## ExtremeWireless 802.11ax AP4000 and AP4000-1 Indoor Access Point

#### AP4000 and AP4000-1 Overview

The AP4000 and 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 and AP4000-1 access point has the following features: • One bi-color 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 ETHO and ETH1

Ethernet ports (ETHO and ETHI) 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 802.3at 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**

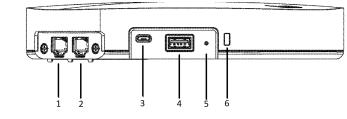
• IEEE 802.3at PoE Power

#### **Power Options**

- Power Draw:
- Typical: 13.0 W; Max: 14.5 W (without USB) (AP4000-1-WW)
   Typical: 15.8 W; Max: 17.3 W (with USB)
- 802.3at 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 and AP4000-1 data sheets.

## Figure 1 AP4000 and AP4000-1 access point ports



## Table 1 AP4000 and AP4000-1 access point hardware ports

Callout	Description
1	ETH1
2	ETHO/PoE+
3	Console port
4	USB port
5	Reset button
6	Security Kensington lock

## Status LED Activity Description

The AP4000 and 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. Use the SKU ACC-WIFI-MICRO-USB when you order the Micro USB cable.

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 VTI00 emulation program, such as Tera Term Pro (a free terminal emulator) or Hilgraeve HyperTerminal (provided with Windows operating systems from XP forward).

## AP4000 and AP4000-1 Box Contents

Ensure that the following items shipped with your access point.

## Table 2 Contents of the AP4000 and AP4000-1 Box

#### **Quantity Item**

- 1 An AP4000 or 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 *AP4000 Access Point Installation Guide* and the *802.11ax and Cloud Access Points Accessories Guide* on 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**



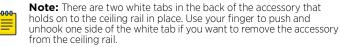
**Electrical Hazard:** Only qualified personnel must perform installation procedures.

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

## Install the Access Point on a Standard Ceiling Rail

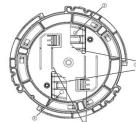
The AP4000 and AP4000-1 access point ships with a mounting bracket for standard 15/16 in. dropped ceiling grid. For non-standard ceiling rail installations, see "Install the Access Point on a Non-Standard Ceiling Grid or a Wall".

- 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.



(Pares

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 or AP4000 access point ceiling install



- 7 Attach the Cat6 RJ45 cable to the ETHO 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

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-IL	Mounting bracket for Interlude (9/16 wide T- bar with protrusion) ceilings				
AH-ACC-BKT-AX-SL	Mounting bracket for Silhouette ceilings (ceiling grid with 1/8 in. or 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 installation				
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				

Bracket part number	Description				
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-TB bracket. Order the -TB bracket for new wall installations.

## Lock the Access Point after Installation (Optional)

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.

## **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 Access Point Installation Guide* for additional information.



**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 Extreme Wireless AP4000 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.

## Regulatory and Compliance Information Safety Guidelines

This section contains notices that are intended to protect your personal safety and to prevent damage to the equipment.

#### **Qualified Personnel:**



Electrical Hazard: Only qualified personnel must perform installation procedures. Within the context of the safety notes in this documentation, qualified persons are defined as persons who are authorized to commission grounding devices, systems, and circuits in accordance with established safety practices and standards. A qualified person understands the requirements and risks involved with installing outdoor electrical equipment in accordance with national codes.

#### Federal Communication Commission Interference Statement

FCC regulations restrict the operation of this device to indoor use only. 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 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 of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into 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

This device is restricted for indoor use. This equipment may only be operated



Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

indoors. Operation outdoors is in violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties. The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft event bet are relative.

and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet. Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or Communications with unmanned aircraft systems.



Warning: FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 44 cm between the radiator and your

#### Japan Indoor Use Statement

For Japan, AP4000-1 access point is restricted for indoor use in the 5150-5350 MHz band only

#### Japan Voluntary Control Council for Interference (VCCI) -Class B

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

#### **European Union (EU) Radiation Warning Statement**



Warning: This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

#### Selling Countries:

	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
Restrictions or requirements in the UK	PT	RO	SK	SI	ES	SE	UK(NI)

#### **Brazil Compliance Statement**

Este produto está homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolução nº. 242/2000 e atende aos requisitos técnicos aplicados.

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados. Para maiores informações, consulte o site da ANATEL - www.anatel.gov.br.

#### **Mexico Compliance Statement**

La operacion de este equipo esta 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 operacion no deseada.

