Extreme Wireless 802.11be
Wi-Fi 7 Indoor AP3020/X

Overview of AP3020/X
The AP3020/X is an ExtremeCloud IQ managed, Wi-Fi 7 (802.11be) universal indoor access point (AP). It has a dual-radio design with two 2x2:2 radios for use across the 6 GHz, 5 GHz, and 2.4 GHz bands. It also features a dedicated sensor and dual IoT radios.

Use these instructions as you mount and connect the AP3020/X. The AP ships with the AH-ACC-BKT-AX-TB mounting bracket for use on flat T-Bar ceiling grids and flat surfaces.
For more information, see *ExtremeWireless Access Point AP3020/X Installation Guide*.



Fig. 1: AP3020(left) and AP3020X (right)

Technical Specifications

The AP3020/X has the following features and specifications.

Radios
- Radio 1: 2x2:2 2.4 GHz, 6 GHz-Full or 5GHz-Low
  Radio 2: 2x2:2 5 GHz-Full or 5 GHz-High
- Two IoT radios: Thread and Zigbee ready, Bluetooth 5.4 Low Energy, IEEE 802.15.4

Ports
- One Ethernet port with RJ45 connectors:
  - ETH0: 100Mbps/1000Mbps/2500Mbps with PoE in
  - 802.3az Energy-Efficient Ethernet (EEE)
- One USB 2.0, Type A, 5V/1A (with 802.3at power)
- One Console port
- One 12V DC port

Security
- One Kensington security slot
- Trusted Platform Module (TPM)

Power Consumption
- Power draw: 802.3af PoE: typical 11W, maximum 13W (802.3af profile) without USB
- Power draw: 802.3at PoE: typical 17W, maximum 19W (802.3at profile) with 5W USB load

Physical Dimensions
- Dimensions: 165 × 165 × 40 mm(6.50 × 6.50 × 1.58 in.)
- Weight: 0.64kg (1.41 lb.)

Temperature:
- Operating: 0°C to +50°C (32°F to 122°F)
- Storage: –40°C to +70°C (–40°F to 158°F)
- Humidity: 0% to 95% (non-condensing)

Enclosure: Plastic Top, Aluminum Bottom

Note: South Korea, Mexico, Taiwan, and Brazil require the use of CAT6 shielded cable.

Fig.2: AP3020 Ports and Connectors

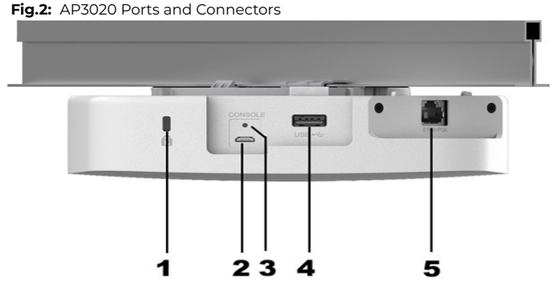


Table 1: *AP3020 Ports and Connectors*

Item	Port
1	Kensington security slot.
2	Console port. The console port can only be used with the Extreme Networks console cable. You will damage the AP if you use another cable.
3	Reset button.
4	USB 2.0 Type A, 5V/1A with PoE 802.3at.
5	ETH0/PoE port.

Fig. 3: AP3020X Ports

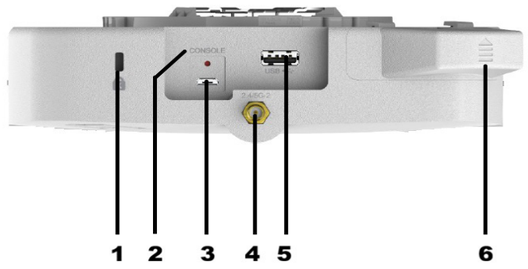


Table 2: *AP3020X Ports and Connections*

Item	Port
1	Kensington security slot.
2	Reset button.
3	Console port.
4	Antenna port; The AP3020X has two 2.4/5 GHz ports for external antennas. It also has two fixed, integral antennas (not shown).
5	USB 2.0, Type A, 5V/1A with PoE 802.3at.
6	Ethernet port with cap. A standard Ethernet cable can be used if you want the cable visible. A flat cable and a cable cap are required if you want to hide the Ethernet cable.

Box Contents

Confirm the following items shipped with your AP before you begin the installation. Contact your dealer if any items are damaged or missing.

Table 3: *Box Contents*

Quantity	Item
1	AP3020/X.
1	AH-ACC-BKT-AX-TB mounting bracket.
1	Regulatory guide.
2	Phillips pan-head wood screws.
2	Phillips head plastic screw-in anchors.

