

ExtremeWirelessTM WiNGTM AP-7612 Installation Guide



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For product documentation online, visit: <https://www.extremenetworks.com/documentation/>

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Preface

Text Conventions

The following tables list text conventions that are used throughout this guide.

Table 1: Notice Icons






Icon	Notice Type	Alerts you to...
	General Notice	Helpful tips and notices for using the product.
	Note	Important features or instructions.
	Caution	Risk of personal injury, system damage, or loss of data.
	Warning	Risk of severe personal injury.
	New	This command or section is new for this release.

Table 2: Text Conventions

Convention	Description
Screen displays	This typeface indicates command syntax, or represents information as it appears on the screen.
The words enter and type	When you see the word “enter” in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says “type.”
[Key] names	Key names are written with brackets, such as [Return] or [Esc] . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press [Ctrl]+[Alt]+[Del]
<i>Words in italicized type</i>	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.

Providing Feedback to Us

We are always striving to improve our documentation and help you work better, so we want to hear from you! We welcome all feedback but especially want to know about:

- Content errors or confusing or conflicting information.
- Ideas for improvements to our documentation so you can find the information you need faster.
- Broken links or usability issues.

If you would like to provide feedback to the Extreme Networks Information Development team about this document, please contact us using our short [online feedback form](#). You can also email us directly at internalinfodev@extremenetworks.com.

Getting Help

If you require assistance, contact Extreme Networks using one of the following methods:

- **GTAC (Global Technical Assistance Center) for Immediate Support**
 - **Phone:** 1-800-998-2408 (toll-free in U.S. and Canada) or +1 408-579-2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact
 - **Email:** support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- **GTAC Knowledge** — Get on-demand and tested resolutions from the GTAC Knowledgebase, or create a help case if you need more guidance.
- **The Hub** — A forum for Extreme customers to connect with one another, get questions answered, share ideas and feedback, and get problems solved. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.
- **Support Portal** — Manage cases, downloads, service contracts, product licensing, and training and certifications.

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number and/or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any action(s) already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

Extreme Networks Documentation

To find Extreme Networks product guides, visit our documentation pages at:

Current Product Documentation	www.extremenetworks.com/documentation/
Archived Documentation (for earlier versions and legacy products)	www.extremenetworks.com/support/documentation-archives/
Release Notes	www.extremenetworks.com/support/release-notes

Open Source Declarations

Some software files have been licensed under certain open source licenses. More information is available at: www.extremenetworks.com/support/policies/software-licensing.

1 Overview

Uplink and Power Connections

The AP7612 (AP-7612-680B30-xx) is a wall-plate 11ac Wave 2 access point (AP) that lets you extend your wireless LAN and deploy local WiFi while still providing extension for wired clients from the same Ethernet jack. This fully-featured AP plugs into existing Ethernet cabled wall plates. The AP provides application visibility and control and policy support over dual integrated radios and a Bluetooth Low Energy (BLE) radio.

AP-7612 comes with a second Gigabit Ethernet port with PoE sourcing capability. The PSE port can provide (802.3af), which allows you to directly power devices such as IP Phones.

The AP-7612 is designed with five single-band internal antennas for indoor use only.

Additional features:

- Primarily designed to support wall, single and dual-gang box installation.
- Power: 802.3at (PoE+) compliant for full functionality. 802.3af is supported with reduced functionality.
- Supports the 802.11ac and 802.11n wireless standards, with full backward compatibility with legacy 802.11abg.
- Has two concurrent Wi-Fi radios, one 5GHz 2x2 11ac radio and one 2.4GHz 2x2 11n. One radio can operate as a Bluetooth Radio.
- Interoperates fully with Wireless LAN, including support for VoWLAN, branch office mode, guest services, RTLS, availability, and mobility.

Uplink and Power Connections

The AP-7612 uses as follows:

Table 3: Power Sources

Power Source	PoE Power Sourcing on GE2
GE1 PoE 802.3at	15.4 Watts.
GE1 PoE 802.3af	Not available.
12V DC	Not available.

The AP has two client ports (GE1/POE and GE2), where:

- GE1/POE port is the system connection.

- GE2 port is used for connecting to an IP Phone.

**Note**

Both GE1 and GE2 ports are not accessible when the AP is mounted on to a bracket.

GE1 acts as the building and system connection. The GE2 port provides optional power and connectivity to wired devices such as IP Phones.