#### **UK Statement and CE Statement**

This equipment complies with the UK and EEA radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body.

The frequency and the maximum transmitted power in the UK and European Conformity are listed below:

2412-2472MHz: 19.96 dBm (AP4000 only) 5180-5240MHz: 22.95 dBm 5260-5320MHz: 22.98 dBm 5500-5700MHz: 22.98 dBm 5745-5825 MHz: 22.98 dBm 5955-6415MHz: 22.97 dBm

CE - The device is restricted to indoor use only when operating in the 5150-5350 MHz and 5945 to 6425 MHz frequency range. UK - The device is restricted to indoor use only when operating in the 5150-5350 MHz and 5925 to 6425 MHz frequency range. The device is restricted for indoor use only in the frequency range. Hereby, Extreme Networks declares that the radio equipment AP4000 and AP4000-1 is in compliance with Radio Equipment Regulations 2017.

#### **Extreme Networks UK Address**

Extreme Networks, UK Ltd. 250 Longwater Avenue Green Park 1st Floor Reading, UK

#### **Extreme Networks EU Importer Address**

Extreme Networks Ireland Ops Ltd Rineanna House Shannon Industrial Estate Shannon. V14CA36 Ireland

#### **Industry Canada Notice**



Warning: For indoor use only. Pour une utilisation en intérieur uniquement.

This device complies with ISED's licence-exempt RSSs. 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. Le présent appareil est conforme aux CNR d' ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Warning: IC Radiation Exposure Statement: This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 27 cm between the radiator and your

Warning: Cet équipement est conforme aux limites d'exposition aux ravonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 27 cm de distance entre la source de rayonnement et votre corps

**Caution:** The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.



Caution: Avertissement: les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

#### **Taiwan Regulatory Statement**

取得審驗證明之低功率射頻器材,非經核准,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。低功率射頻器材之 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,並改善至無罪擾時方得繼續使用。前述合法通信,指依電信管理法規 定作業之無線電通信。低功率射頻器材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。應避免影響附近雷達系統之操作。 請至此連結閱讀中文說明: https://www.extremenetworks.com/support/

ExtremeWireless 802.11ax Wi-Fi 6E AP4000 無線接入點 無線電:3 個無 線電 (2.4GHz、5 GHz 和 6 GHz); 1 個物聯網無線電 (BLE/802.15.4)

#### **Hazardous Substances**

This product complies with the requirements of Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

#### **European Waste Electrical and Electronic Equipment** (WEEE) Notice



In accordance with Directive 2012/19/EU of the European Parliament on waste electrical and electronic equipment (WEEE):

- 1 The symbol above indicates that separate collection of electrical and electronic equipment is required.
- 2 When this product has reached the end of its serviceable life, it cannot be disposed of as unsorted municipal waste. It must be collected and treated separately
- 3 It has been determined by the European Parliament that there are potential negative effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment.

It is the users' responsibility to utilize the available collection system to ensure WFFF is properly treated. For information about the available collection system, contact Extreme

Environmental Compliance at Green@extremenetworks.com.

#### Supplement to Product Instructions

	限用物質及其化學符號 Restricted substances and its chemical symbols								
單元Unit	銜Lead (Pb)	柔Mercury (Hg)	鍋Cadmium (Cd)	六價格 Hexavalent chromium (Cr*6)	多決聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)			
金屬掌件 (Metal Parts)	0	0	0	0	0	0			
電路模组 (Circuit Modules)	-	0	0	0	0	0			
電覺及電覺組件 (Cables & Cable Assemblies)	0	0	0	0	0	0			
豐料和聚合物掌件 (Plastic and Polymeric parts)	0	0	0	0	0	0			
	exceeding 0.01 w	wt % " 係指用 nt %" indicate that ition.	the percentage conte	nt of the restricted s	ubstance exceeds the	0			

