

ExtremeWireless 802.11ax AP410i/e Indoor Access Points

AP410i/e Overview

The AP410i/e access points are indoor model enterprise class 802.11ax access points. The “i” in AP410i indicates that the access point comes with internal antennas and the “e” indicates that it comes with external antenna connectors. The access points feature built-in dual-band radios, two band-locked radios, eight WiFi internal or external antennas. The AP410i/e can be mounted on a flat surface such as a wall, solid flat ceiling, and to a junction box, and can be installed on a suspended or drop ceiling.

 **Note:** The AP410i/e requires a minimum base firmware of WiNG 7.3.0.

The AP410i/e access points have the following features:

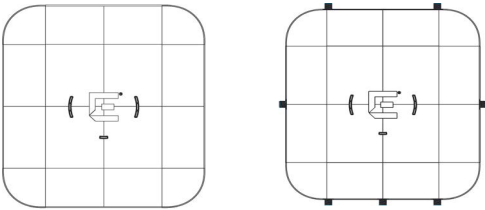
- Radios:
 - Three 802.11ax radios (one 2X2 2.4GHz radio, one 4X4 5GHz radio, and one 2X2 2.4GHz and 5GHz radio)
- Console port: RJ45
- Two Ethernet ports:
 - 1 x 10/100/1000 Mbps auto-negotiation Ethernet port, RJ45
 - One multi-rate GE/2.5GE Ethernet port
- LEDs: Seven
 - All LEDs will be on during reset and will connect to general purpose input or output (GPIO) pins (see “LED Indicators” for details)
- One reset button
- One Kensington lock
- One safety hanger provision
- One USB 2.0 type A connector
- Power: PoE 802.3at and 802.3bt (see [Table 1](#) for details)
- Antennas:
 - AP410i: Eight WiFi internal antennas
 - AP410e: Six RP-SMA external antenna ports
- Temperature:
 - AP410i: 0 °C to +50 °C (32 °F to +122 °F)
 - AP410e: -20 °C to +55 °C (-4 °F to +131 °F)
- Enclosure: Plastic

Table 1 AP410i/e Power source

Power source	Description
Power over Ethernet (PoE)	Power is provided through the 2.5GE multi-rate Ethernet ports of AP410i/e, compliant to be powered with 802.3at and 802.3bt to provide full functionality. For reduced functionality, use 802.3af.
External 12V DC power supply (optional; ordering part #37219- PWR 12VDC, 3A, 2.5mm x 5.5mm connector)	Power is provided through an external DC power supply plugged into an AC source. A GPIO connection is required to indicate that an external 12V DC power supply is present.

 **Note:** PoE is disabled when external power supply is used.

Figure 1 Front views of AP410i and AP410e



LED Indicators

The LED indicators are located on the front face of the access point but are not visibly marked.

Table 2 AP410i/e LED status

LED indicator	LED color	Description
Status	Green	Normal operational status
	Amber	Non-operational status
GE1 Ethernet	Amber	100 Mbps
	Green	1000 Mbps
	Purple	2.5G
GE2 Ethernet	Amber	100 Mbps
	Green	1000 Mbps
Radio 1	Green	2.4G activity
Radio 2	Amber	5G activity
Radio 3	White	Sensor activity

AP410i/e Box Contents

Ensure that the following items are available:

Table 3 Contents of the AP410i/e Box

Quantity	Item
1	AP410i/e Quick Reference
1	Access point (AP410i or AP410e)
1	Mounting bracket for 802.11ax indoor access point
2	Phillips pan head wood screws
2	Screw-in anchors

All optional brackets and accessories are sold separately. For detailed installation instructions about all mounting procedures, refer to the *ExtremeWireless Access Points AP410i/e Installation Guide* in the [Extreme Networks Documentation Support](#) site.

Install the Access Point

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

Use these instructions as guidelines for mounting and connecting the AP410i/e access points easily and safely. The AP410i/e comes with a Mounting Bracket (#37201) that can be used to mount the access point on a flat T-bar with flat ceiling tiles, flat surfaces, or beams. An adapter and brackets are available for mounting the access point to non-flat ceiling tiles and T-bars. To mount the AP410i/e on a junction box, use the optional bracket (WS-MBI-WALL04; #30516).

 **Note:** The mounting procedures for installing the access point using the WS-MBI-DCFLUSH (ordering part #37211) adapter to a T-bar, WS-MBI-DCMTR01 (ordering part #30518) to a T-bar, and using the main mounting bracket (ordering part #37201) along with a flat metal easy-attach adapter (ordering part #37210), accessory BRKT-000147A-01 (beam clip), and KT-135628-01 are covered in the *ExtremeWireless Access Points AP410i/e Installation Guide*.