**Caution**

Do not take the AP off the bracket if you are not the owner or not trained to perform the task.

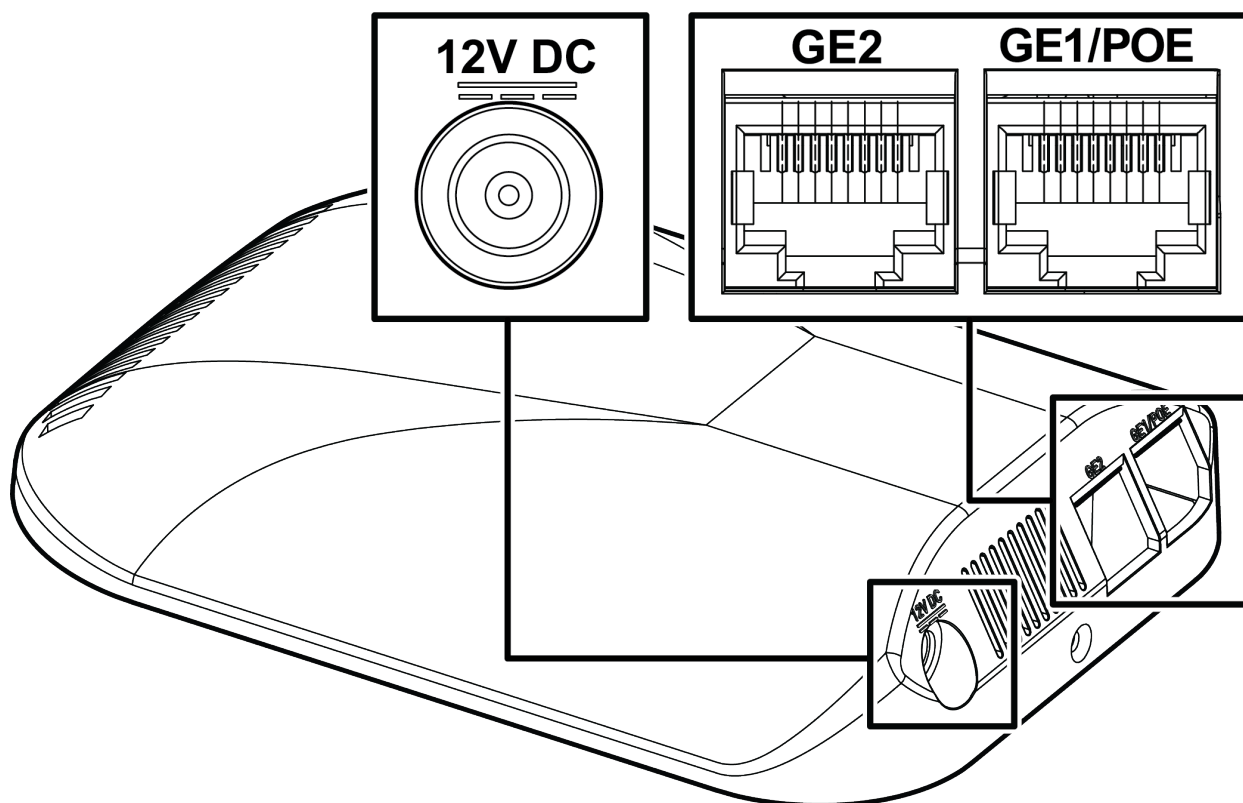


Figure 1: Power Connections on AP-7612

2 Installation Process

Verifying the Box Contents
Safety Guidelines
Mounting the Bracket to a Wall
Connecting the AP to the Network
Mounting the AP to the Bracket

Follow these procedures to install the AP-7612:

- 1 Verify the box contents.
- 2 Review the [Safety Guidelines](#).
- 3 Mount the bracket to a wall, or junction/gang box.
- 4 Connect the AP to the Network.
- 5 Mount the AP to the Bracket.

Verifying the Box Contents

Before you install the AP-7612, make sure that you have all of the necessary parts.