備考3."一"係指該項限用物質為排除項目。 Note3:The "" indicate the state of the state of

#### **Declaration of Conformity in Languages of the European** Community

- English Hereby, Extreme Networks declares that the radio equipment type (AP4000 and AP4000-1) is in compliance with Directive 2014/53/EU. For full text of the EU Declaration of Conformity, contact Extreme Regulatory Compliance at compliancerequest@extremenetworks.com
- Finnish Täten Extreme Networks vakuuttaa, että Radio laite tyyppi (AP4000 and AP4000-1) on direktiivin 2014/53/EU mukainen.EU vaatimustenmukaisuusvakuutuksen täydellisestä tekstistä ota yhteyttä äärimmäisiin viranomais säädöksiin osoitteessa compliancerequest@extremenetworks.com
- Extreme Networks verklaart hierbij dat het type radioapparatuur Dutch (AP4000 and AP4000-1) in overeenstemming is met richtlijn 2014/53/ EU.Voor de volledige tekst van de EU-conformiteitsverklaring u contact opnemen met extreme regelgeving op compliancerequest@extremenetworks.com
- Par la présente, Extreme Networks déclare que le type d'équipement French radio (AP4000 and AP4000-1) est conforme à la directive 2014/53/ UE.Pour le texte intégral de la Déclaration de conformité de l'UE, veuillez communiquer avec Extreme Regulatory Compliance à compliancerequest@extremenetworks.com
- Härmed intygar Extreme Networks att radioutrustning typ (AP4000 and Swedish AP4000-1) överensstämmer med direktiv 2014/53/EU.För fullständig text av EU-försäkran om överensstämmelse, vänligen kontakta Extreme regelefterlevnad på compliancerequest@extremenetworks.com
- Danish Herved erklærer Extreme Networks, at radioudstyrs typen (AP4000 and AP4000-1) er i overensstemmelse med direktiv 2014/53/EU.For den fulde ordlyd af EU-overensstemmelseserklæringen bedes du kontakte Extreme Regulatory Compliance på compliancerequest@extremenetworks.com
- German Dabei erklärt Extreme Networks, dass der Funkgerätetyp (AP4000 and AP4000-1) mit der Richtlinie 2014/53/EU im Einklang steht. Für den vollständigen Wortlaut der EU-Konformitätserklärung wenden Sie sich bitte an extreme Regulatory Compliance unter compliancerequest@extremenetworks.com
- Με την παρούσα, ακραία δίκτυα δηλώνουν ότι ο τύπος του Greek ραδιοεξοπλισμού (AP4000 and AP4000-1) συμμορφώνεται με την οδηγία 2014/53/ΕΕ.Για το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ, παρακαλούμε επικοινωνήστε με την ακραία κανονιστική συμμόρφωση στο compliancerequest@extremenetworks.com
- Hérlendis, Extreme Networks, lýsa því yfir að útvarpsbúnaðargerðin Icelandic (AP4000 and AP4000-1) sé í samræmi við tilskipun 2014/53/ESB.Fyrir fullan texta í ESB yfirlýsingu um samræmi, vinsamlegast hafðu samband við Extreme Reglufylgni á compliancerequest@extremenetworks.com
- Di conseguenza, Extreme Networks dichiara che il tipo di apparecchiature Italian radio (AP4000 and AP4000-1) è conforme alla direttiva 2014/53/EU.Per il testo integrale della Dichiarazione di conformità dell'UE contattare Extreme Regulatory Compliance presso compliancerequest@extremenetworks.com
- Spanish Por la presente, Extreme Networks declara que el tipo de equipo radioeléctrico (AP4000 and AP4000-1) cumple con la Directiva 2014/53/ UE.Para obtener el texto completo de la Declaración de conformidad de la UE, póngase en contacto con Extreme Regulatory Compliance en compliancerequest@extremenetworks.com
- Portuguese Por este meio, a Extreme Networks declara que o tipo de equipamento de rádio (AP4000 and AP4000-1) está em conformidade com a Diretiva 2014/53/UE.Para obter o texto integral da Declaração de Conformidade da UE, contacte o cumprimento regulamentar extremo em compliancerequest@extremenetworks.com
- Malti B ' dan, netwerks estremi, jiddikjara li t-tip ta ' tagħmir tar-radju (AP4000 and AP4000-1) huwa konformi mad-Direttiva 2014/53/UE.Għat-test sħiħ tad-dikjarazzjoni ta ' konformità tal-UE, jekk jogħġbok ikkuntattja lillkonformità regolatoria compliancereguest@extremenetworks.com

# **ExtremeWireless**<sup>™</sup> **Indoor Access Point**

## **Quick Reference**

AP4000-WW and AP4000-1-WW

#### Scan to Download the ExtremeCloud IQ Companion Mobile Application

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





ExtremeCloud IQ Companion iOS Mobile Application

ExtremeCloud IQ Companion Android Mobile Application

## Scan for Product Support Details



ExtremeCloud IQ Companion Mobile Application Onboarding



Documentation

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