Micro USB Console Port

Through the console port, you can make a serial connection between your management system and the access point.
Use the SKU ACC-WIFI-MICROUSB if you need to order the Micro USB cable. Use only the Extreme Networks console cable with the console port. Another cable can damage the AP.

Status LED Activity

The AP3020/X has a LED on top of the chassis. It shows the operational states for power, firmware updates, Ethernet and wireless interface activity, and alarms.

Table 4: ExtremeCloud IQ LED Activity

LED	Description
Dark	Power is off.
Solid white	The device power is on and the AP is ready to use. The device has successfully established a Control And Provisioning of Wireless Access Points (CAPWAP) connection to ExtremeCloud IQ and is operating normally.
Solid amber	The device power is on and the access point is in boot up mode, or is running without a CAPWAP connection.
Fast-blinking amber	The IQ Engine firmware is updating.

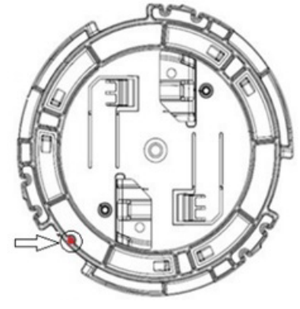
Table 5: ExtremeCloud IQ Controller Status LED Activity

LED	Description
Dark	Power is off or the AP is taken over by the controller. Configuration pushes down to AP from controller to turn off the LED.
Solid white	The AP is starting up or is already taken over by the controller.
Flashing fading white	Configuration pushes down to AP from controller helping the user locate the AP by sight.
Solid amber	A firmware upgrade is occurring.
Fast-blinking amber	The AP is acquiring the DHCP IP.

Position the Access Point Before Installation

Line up the red dot on the access point and the bracket for ease of installation. The AP and bracket lock in place.

Fig. 4: AH-ACC-BKT-AX-TB Bracket Red Dot



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

Before you begin
You need the following items:
- One AP3020/X
- Three M3.5 screws and three screw-in anchors, shipped with the -WL bracket.
- One AH-ACC-BKT-AX-TB or one AH-ACC-BKT-AX-WL bracket.

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

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.
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

Fig. 5: Standard Ceiling Rail Installation

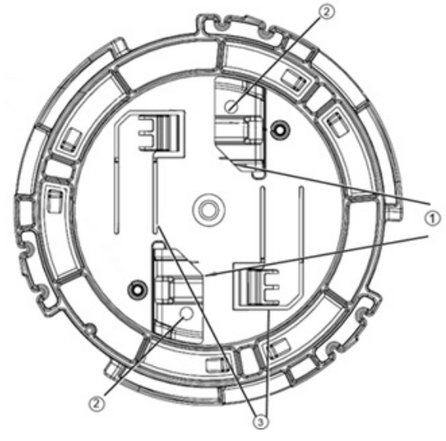


Table 6: *Standard Rail Components*

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.

The AP ships with a mounting bracket for standard 24 mm (15/16 in.) wide T-Bars or 14 mm (9/16 in.) wide T-Bar rails.
For non-standard ceiling rail installations, see “Install the Access Point on a Non-Standard Ceiling Grid or Wall”.

1. Remove the ceiling tiles.
2. Align the accessory on the ceiling rail so that the accessory 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.
4. Attach the LAN cable Ethernet plug to the appropriate Acces Point Ethernet port.
5. Align the red dot on the back of the AP against the red dot on the bracket. The accessory 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 accessory.
7. Attach the Cat6 RJ45 cable to the ETH0.
8. Replace the ceiling tiles.

Install the Access Point on a Non-Standard Ceiling Grid or Wall

Install the AP on a non-standard ceiling grid with the following accessories:

Table 7: *Non-Standard Ceiling Grid and Wall Accessories*

Bracket Part Number	Description
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude ceilings (24 mm or 15/16 in. ceiling grid), Suprafine ceilings (14 mm or 9/16 in. flat ceiling grid), and walls. The ceiling tile sides must be flat without a step on its edges.
AH-ACC-BKT-AX-IL	Mounting bracket for Interlude (14 mm or 9/16 wide T-Bar with protrusion and has less than 1/4 in. between the wall and the access point) ceiling grid or T-Bars.
AH-ACC-BKT-AX-SL	Mounting bracket for Silhouette ceilings (ceiling grid with 3.18 mm (1/8 in.) or 6.35 mm (1/4 in.) bottom opening).
ACC-BKT-AX-JB	Junction box or wall mounting for indoor access points.
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	Mounting kit for 14 mm (9/16 in) wide T-Bars.
ACC-BKT-AX-WNG-ADAPT	Adapter bracket for cloud AP to WiNG mounting plate (#37201). 10 pack.
ACC-BKT-TB-NF.	Mounting bracket for 24 mm (15/16 in) wide T-Bars.

