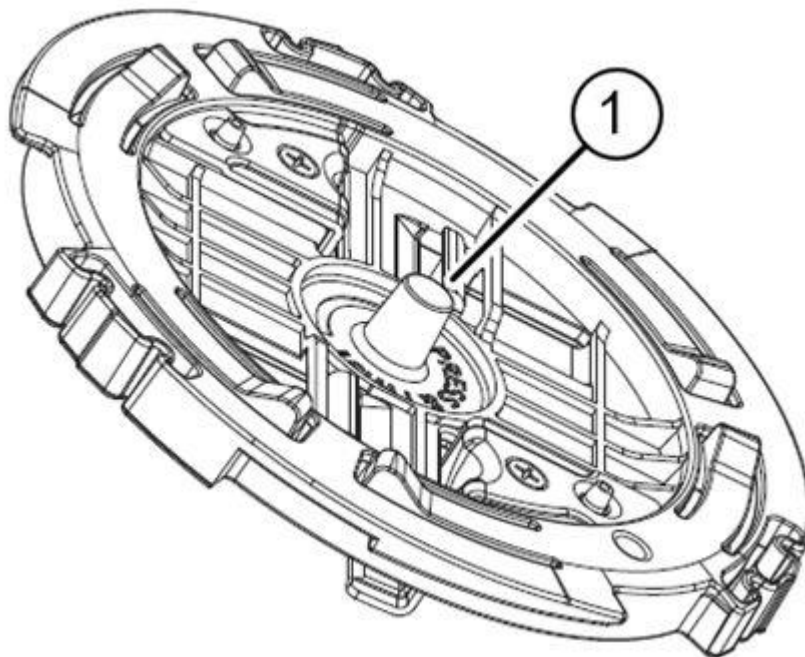


Figure 27: AH-ACC-BKT-AX-SL Accessory Bracket Circular Tip

Call out	Description
1	AH-ACC-BKT-AX-SL bracket circular tip

5. Press and rotate the access point clockwise until it locks into place on the accessory.
6. Connect the network cable.
7. Remove the ceiling tiles.

Install the Access Point to a 9/16-inch T-bar Ceiling

Before You Begin

You need the following items:

- One AP4020FX access point
- One AH-ACC-BKT-AX-TB accessory bracket if the t-bar bottom is flat
- One AH-ACC-BKT-AX-IL accessory bracket if there is a protrusion in the center of the t-bar bottom

About This Task

You can mount the access point to a ceiling that has a 9/16 in. wide T-bar.

Procedure

1. Remove the ceiling tiles.
2. Place the bracket on the ceiling rail in such a way that the accessory center is over the protrusion and the metal hinges are between perpendicular and about one-eighth of a turn from the sides of the ceiling rail.

3. Push up gently and rotate the bracket clockwise until the hinges hook over the edge of the rail and the white tabs click in place.



Note
There are two white tabs in the back of the accessory bracket that holds on to the ceiling rail in place. Use your finger to pull and unhook one side of the white tab if you want to remove the accessory from the ceiling rail.
Gently rotate the bracket counterclockwise and if there is resistance, the other white tab in the back of the accessory must also be released.