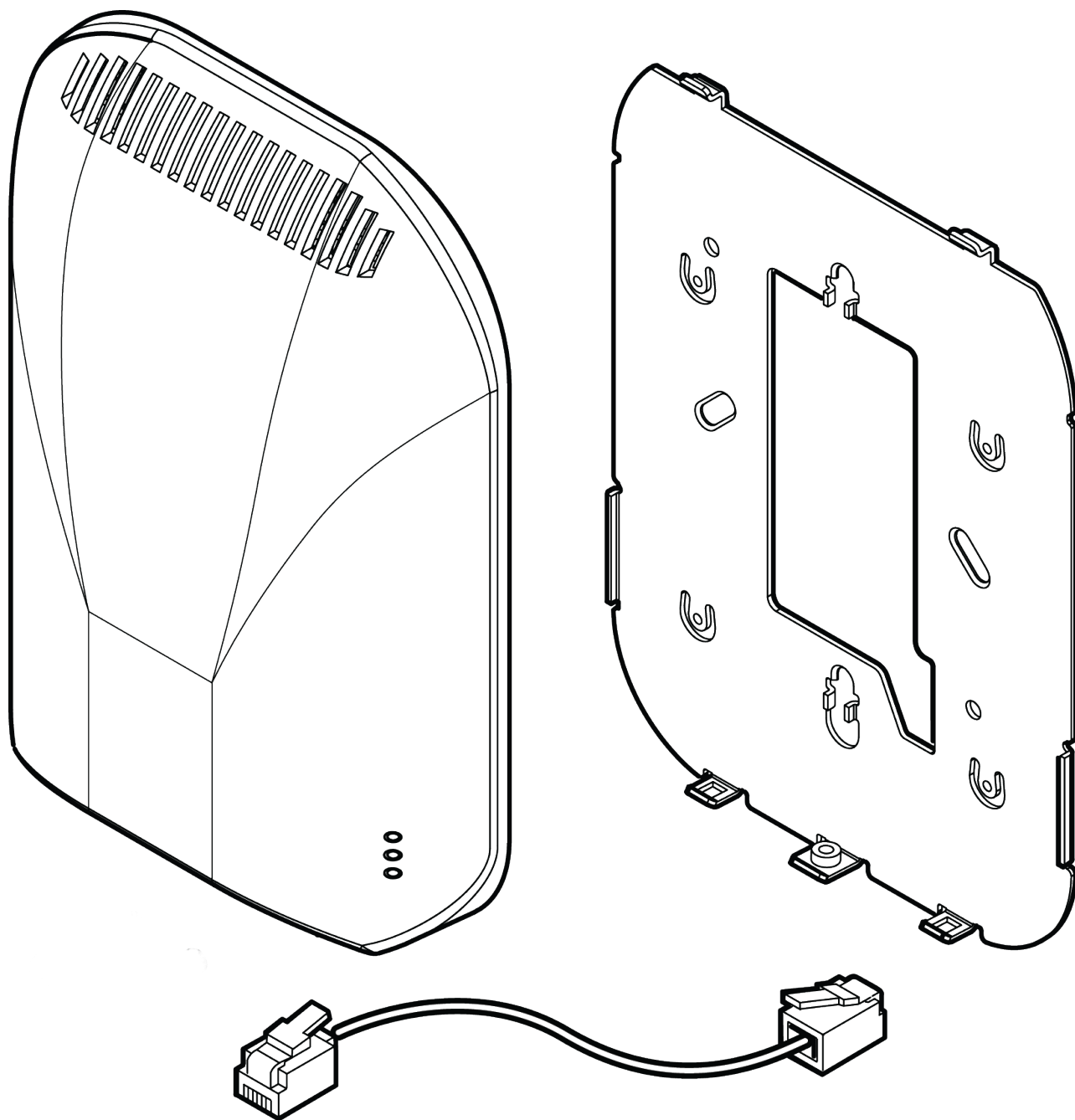
- 1 Verify that the box contains the following items:

Table 4: AP-7612 Box Contents

Quantity	Item
1	AP-7612 Quick Reference
1	AP-7612-680B30-xx
1	Wall/Junction box/Gang box mounting bracket (includes Security Torx screw)

Table 5: AP-7612 Box Hardware Contents

Quantity	Item
1	100mm twister pair RJ45 Flat Cable
1	Security Torx screw (size 0.45X6)

**Note**

Only the RJ45 flat cable ships with the product. Users need to provide their own additional cable for GE2.

- 2 Perform a visual inspection of the AP for any signs of physical damage. Contact Extreme Networks if there are any signs of damage.

**Note**

Before mounting the AP-7612, read [Safety Guidelines](#).

Safety Guidelines

This section contains notices that you must adhere to ensure your personal safety and to prevent any damage to the equipment.