Install the Access Point on a Beam

Before you begin

You need the following items:

- AP3020/X
- ACC-BKT-AX-BEAM mounting bracket

Find a location that supports the following requirements:

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

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

1. Align the red dot on the AP with the red dot on the accessory bracket.
2. Insert the plastic part posts into the AP back recess.
3. Push the AP onto the plastic part, and rotate the AP about one-sixth turn clockwise to make it lock in place.
   If you can turn or twist the AP, it was not locked in place properly. Remove the AP and attach it again until it locks in place.
4. Connect the network cable.
5. Open the top screw as necessary and place the beam clip onto a beam. You must hold the AP when attaching the beam clip.
6. Tighten the beam clip top screw to a torque of 5.65-Newton-meters (50 in-lbs.)

Install the Access Point on a Silhouette Ceiling

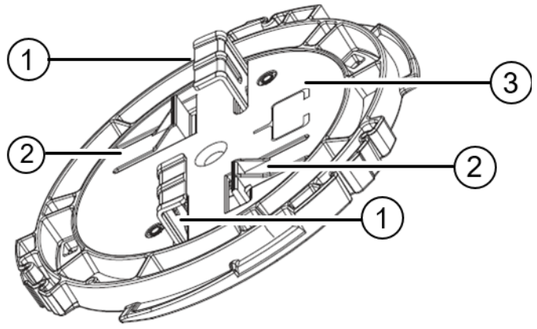
Before you begin

You need the following items:

- AP3020/X
- AH-ACC-BKT-AX-SL bracket.

You can mount the access point to a ceiling grid with 3.18mm (1/8 in.) or 6.35mm (1/4 in.) bottom opening.

Fig. 6: AH-ACC-BKT-AX-SL Accessory Bracket



Note: Silhouette is an Armstrong Ceiling Solutions name.

Table 8: AH-ACC-BKT-SL Bracket Components

Callout	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 3.18mm (1/8 in.) or 6.35mm (1/4 in.) ceiling grid.

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

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

Before you begin

You need the following items:

- AP3020/X
- 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

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

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 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.
4. Gently rotate the bracket counterclockwise and if there is resistance, the other white tab in the back of the accessory must also be released.
5. 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.
6. Press and rotate the access point clockwise about 1/6th of a turn until it locks into place on the accessory bracket.
7. Connect the network cable.
8. Place the cable cover over the Ethernet cable.
9. Replace the ceiling tiles.

Install the Access Point to a 15/16th-inch T-Bar Ceiling

Obtain the following items:

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

Use the ACC-BKT-TB-NF bracket when you install the AP on a suspended ceiling with 24 mm (15/16th-in.) grid system.

1. Remove the ceiling tiles.
2. Using the adapter guide on the top half of the ACC-BKT-TB-NF adapter, 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. Center the -TB accessory on the attached -NF parts.
5. 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.
6. Align the red dot on the back of the AP against the -TB bracket red dot. The bracket has a circular tip that fits into the circular depression on the back of the AP.
7. Press and rotate the access point about one-eighth of a turn clockwise until it clicks into place on the accessory.
8. Connect the network cable.
9. Replace the ceiling tiles.

Install the Access Point to a T-Bar with ACC-BKT-AX-TBW

1. Turn the -TBW accessory screws in such a way that they do not extend past the plastic on the T-Bar side
2. Align the -TBW accessory metal clips on a T-Bar and rotate the metal clip about 1/6th turn clockwise to attach the bracket to the T-Bar.
3. Tighten the screws until either resistance is noticed or the screw head bottoms on the -TBW accessory plastic part.

   Note: Torque the screws to 0.113-Newton-meters (1.0 in-lbs) and turn each screw one more complete turn clockwise.
4. Attach the access point to the -TBW bracket by aligning the red dot on the bracket and the access point. The bracket has a circular tip that fits into the circular depression on the back of the access point.
5. Press and rotate the access point 1/6th turn clockwise until it clicks into place on the bracket.
6. Attach the network cable.
7. (Optional) Place the cable cover over the Ethernet cable.

Install the Access Point on a Junction Box

Before you begin

You need the following items:

- AP3020/X
- ACC-BKT-AX-JB for junction box mounting.

Install an 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 has two parts:

- A metal part that attaches to the junction box.
- A plastic part that attaches to the metal part and AP.