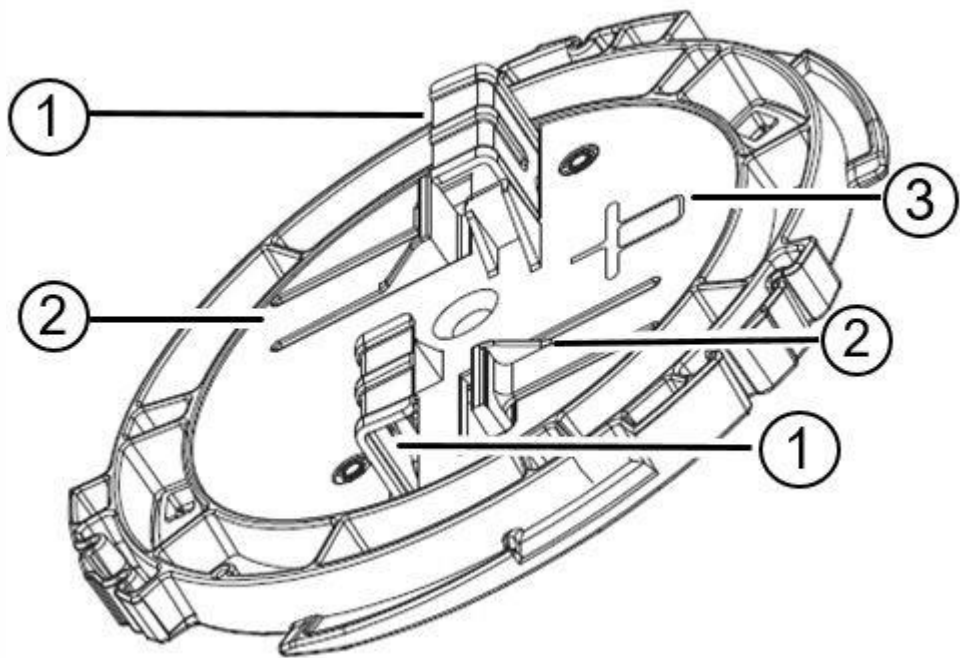


Figure 28: AH-ACC-BKT-AX-IL accessory bracket

Call out	Description
1	Metal hinges on the AH-ACC-BKT-AX-IL bracket.
2	White tabs on the AH-ACC-BKT-AX-IL bracket.
3	Drawing of 9/16 in. ceiling grid, for your reference.

4. Align the red dot on the back of the access point against the accessory red dot.



Note
The bracket has a circular tip that fits into the circular depression on the back of the access point.

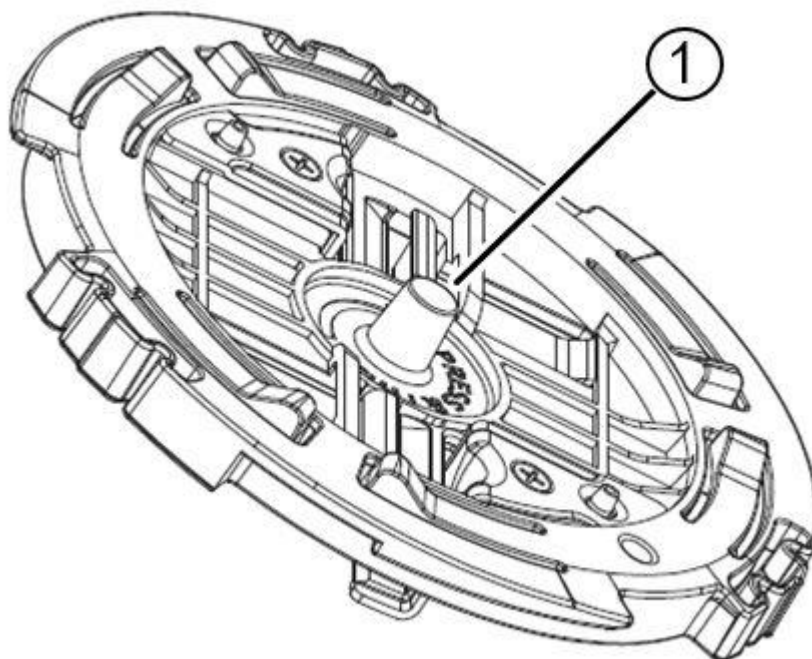


Figure 29: AH-ACC-BKT-AX-IL accessory bracket circular tip

Call out	Description
1	AH-ACC-BKT-AX-IL bracket circular tip

5. Press and rotate the access point clockwise about one-sixth of a turn until it locks into place on the accessory bracket.
6. Connect the network cable.
7. Place the cable cover over the Ethernet cable.
8. Replace the ceiling tiles.

Install the Access Point on a 15/16-inch T-bar

Before You Begin

Obtain the following items:

- One access point
- One ACC-BKT-TB-NF adapter
- One AH-ACC-BKT-AX-TB accessory

About This Task

Use the ACC-BKT-TB-NF bracket when you install the AP on a suspended ceiling with 15/16-inch grid system.

