

ExtremeWireless 802.11ax AP4000-1 Indoor Access Point

AP4000-1 Overview

The AP4000-1 access point is a high-performance, 802.11ax Wi-Fi 6E access point. Designed for high-density indoor environments, the access point can operate in 6 GHz, 5 GHz band, and 2.4 GHz bands. The access point can support IEEE 802.11ax Orthogonal Frequency-Division Multiple Access (OFDMA) multi-user access. The access point can be installed on an indoor environment such as a ceiling rail, on non-standard ceilings, on a wall, on a junction box, or to a beam.

The AP4000-1 access point has the following features:

- One multicolor LED status light
 - For LED activity description, see "Status LED Activity Description"
- One light sensor located at the top of the device
- Two Ethernet ports - Eth0 and Eth1
 - Ethernet ports (Eth0 and Eth1) automatically negotiate half- and full-duplex connections with the connecting device.
 - Eth0: 100/1000/2500 Mbps auto-negotiation Ethernet port, RJ45, Power over Ethernet (PoE) at 802.3at
 - Eth1: 10/100/1000 Mbps auto-negotiation Ethernet port, RJ45
- These ports are auto-sensing and adjust to straight-through and crossover standard Cat5e or better Ethernet cables automatically. The access point receives power through an Ethernet connection to the Eth0 port from power sourcing equipment (PSE) that is compatible with the 802.3at and 802.3af standards.
- One USB port
 - Use the USB port to connect USB-based beacons such as iBeacon and Internet of Things (IoT) devices. Remove the screw that secures the protective cover to access the USB port.
- One micro USB console port
- One reset button
- One Kensington lock
 - The best practice is to use Kensington locks for locking the device.
- Temperature:
 - Operating temperature: 0 °C to +50 °C (+32 °F to +122 °F)
 - Storage temperature: -40 °C to +70 °C (-40 °F to +158 °F)
- Relative humidity: 0% to 95% non-condensing

Power Specifications

- IEEE 802.3at PoE Power

Power Options

- Power Draw:
 - Typical: 13.0 W; Max: 14.5 W (without USB)
 - Typical: 15.8 W; Max: 17.3 W (with USB)
 - 802.3af PoE capable
 - Gigabit Ethernet port (RJ45 power input pins: Wires 4,5,7,8 or 1,2,3,6)
- For detailed device and radio specifications, refer to the *AP4000-1 Data Sheet*.

Figure 1 AP4000-1 access point hardware components

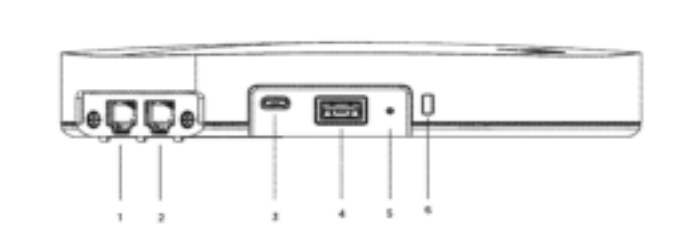


Table 1 AP4000-1 access point hardware ports

Callout	Description
1	Eth1
2	Eth0/PoE+
3	Console port
4	USB port
5	Reset button
6	Security Kensington lock

Status LED Activity Description

- The AP4000-1 access point has one status light on top of the chassis. The status light conveys operational states for system power, firmware updates, Ethernet and wireless interface activity, and major alarms.
- Dark: power is off.
 - Steady white: The device has successfully established a Control And Provisioning of Wireless Access Points (CAPWAP) connection to ExtremeCloud IQ and is operating normally.
 - Slow-blinking white: The device has a CAPWAP connection to ExtremeCloud IQ, but is operating on 802.3af power instead of 802.3at power.
 - Steady amber: The device is initializing, rebooting, or is running without a CAPWAP connection.
 - Slow-blinking amber: The device has no CAPWAP connection to ExtremeCloud IQ, and is operating on 802.3af power instead of 802.3at power.
 - Fast-blinking amber: The device is upgrading its IQ Engine firmware.

Micro USB Console Port

Through the console port, you can make a serial connection between your management system and the access point.

- **Note:** When you connect to the device using the micro USB Console port, the management station from which you connect to the device must have a VT100 emulation program, such as Tera Term Pro (a free terminal emulator) or Hilgraeve HyperTerminal (provided with Windows operating systems from XP forward).

AP4000-1 Box Contents

Ensure that the following items are available:

Table 2 Contents of the AP4000-1 Box

Quantity	Item
1	An AP4000-1 access point
1	Mounting bracket for 15/16 in. T-bar ceiling installation (part number AH-ACC-BKT-AX-TB)
1	Quick Reference Guide

All optional brackets and accessories are sold separately. For detailed instructions about all mounting procedures, refer to the *ExtremeWireless AP4000-1 Access Point Installation Guide* and the *802.11ax and Cloud Access Points Accessories Guide* in the [Extreme Networks Documentation Support](#) site.