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

Install an AP Using WNGADAPT Bracket

For any indoor concrete wall installations, use the ACC-BKT-AX-WNGADAPT adapter bracket parts with an existing 37201 metal bracket.

⚠ **Warning:** Do not use the AH-ACC-BKT-AX-TB bracket for indoor concrete wall installations.

The 37201 metal mounting bracket ships with indoor WiNG access points. If you do not have the 37201 metal bracket, order it separately.

Attach the 37201 bracket to the wall before installing the WNGADAPT adapter.

Attach the 37201 Bracket

The 37201 main mounting bracket ships with the following items:

- One 37201 main mounting bracket
- Two Phillips pan-head screws
- Two screw-in anchors

For concrete wall installations, you must provide screws and screw-in anchors.

1. Use the metal mounting bracket as a template and mark and drill two mounting holes.
   The four bracket feet and the engraved bracket arrows must be pointing up.
2. Attach the screw-in anchor to the mounting holes.
   Plastic screws and screw-in anchors are for drywall; metal screws and screw-in anchors are for drywall or wood wall installations.
   For concrete wall installations, use a masonry anchor which slips into a drilled hole and expands as the bolt is tightened. Masonry anchors are not provided with the #37201 bracket.
3. Place the metal bracket over the mounting holes and run the LAN cable through the large center hole on the metal mounting bracket.
4. Attach the bracket using two pan-head screws for drywall, wood wall, or metal installations.
   Masonry anchors have integral threaded studs. If you are attaching the 37201 bracket to a concrete wall, then the anchor studs must protrude through the holes where a hex nut is tightened.

WNGADAPT Installation

The WNGADAPT plate ships with two parts:

- One WNGADAPT circular plastic twist part
- One WNGADAPT metal plate

1. With the WNGADAPT metal plate engraved arrows pointing up, place the WNGADAPT metal plate over the 37201 metal mounting bracket.
2. Run the LAN cable through the large center opening on the WNGADAPT plate.
3. Push the WNGADAPT metal plate down on to the 37201 bracket until the metal plate clicks in place.
4. Line the plastic twist part embossed dot against the red dot on the WNGADAPT metal plate.
   Bring the LAN cable up between the WNGADAPT metal plate and the plastic twist part.
5. Rotate the twist part clockwise ¼th of a turn until the locking pin on the WNGADAPT metal plate clicks into place.
6. Line up the red dot on the rear of the access point against the red dot on the plastic twist part. Ensure that the access point center recess area aligns onto the plastic twist center post.
7. Rotate the access point 1/6th of a turn clockwise until it clicks into place.
8. Insert the LAN cable into the RJ45 connector on top of the access point. If there is a LAN cable PoE, then the access point starts a boot cycle.

If desired, use an in-line coupler, flat cable, and a cosmetic cap to attach the RJ45 cable onto the indoor access points.

Connect the AP to the Network

Before you begin

You need an Ethernet cable. Locate the Ethernet ports on the AP.
Connect the AP to your network using one of the Ethernet ports and a network cable.

1. Connect the Ethernet cable to one of the Ethernet ports on the AP.
2. Connect the other end of the cable to the Ethernet port on the switch.

Connect a Power Supply

If you require an external 12V DC power supply, you can plug the power cord into the power connector at the back of the AP.
The LED on the top of the AP lights up white when you connect the power supply. See *Status LED Activity* for more information.

Secure the Access Point After Installation (Optional)

Before you begin

You need a Kensington security lock.
Help to secure the access point from damage or theft.
The AP's security is determined by the cable attachment or the radome breaking.

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

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Downloads

Commission, monitor, and troubleshoot devices easily with **ExtremeCloud IQ** Companion Mobile Application (supported on iOS and Android).

If you need to manually download the applications, then you can use the URLs below.

- ExtremeCloud IQ Companion Mobile: Application Onboarding: https://extremecloudiq.com/login
- ExtremeCloud IQ Companion Android Mobile Application : https://play.google.com/store/apps/details?id=com.extremenetworks.xiqmobileapp
- ExtremeCloud IQ Companion iOS Mobile Application: https://apps.apple.com/us/app/extremecloud-iq-companion/id1526789768

Documentation

You can find documentation for all of your Extreme Networks products at the Extreme documentation portal at https://supportdocs.extremenetworks.com/support/documentation/.

Extreme networks

AP3020/X

Access Point

QUICK INSTALLATION GUIDE

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Use your mobile device camera to scan the serial number, capture installation images, assign or change device location, and network policy. The ExtremeCloud IQ Companion Mobile Application enables you to access the device CLI for troubleshooting and view device and client status.

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