Procedure

1. Remove the ceiling tiles.

2. Using the adapter guide on the top half of the ACC-BKT-TB-NF adapter, align and attach the -NF on to the ceiling rail.
3. Slide the other part of the -NF adapter onto the half attached to the ceiling rail.
4. Attach the AH-ACC-BKT-AX-TB accessory onto the -NF adapter.

a. Center the -TB accessory on the attached -NF parts.

b. Push up and rotate the -TB accessory clockwise until the metal hinges hook over the bottom halves of the -NF adapter ends and the plastic tabs on the -TB accessory click into place.

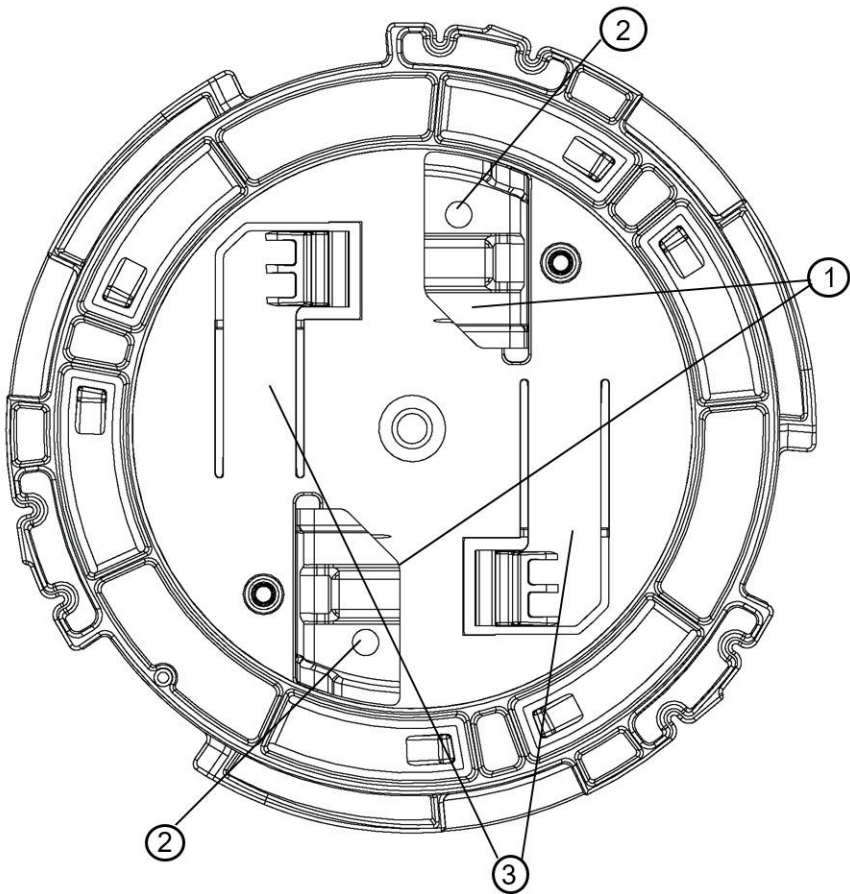


Figure 30: AH-ACC-BKT-AX-TB Accessory Bracket

Callout	Description
2	Mounting holes for wall mounting
3	White plastic tab on the AH-ACC-BKT-AX-TB bracket

5. Align the red dot on the back of the access point against the -TB bracket red dot.



Note
The bracket has a circular tip that fits into the circular depression on the back of the access point.

6. Press and rotate the access point one-eighth of a turn clockwise until it clicks into place on the accessory.
7. Connect the network cable.
8. Replace the ceiling tiles.

Install the Access Point on a Junction Box

Before You Begin

The following hardware is required to install an indoor access point on a junction box (box):

- An indoor access point
- ACC-BKT-AX-JB accessory

About This Task

Install the access point to a junction box if you want to power the AP using an electrical connection.