Install the Access Point on a Wall or a Flat Ceiling

Pre-installation checklist:

- The mounting surface, item, and hardware must be able to support the access point in all environmental conditions.
 - The mounting surface should be flat.
- To install the access point on a dry wall or flat surface:

Option 1: Install the Access Point Using the Main Mounting Bracket

- 1 Using the main mounting bracket as a template, mark the hole centers on the wall.

 **Note:** The four feet of the bracket and the arrow mark must be vertical and pointing up, and the flat part of the bracket must be touching the flat surface.

- 2 Insert the screws into the mounting bracket holes and use the screw-in anchors, if needed.
- 3 Insert the Ethernet cable into the GE1 port.
- 4 Insert the access point onto the bracket feet and slide it down to lock it in place.

Option 2: Install the Access Point Using an Optional Wall and Box Bracket

 **Note:** Mounting the access point to a flat ceiling requires the WS-MBI-WALL04 (#30516) bracket, two Phillips pan head wood screws, and two screw-in anchors.

- 1 Install the WS-MBI-WALL04 bracket onto a wall or a flat ceiling with two screws and anchors if appropriate, and ensure that the locking tab is on the top side.
 - Use the optional wall and box bracket as a template and mark the holes to be used. For wall mounting procedure, the best practice is to use “A” or “B” hole centers.
 - Mark the hole centers to be used on the attachment surface.
 - Drill the holes and attach the bracket using the screws and anchors provided in the kit.
- 2 Insert the Ethernet cable into the GE1 port.
- 3 Insert the access point onto the keyhole posts, slide the access point and lock it into place at about 1/4th inch from the wall.

Install the Access Point on a Suspended or Drop Ceiling

The AP410i/e can be mounted to a suspended or drop ceiling directly by using the main mounting bracket on the T-bar. If there is a ceiling tile protrusion, add the optional T-bar adapter to the main mounting bracket prior to T-bar installation.

Option 1: Install the Access Point Using the Main Mounting Bracket on a Flat T-bar with Flat Ceiling Tiles

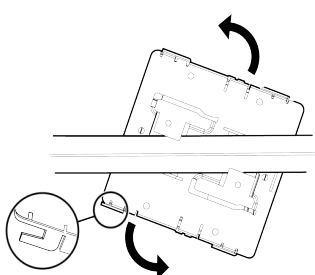
Pre-installation checklist:

- The base thickness of the T-bar that supports the ceiling tile is 0.031 in.
- The maximum base thickness of the T-bar is 0.055 in.

 **Note:** The T-bar width can be either 9/16 in. (15 mm) or 15/16 in. (24 mm).

- 1 Remove the ceiling tiles, and then push and rotate the main mounting bracket onto the T-bar in such a way that the main bracket center angled locking tabs get attached to the T-bar ([Figure 2](#)).

Figure 2 Attaching the main mounting bracket to a T-bar



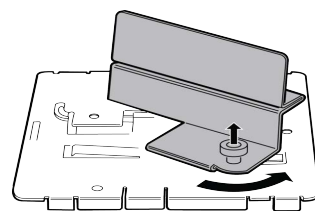
- 2 Replace the tiles to hold the T-bar in place.
- 3 Hold the access point, and rock it back and forth to ensure it is securely mounted.
- 4 Attach the Ethernet cable’s RJ45 connector to the GE1 port.

Option 2: Install the Access Point Using an Adapter on the Main Mounting Bracket

 **Note:** Mounting the access point to a suspended or drop ceiling requires an optional adapter (Universal Mounting Kit for WLAN APs; # KT-135628-01). The adapter requires a flat T-bar and fits a ceiling tile with up to a 0.35 in. protrusion from the T-bar.

- 1 Attach the T-bar adapter by lining up the small bends on the adapter with the long raised parts on the main bracket. Pull up the adapter’s locking pin, and twist. Make sure the locking pin goes into the locking pin hole on the main bracket and locks in place.

Figure 3 Attaching the adapter to the main bracket



- 2 Slide the T-bar holder onto the T-bar and replace the tiles to hold the adapter onto the T-bar.
- 3 Hold the access point, and rock it back and forth to ensure that it is securely mounted.
- 4 Attach the Ethernet cable to the GE port.

The optional WS-MBI-DCMTR01 (#30518) adapter can be used for T-bar installations without the mounting bracket. For detailed instructions, see the *ExtremeWireless Access Points AP410i/e Installation Guide*.