**Caution**

The unit and all interconnected equipment must be installed indoors within the same building, including all -powered network connections as described by Environment A of the IEEE 802.3at standard.

Qualified Personnel

**Danger**

Only qualified personnel should perform installation procedures.

Mounting the Bracket to a Wall

This procedure assumes that you are running a LAN cable through a wall.

**Note**

You can also mount this AP to a wall and run a LAN cable between the AP and bracket without creating a hole in the wall.

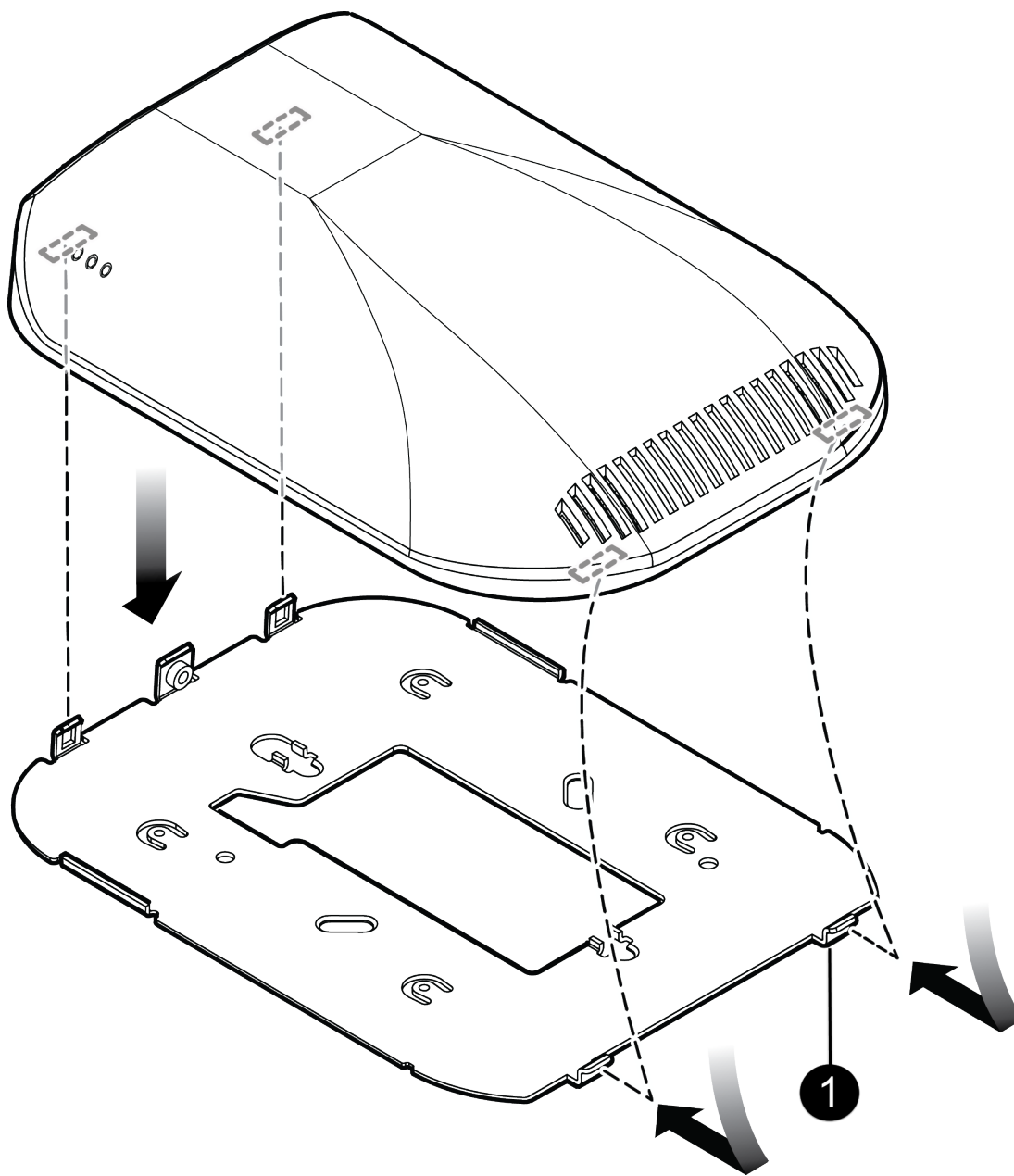


Figure 2: AP-7612 Mounting Bracket

Number	Description
1	AP mounting tabs

To mount the bracket to a wall:

- 1 Using the mounting bracket as a guide, choose a location where it is feasible to place the AP's center. The location must allow the LAN cables to come out of the wall within the large rectangular hole. Place the bracket against the wall. (The captive screw will be used to lock the AP in place.) Decide which two holes to use to mount the bracket. We recommend using the two holes at the top and the bottom center of the opening. At a minimum, use two holes on opposite sides of the large center opening.
- 2 Mark the two hole centers.
- 3 For drywall/plasterboard walls, drill two holes using a 1/4" or 6mm diameter drill bit.
- 4 For drywall/plasterboard walls, screw the plastic anchors into the wall first and then insert the screws into the anchors.
- 5 Insert the bracket over the screw heads and slide the bracket. Ensure that both screws get attached to the bracket.
- 6 Tighten the screws to secure the bracket in its place. Torque the screw to 9.0 in-lbs.
- 7 **Connect the LAN/power to the AP.**
- 8 **Attach the AP to the mounting bracket.**

Connecting the AP to the Network

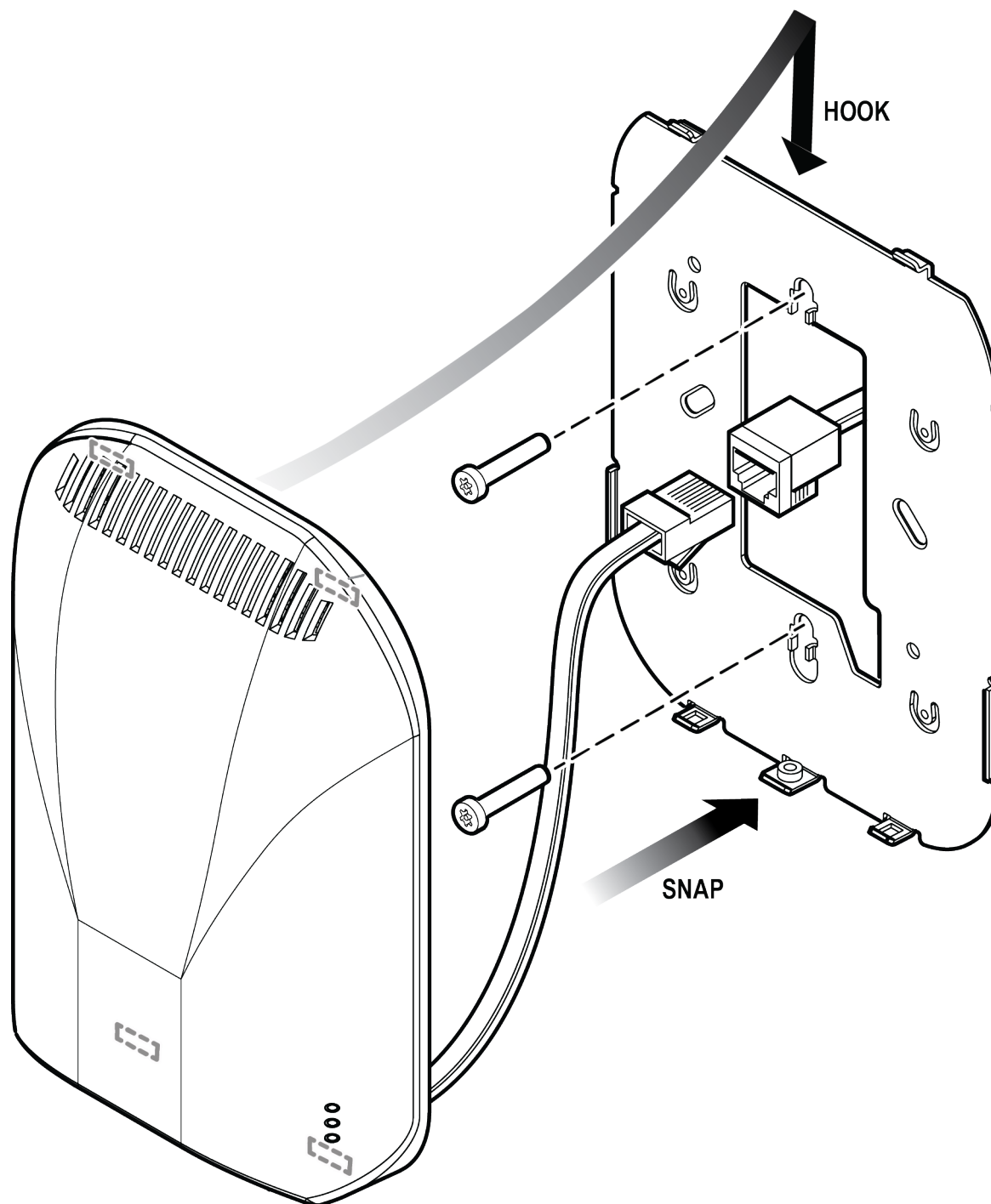
Connect the building wire LAN 1 wire (either + at or PoE af) to the black RJ-45 connector using short patch cables. Alternatively, you can connect the pass-through cable to the blue connector (top) on the back of the AP.