The ACC-BKT-AX-JB accessory bracket is used when you need to install the access point on an indoor junction box. The ACC-BKT-AX-JB access has two parts:

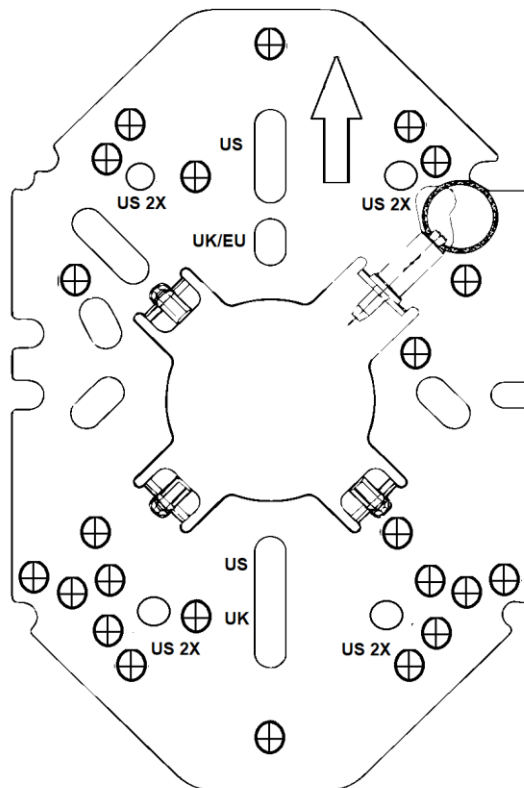


Figure 31: ACC-BKT-AX-JB Accessory Bracket Metal Part

Procedure

1. Remove the screws holding the junction box cover plate.
2. Remove the LAN cable from the cover plate.
3. Bring the LAN cable through the center hole of the metal bracket part.
The LAN wire must be in-between the metal part and the plastic part during installation.
4. Place the ACC-BKT-AX-JB accessory metal part, with the bracket holes against the cover plate of the box.
5. Using the screws removed from the cover plate, find the bracket holes that align with the junction box screw holes.



Important

The text for the holes must be normally readable.

6. Using the cover plate screws, attach the metal bracket part to the junction box.
7. Place the plastic part on the metal part, rotate it 1/4th to 1/3rd turn clockwise until you hear it click in place as the lock is set.



Important

When installed correctly on a wall, the side arrows on the plastic part must be pointing up.



Note

There is a metal pull ring in the metal part that is used to unlock and remove the plastic part.

To unlock the plastic part, pull out the pin's ring and turn the plastic part 1/3rd turn counter-clockwise and lift it apart.

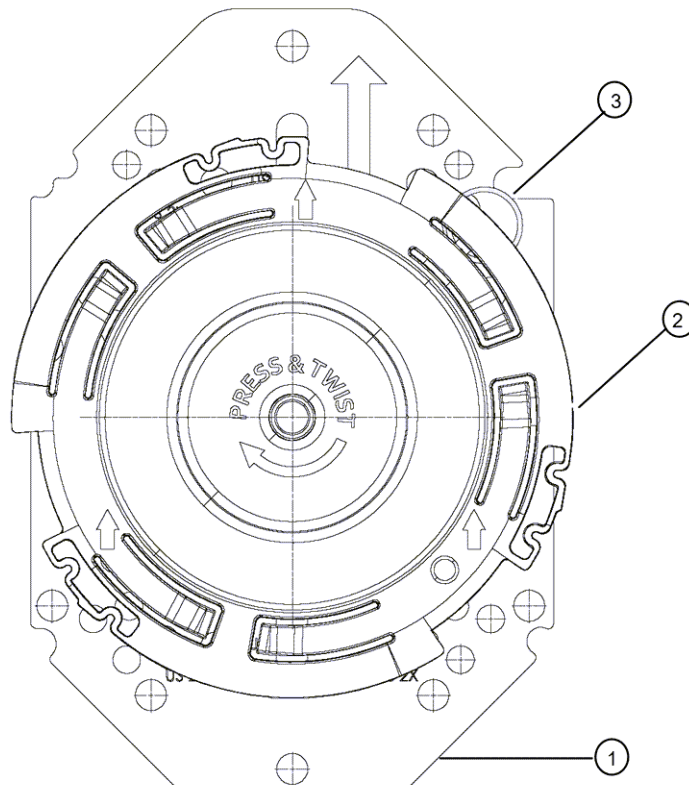


Figure 32: Junction Box Accessory Bracket Assembly

Callout	Description
1	Sheet-metal junction box hole metal part
2	Plastic twist plate part
3	Pull ring with 10 mm diameter ring for unlocking the plastic part