Install the Access Point on a Junction Box

Use the Wall and Box Bracket, WS-MBI-WALL04 (#30516) to mount the access point on a junction box.

- 1 Remove the screws from the junction box.
- 2 Line up the bracket holes with the hole on the junction box.

If the holes do not align, drill new holes.

 **Note:** When you line up the holes, the bracket locking tab must be pointing up and the junction box must be fully covered by the bracket. The bracket must be square to the rest of the room walls and the two holes that are being used must be on the opposite side of large center hole on the bracket.

 **Note:** If the holes that you need to use are not near the corners of the bracket, break off the corner to decrease bracket’s visibility after the access point is installed.

- 3 Using the aligned holes, attach the bracket to the junction box using the screws removed from the box earlier.

 **Caution:** Over tightening the screws will cause the bracket to bend. If the bracket bends, you will not be able to slide the access point onto the keyhole posts.

- 4 Connect the Ethernet cable to the access point.
- 5 Align the keyhole slots and posts and then slide the access point onto the bracket until you hear it lock in place.

Install the Access Point on a Beam

Pre-installation checklist:

- The beam must be able to support the access point in all environmental conditions.
- The beam must be flat.

Before attaching the access point onto a beam, verify that:

- Beam attachment area is at least 0.5” (12.7 mm) wide and as long as the access point’s largest dimension.
- Beam mounting surface is less than 0.650” (16.5 mm) thick.

To attach an access point to a beam, attach a beam clip (BRKT-000147A-01) to the mounting bracket:

- 1 Attach the adapter to the mounting bracket by using a twisting motion.
- 2 Attach the mounting bracket to the access point.
- 3 Place the adapter on a beam in such a way that there is enough space between the screw and clamp to be tightened.

- 4 Use the screw and clamp on the top of the adapter to secure the access point in place on the beam.
- 5 Insert the Ethernet plug into the access point.

Connect a Power Supply

If you need to power the AP410i/e access point with an external 12V DC power supply, you can plug the power cord into the power connector on the back of the access point. There is no wall mount for the 12V DC power supply. The power LED on the front face of the access point is lit when the power supply is connected. For information about optional power supplies, refer to the *ExtremeWireless Access Points AP410i/e Installation Guide*.

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 must not attempt to install or change the setting.

External antenna

Use only approved antennas. The non-approved antennas may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC/IC limit and is prohibited.

Installation procedure

Refer to user’s manual for installation details.

 **Warning:** Carefully select the installation position and make sure 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.

Antenn externe

Utiliser uniquement les antennes approuvees par le fabricant. L'utilisation d'autres antennes peut conduire a un niveau de rayonnement essentiel ou non essentiel depassant les niveaux limites definis par FCC/IC, ce qui est interdit.

ProcEDURE d’installation

Consulter le manuel d’utilisation.

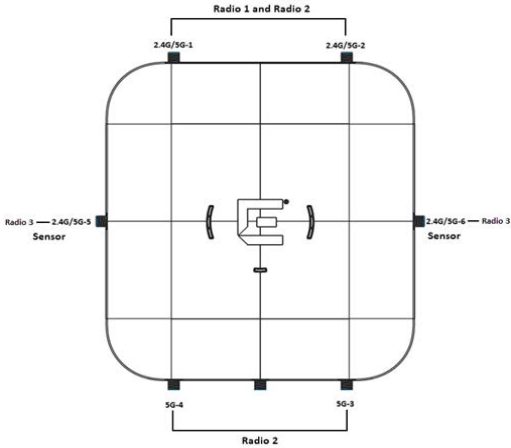
 **Warning: Avertissement:** Choisir avec soin la position d’installation et s’assurer que la puissance de sortie ne depasse pas les limites en vigueur. La violation de cette regle peut conduire a de serieuses penalites federales.

GE and Console Connections

The AP410i/e has two GE (Ethernet) ports and a Console port. During administration and maintenance through the Console, the access point must still have a power connection through either an Ethernet PoE cable or an external DC power supply.

Antenna Configurations for External Antenna Model

Figure 4 AP410e external antenna connectors



Antenna socket radio mapping information

- Radio 1 (R1) - antennas 1 and 2
- Radio 2 (R2) - antennas 1, 2, 3, and 4
- Radio 3 (R3) - antennas 5 and 6

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 should perform installation procedures. Within the context of the safety notes in this documentation, qualified persons are defined as persons who are authorized to commission, ground and label 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.