Mounting the AP to the Bracket

After you attach the bracket to a wall or junction/gang box and connect the LAN/power, attach the AP to the bracket.

- 1 Stuff any extra GE1 cable into the wall/box.
- 2 Keep the **bracket** at an angle and insert the two tabs at the top of the bracket into the AP.
- 3 Rotate the AP on the tabs and wait for it to clip to the other side of the bracket. The other side of the bracket is on the bottom of the AP where the cable enters.

- 4 Attach and tighten the Security Torx screw to the bottom of the AP so that the AP is attached to the bracket. Torque the screw to 7 in-lbs.

**Note**

If you are using the optional 12V DC-IN adapter instead of PoE on GE1 port, then fully insert the friction fit connector into the AP. Plug the AP into an AC receptacle.

3 Specifications

This appendix lists the specifications for the ExtremeWireless™ Indoor Access Point AP-7612.

Table 6: Specifications for the AP-7612

Item	Specification
AP Part Number: 37101	AP-7612-680B30-US
AP Part Number: 37102	AP-7612-680B30-WR
Enclosure material	AP enclosure is not plenum rated.
Power source	Power is provided by Power-over-Ethernet (802.3at or 802.3af). No AC power supply is needed. If wall plate has more than two Ethernet ports, the extra ports are not accessible after installing the Wall Plate AP.
Power consumption	802.3at or PoE 802.3af Sensor radio power budget is 802.1af (12.5W)
Antenna	Five internal antennas
Uplink interface	One 10/100/1000BT Ethernet port
RoHS compliant	Yes
Radio configuration	Dual Band Dual Concurrent 802.11ac and 802.11n Radio 1: 5 GHz; 2x2:2; IEEE 802.11 ac (up to 886 Mbps per radio) Radio 2: 2.4 GHz; 2x2:2; IEEE 802.11n (up to 300 Mbps per radio) Legacy 802.11abg mode support Integrated sensor radio that operates as Bluetooth 4.0 radio or operates as 802.15.4 (one at a time)
Water/dust proof ratings	Not applicable
Operating temperature	0°C to 40°C
Non-operating transportation/ storage	-40°C to 70°C (-40°F to 158°F)
Altitude (feet)	>6,500 feet; safety approved to 2,000 meters
Relative humidity (% RH)	0% to 95% (non-condensing)
Wind	Not applicable. The AP-7612 is an indoor-only model.

4 Regulatory Information

United States

Canada

European Waste Electrical and Electronic Equipment (WEEE) Notice

CE Statement for Mobile Device Usage

Hazardous Substances

Declaration of Conformity in Languages of the European Community

United States

FCC Declaration of Conformity Statement

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/TV technician for help.

FCC Caution:

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference
- This device must accept any interference received, including interference that may cause undesired operation.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Radiation Exposure Statement

For product available in the USA/Canada market, only channel 1-11 can be operated. Selection of other channels is not possible. This device is going to be operated in 5.15-5.25GHz frequency range, it is restricted in indoor environment only. This device is restricted for indoor use.

This equipment complies with FCC RF radiated exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 22 cm between the radiator and your body.

Canada

Industry Canada Notice

This device complies with Industry Canada license-exempt RSS standard(s). Operation 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 of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1 l'appareil ne doit pas produire de brouillage, et
- 2 l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



Caution

- 1 For product available in the USA/Canada market, only channel 1-11 can be operated. Selection of other channels is not possible.
- 2 Dynamic Frequency Selection (DFS) for devices operating in the bands 5250- 5350 MHz, 5470-5600 MHz and 5650-5725 MHz.
- 3 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.
- 4 The maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit.
- 5 The maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate.
- 6 For indoor use only.