8. Align the red dot on the back of the access point against the red dot on the plastic part.
9. Push the access point onto the plastic part and turn it clockwise until you hear it lock in place.
10. Insert the RJ45 cable connector to the Ethernet connector on the access point.

Install the Access Point on a Beam

Before You Begin

The following hardware is required to install the access point on a beam:

- An indoor model access point
- ACC-BKT-AX-BEAM accessory

Find a location that supports the following requirements:

- The beam must be able to support the access point in all environmental conditions.
- The beam must be flat.
- Beam attachment area is at least 0.5 in. (12.7mm) wide and as long as the access point's largest dimension.
- Beam mounting surface is at least 0.040 in. (1.0 mm) thick, but less than 0.650 in. (16.5mm) thick.

About This Task

If you are installing the access point in a warehouse or other industrial environments, then you might have to install the AP on a beam instead of a ceiling.

Procedure

1. Align the red dot on the access point with the red dot on the accessory bracket.
2. Insert the plastic part posts into the access point back recess.
3. Push the access point onto the plastic part, and rotate the access point about one-sixth turn clockwise to make it lock in place.



Note

If you can turn or twist the access point, it was not locked in place properly. Remove the access point and attach it again until it locks in place.

4. Plug the RJ45 connector plug into ETH or ETH0, RJ45 connector receptacle on the access point.

If desired, flat Ethernet cables and caps may be used with all indoor access points.

5. Open the top screw as necessary and place the beam clip onto a beam.

**Note**

You must hold the access point when attaching the beam clip.

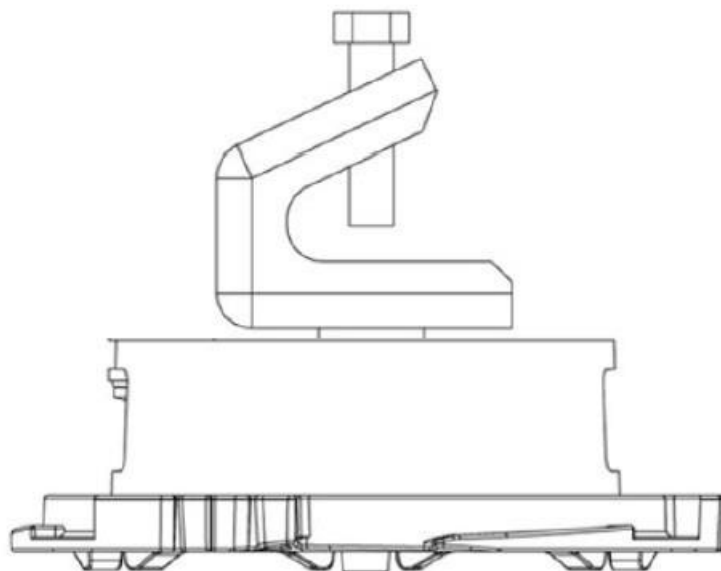
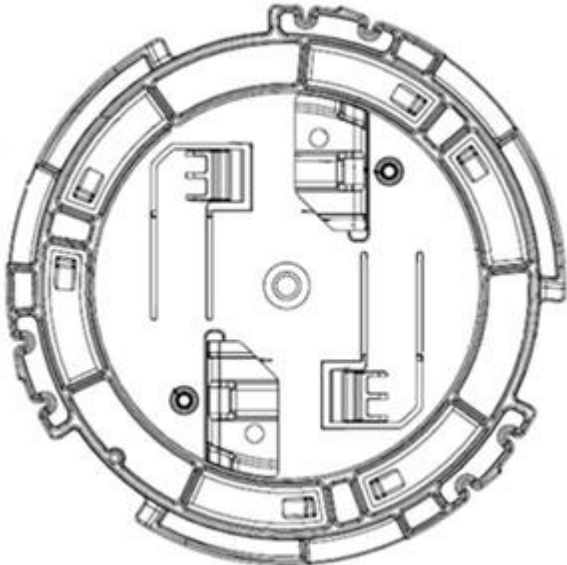
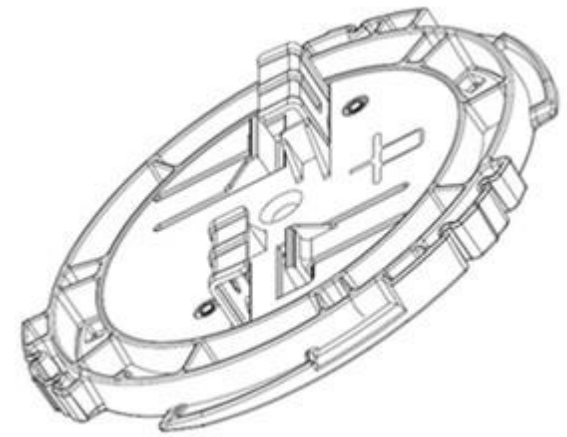