Warning: MPE Statement - Mobile device: 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 26 cm between the radiator and your body.

Federal Communications Commission (FCC) Notice

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.

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

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 31 cm between the radiator and your body.

Industry Canada Notice

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.

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.

Warning: IC Radiation Exposure Statement: This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 39 cm between the radiator and your body.

Warning: Déclaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 39 cm de distance entre la source de rayonnement et votre corps.

Australia Notice

Warning: AU co-location MPE Statement: This equipment complies with AU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 24 cm between the radiator and your body.

Other Countries

Brazil

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

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.

單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr ⁶⁺)	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
金屬零件 (Metal Parts)	○	○	○	○	○	○
電路模組 (Circuit Modules)	—	○	○	○	○	○
電纜及電纜組件 (Cables & Cable Assemblies)	○	○	○	○	○	○
塑料和聚合物零件 (Plastic and Polymeric parts)	○	○	○	○	○	○
備考1. “超出0.1 wt %” 及 “超出0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值。 Note 1 : “Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.						
備考2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。 Note 2 : “○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.						
備考3. “—” 係指該項限用物質為排除項目。 Note 3 : The “—” indicates that the restricted substance corresponds to the exemption.						

NCC Statement

功率電波輻射性電機管理辦法第十二條 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。

第十四條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。

無線資訊傳輸設備避免影響附近雷達系統之操作。

本器材須經專業工程人員安裝及設定，始得設置使用，且不得直接販售給一般消費者。

CE Declaration

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

Warning: CE co-location MPE Statement: This equipment complies with CE 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.

	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

All Operational Modes

AP410i and AP410e

2.4GHz: 802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40), 802.11ax (HEW20), 802.11ax (HEW40), 802.15.4 (Thread)
5GHz: 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT20), 802.11ac (VHT40), 802.11ac (VHT80), 802.11ac (VHT160), 802.11ax (HEW20), 802.11ax (HEW40), 802.11ax (HEW80), 802.11ax (HEW160)

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

2412-2472MHz: 19.98 dBm
2402-2480MHz (LE): 6.23 dBm
5180-5240MHz: 22.98 dBm
5260-5320MHz: 22.98 dBm
5500-5700MHz: 29.98 dBm
2405-2480MHz: 6.48 dBm

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):

- The symbol above indicates that separate collection of electrical and electronic equipment is required.
- 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.
- 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 WEEE is properly treated. For information about the available collection system, please contact Extreme Environmental Compliance at Green@extremenetworks.com.

Declaration of Conformity in Languages of the European Community

English	Hereby, Extreme Networks, declares that the radio equipment type (AP410i/e) is in compliance with Directive 2014/53/EU. For full text of the EU Declaration of Conformity, please contact Extreme Regulatory Compliance at compliancerequest@extremenetworks.com
Finnish	Täten Extreme Networks vakuuttaa, että Radio laite tyyppi (AP410i/e) on direktiivin 2014/53/EU mukainen.EU vaatimustenmukaisuusvakuutuksen täydellisestä tekstistä ota yhteyttä äärimmäisiin viranomais säädöksiin osoitteessa compliancerequest@extremenetworks.com
Dutch	Extreme Networks verklaart hierbij dat het type radioapparatuur (AP410i/e) 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
French	Par la présente, Extreme Networks déclare que le type d'équipement radio (AP410i/e) 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
Swedish	Härmed intygar Extreme Networks att radioutrustning typ (AP410i/e) 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 (AP410i/e) 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 (AP410i/e) 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
Greek	Με την παρούσα, ακραία δίκτυα δηλώνουν ότι ο τύπος του ραδιοεξοπλισμού (AP410i/e) 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
Icelandic	Hérlendiris, Extreme Networks, lýsa því yfir að útværpsbúnaðargerðin (AP410i/e) 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
Italian	Di conseguenza, Extreme Networks dichiara che il tipo di apparecchiature radio (AP410i/e) è conforme alla direttiva 2014/53/UE.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 (AP410i/e) 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 (AP410i/e) 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, networks estremi, jiddikjara li t-tip ta ’ taghmir tar-radju (AP410i/e) huwa konformi mad-Direttiva 2014/53/UE.Ghat-test shih tad-dikjarazzjoni ta ’ konformità tal-UE, jekk joghgbok ikkuntattja lill-konformità regolatorja compliancerequest@extremenetworks.com

ExtremeWireless™ Indoor Access Points

Quick Reference - No BLE and IoT

AP410i

AP410e

Legal Notices

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P/N 9037239-00 Rev AA