Avertissement:

- 1 Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.
- 2 Sélection dynamique de fréquences (DFS) pour les dispositifs fonctionnant dans les bandes 5250-5350 MHz, 5470-5600 MHz et 5650- 5725 MHz.

- 3 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;
- 4 le gain maximal d'antenne permis pour les dispositifs utilisant les bandes 5250-5350 MHz et 5470-5725 MHz doit se conformer à la limite de p.i.r.e.
- 5 le gain maximal d'antenne permis (pour les dispositifs utilisant la bande 5725-5850 MHz) doit se conformer à la limite de p.i.r.e. spécifiée pour l'exploitation point à point et non point à point, selon le cas.
- 6 Pour une utilisation en intérieur uniquement.

For Mobile Device Usage



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 24cm between the radiator & your body.



Warning

Déclaration d'exposition aux radiations: 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 24 cm de distance entre la source de rayonnement et votre corps.

Safety Guidelines

This section contains notices that you must adhere to ensure your personal safety and to prevent any damage to the equipment.



Caution

The unit and all interconnected equipment must be installed indoors within the same building, including all PoE powered network connections as described by Environment A of the IEEE 802.3af standard.

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.
- 4 It is the users' responsibility to utilize the available collection system to ensure WEEE is properly treated.

For information about the available collection system, please contact Extreme Customer Support at 353 61 705500 (Ireland).

CE Statement for Mobile Device Usage



Warning

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

All operational modes:

2.4GHz: 802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40), Bluetooth(BR/EDR, LE)

5GHz: 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40), 802.11ac (VHT80)

The frequency and the maximum transmitted power in EU are listed below:

- 2412-2472MHz: 19.84 dBm
- 2402-2480MHz (BR/EDR): 9.99 dBm
- 2402-2480MHz (LE): 9.63 dBm
- 5180-5320MHz: 22.93 dBm
- 5500-5700MHz: 29.97 dBm

The device is restricted to indoor use only when operating in the 5150 to 5350 MHz frequency range.

Selling Countries:

Restriction in	AT	BE	BG	HR	CY	CZ	DK
	EE	FI	FR	DE	EL	HU	IE
	IT	LV	LT	LU	MT	NL	PL
	PT	RO	SK	SI	ES	SE	UK

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.

Declaration of Conformity in Languages of the European Community

Hereby, Extreme Networks, Inc. declares that the radio equipment type AP- 7612 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following Internet address: www.extremenetworks.com

**Note**

Changes or modifications made to this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

产品说明书附件 Supplement to Product Instructions

部件名称 (Parts)	有毒有害物质或元素 (Hazardous Substance)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr ⁶⁺)	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件 (Metal Parts)	×	○	○	×	○	○
电路模块 (Circuit Modules)	×	○	○	×	○	○
电缆及电缆组件 (Cables & Cable Assemblies)	×	○	○	×	○	○
塑料和聚合物部件 (Plastic and Polymeric parts)	○	○	○	○	○	×
电路开关 (Circuit Breakers)	○	○	×	×	○	○

○： 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。
Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T 11363-2006 standard.

×： 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006 标准规定的限量要求。
Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T 11363-2006 standard.

对销售之日的所售产品, 本表显示,
凯创供应链的电子信息产品可能包含这些物质。注意: 在所售产品中可能会也可能不会含有所有所列的部件。
This table shows where these substances may be found in the supply chain of Extreme electronic information products, as of the date of sale of the enclosed product. Note that some of the component types listed above may or may not be a part of the enclosed product.

除非另外特别的标注, 此标志为针对所涉及产品的环保使用期标志。某些零部件会有一个不同的环保使用期(例如, 电池单元模块)贴在其产品上。
此环保使用期限只适用于产品是在产品手册中所规定的条件下工作。
The Environmentally Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here, unless otherwise marked. Certain parts may have a different EFUP (for example, battery modules) and so are marked to reflect such. The Environmentally Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.



5GHz band (W52, W53): Indoor Use Only

NCC Statement

- (1) 「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」。
- (2) 「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」。
- (3) 「電磁波曝露量 MPE 標準值 $1\text{mW}/\text{cm}^2$ ，本產品使用時建議應距離人體：22 cm」。
- (4) 無線資訊傳輸設備避免影響附近雷達系統之操作。