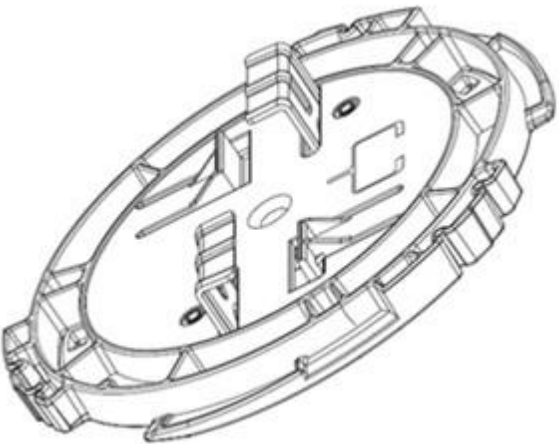
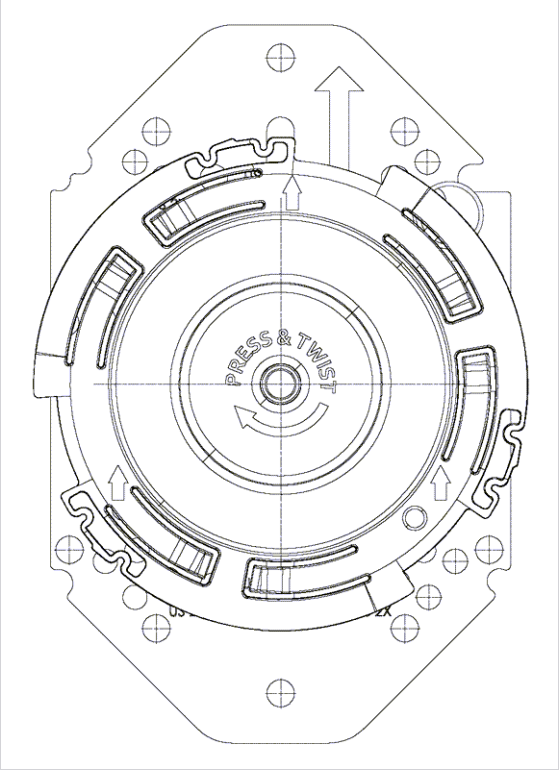
Figure 33: ACC-BKT-AX-BEAM Accessory Bracket