Position the Access Point before Installation

There is a red dot on the back of the access point and the bracket that will work as a guide to position the access point for installation. Line up the red dot on the access point and the bracket for ease of installation.

Install the Access Point

- **Electrical Hazard:** Only qualified personnel must perform installation procedures.

Use these instructions as guidelines for mounting and connecting the AP4000-1 access point easily and safely.

Install the Access Point on a Standard Ceiling Rail

The AP4000-1 access point ships with a mounting bracket for standard 15/16 in. dropped ceiling grid. For non-standard ceiling rail installations, see "Install the Access Point on a Non-Standard Ceiling Grid or a Wall".

- 1 Remove the ceiling tiles.
- 2 Align the accessory on the ceiling rail in such a way 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.

- **Note:** There are two white tabs in the back of the accessory that holds on to the ceiling rail in place. Use your finger to push and unhook one side of the white tab if you want to remove the accessory from the ceiling rail.

Figure 2 AH-ACC-BKT-AX-TB bracket

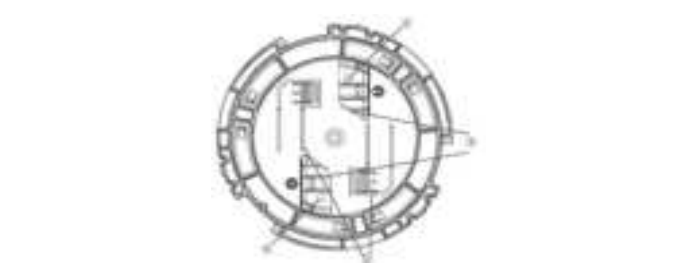


Table 3 AH-ACC-BKT-AX-TB bracket parts description

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 Ethernet port cap to the access point Ethernet port. For more information about Ethernet cap, refer to Ethernet Cap Accessory Information on the *802.11ax and Cloud Access Points Accessories Guide*.
- 5 Align the red dot on the back of the access point against the 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 1/8th turn clockwise until it clicks into place on the accessory.

Figure 3 AP4000-1 access point ceiling install



- 7 Attach the Cat6 RJ45 cable to the Eth0 or Eth1 port.
- 8 If hidden cables are desired, then place the cable cover over the Ethernet cable.
- 9 Replace the ceiling tiles.

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

For detailed non-standard ceiling grid installation or wall installation instructions, refer to the *802.11ax and Cloud Access Points Accessories Guide*.

The access point can be installed on a non-standard ceiling grid using the following accessories:

Table 4 Non-standard ceiling grid and wall accessories information

Bracket part number	Description
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude ceilings (15/16 in. ceiling grid), Suprafine ceilings (9/16 in. ceiling grid), and walls
AH-ACC-BKT-AX-TL	Mounting bracket for Interlude (9/16 wide T-bar with protrusion) ceilings
AH-ACC-BKT-AX-IL	Mounting bracket for Silhouette ceilings (ceiling grid with 1/8 in. or 1/4 in. bottom opening)
AH-ACC-BKT-AX-SL	Junction box or wall mounting for indoor access points
ACC-BKT-AX-JB	Beam mounting for indoor access points
ACC-BKT-AX-BEAM	

Bracket part number	Description
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
ACC-BKT-TB-NF	Adapter bracket AH-ACC-BKT-TB for 15/16 in. wide T-bars non-flat or protruded ceiling tiles
ACC-BKT-AX-WNGADAPT	Adapter bracket for using cloud access point with WiNG mounting plate (#37201)

- **Note:** The default bracket for wall installation is the ACC-BKT-AX-JB bracket. 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 the Access Point after Installation

Secure the access point by using the Kensington lock on the side of the access point. The security feature is used to prevent the access point from being removed from the mounting accessory.

Antenna Information

- The access points have internal antennas.
- 2 Dual-band 2.4G/5G antennas
 - 2 6G band antennas
 - 2 scanning 2.4G/5G/6G antennas

Professional Installation Instruction

Installation personnel

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

Installation procedure

Refer to the *ExtremeWireless AP4000-1 Access Point Installation Guide*.

- **Warning:** Select the installation position and ensure that the final output power does not exceed the limit set forth in relevant rules. The violation of the rule could lead to serious federal penalty.

Instructions d’installation professionnelle Installation

Ce produit est destine a un usage specifique et doit etre installe par un personnel qualifie maitrisant les radiofrequences et les regles s’y rapportant. L’installation et les reglages ne doivent pas etre modifies par l’utilisateur final.

Procedure d’installation

Consulter le manuel d’utilisation *ExtremeWireless AP4000-1 Access Point Installation Guide*.

- **Warning: Avertissement:** Choisir avec soin la position d’installation et s’assurer que la puissance de sortie ne depasse pas les limites en vigueur. La violation de cette regle peut conduire a de serieuses penalites federales.