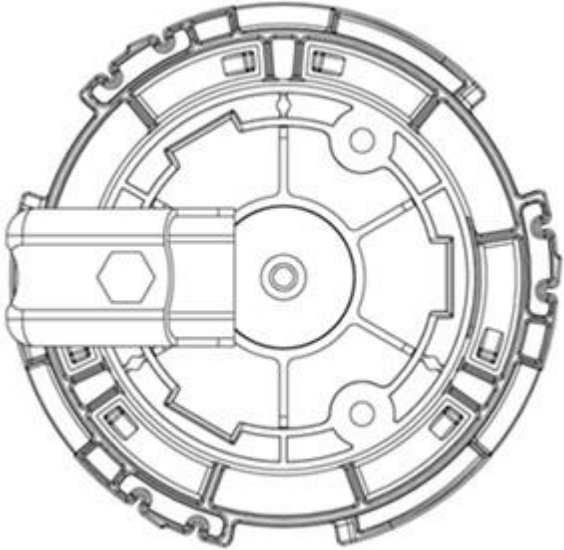
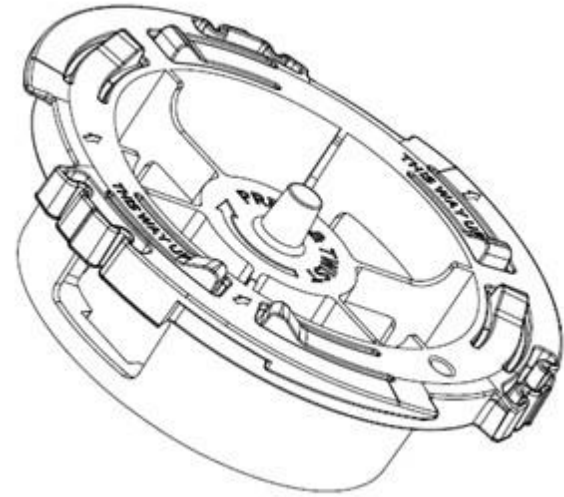
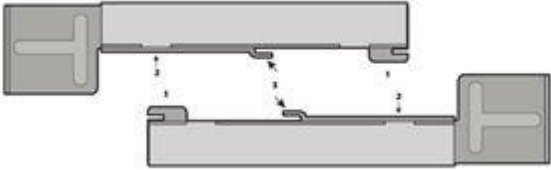
6. Tighten the beam clip top screw to a torque of 50 in-lbs.

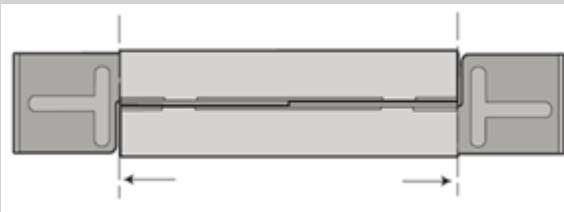
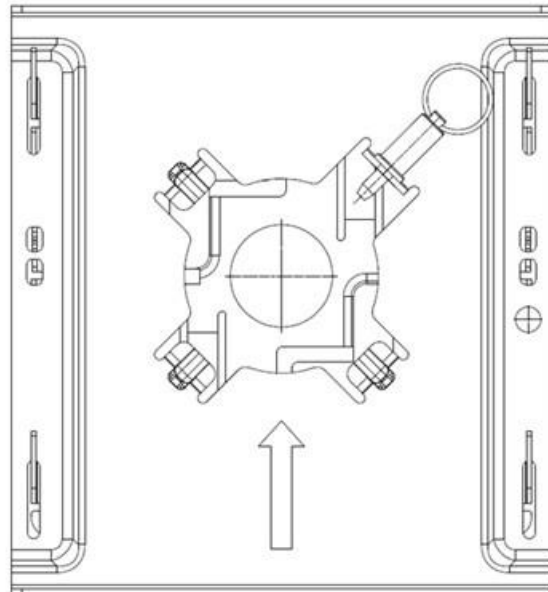
Nonstandard Ceiling or Wall

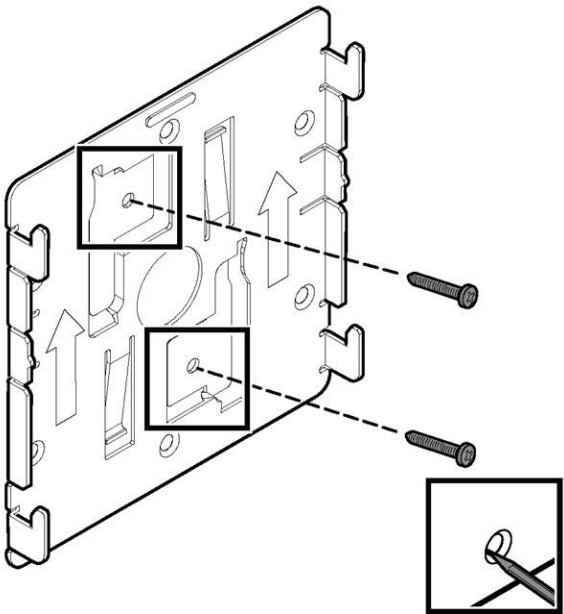
The access point can be installed on a nonstandard ceiling grid using the following accessories:

Order part number	Description
AH-ACC-BKT-AX-TB Note: Only this bracket is included with the access point	Mounting bracket for 15/16 in. ceiling grid 
AH-ACC-BKT-AX-IL	Mounting bracket for 9/16 in. wide T-bar with protrusion, 9/16 in. ceilings, and walls 

Order part number	Description
AH-ACC-BKT-AX-SL	Mounting bracket for 1/8 in. and 1/4 in. ceiling grids with a bottom opening 
ACC-BKT-AX-JB	Junction box or wall mounting for indoor access points 

Order part number	Description
ACC-BKT-AX-BEAM	Beam mounting for indoor access points 
AH-ACC-BKT-AX-WL	Mounting bracket for direct-to-wall installations 
AH-ACC-BKT-916-KIT	9/16 in. ceiling mount brackets for non-flat and protruded ceiling tiles. Use with AH-ACC-BKT-AX-TB 

Order part number	Description
ACC-BKT-TB-NF	Adapter bracket for use with AH-ACC-BKT-TB with 15/16 in. wide T-bars on non-flat or protruded ceiling tiles A side-view technical drawing of a rectangular adapter bracket. It features a central horizontal slot and two T-shaped protrusions on the left and right ends. Arrows at the bottom indicate the direction of assembly or adjustment.
ACC-BKT-AX-WNGADAPT	Adapter bracket for use with cloud access point that has an existing WiNG mounting plate (#37201) A top-down technical drawing of a square adapter bracket. It has a central circular hole with a crosshair. Four mounting arms extend from the corners, each ending in a circular hole. A large upward-pointing arrow is centered below the bracket. The bracket is shown within a rectangular frame representing a ceiling tile. Figure 35: ACC-BKT-AX-WNGADAPT adapter bracket

Order part number	Description
	 Figure 36: WiNG metal bracket (#37201)

**Important**

The default bracket for wall installation is the ACC-BKT-AX-JB bracket.

**Note**

Order the -JB bracket for new wall installations. The AH-ACC-BKT-AX-WL bracket is for users who already have the -WL brackets.

Lock Your Access Point

Before You Begin

You will need a Kensington security lock.

About This Task

Secure the access point from damage or theft.

Procedure

1. Securely attach the free end of the Kensington lock cable near the AP.
2. Insert the rectangular lock end into the Kensington security slot on the AP.
3. Lock the Kensington lock.

Mobile Onboarding App

Installation

Onboard the Access Point with the ExtremeCloud IQ Mobile Onboarding App

Before You Begin

You can download the ExtremeCloud IQ Mobile Onboarding application to your mobile device from the [Google application store](#) or from the [Apple application store](#). For more information, see [APs Onboarding - An Effortless Onboarding Experience](#).

You require administrator login privileges. Contact your network administrator if you need login credentials.

About This Task

You can use the ExtremeCloud IQ Mobile Onboarding application to quickly onboard, monitor and troubleshoot access points.

Procedure

1. Open the ExtremeCloud IQ Mobile Onboarding application.
2. Enter your login information.
3. Tap **Add a Device**.
4. Scan the QR code or bar code on the back of the AP with your mobile device camera.
5. Verify the AP model and serial number
6. Select the location.
7. Choose any configured network policies for the AP.