ExtremeWireless™ AP510e

Installation Guide

9035996-03 Rev AA
April 2023

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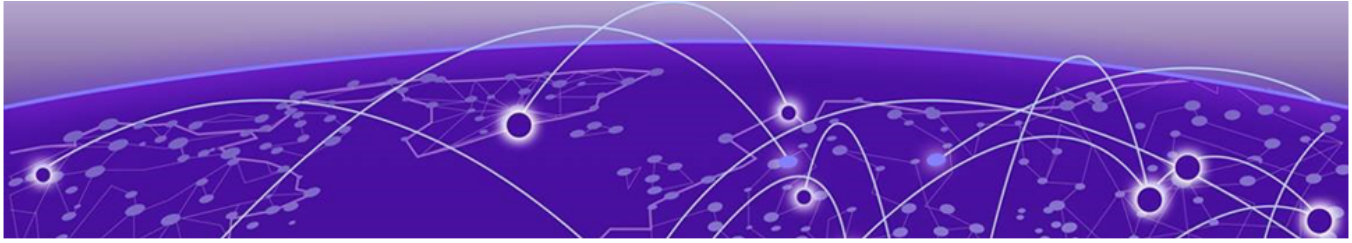

Table of Contents

Preface

This section discusses the conventions used in this guide, ways to provide feedback, additional help, and other Extreme Networks® publications.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as ExtremeSwitching switches or SLX routers, the product is referred to as *the switch* or *the router*.

Table 1: Notes and warnings

Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product
	Note	Useful information or instructions
	Important	Important features or instructions
	Caution	Risk of personal injury, system damage, or loss of data
	Warning	Risk of severe personal injury

Table 2: Text

Convention	Description
`screen displays`	This typeface indicates command syntax, or represents information as it is displayed 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 in boldface, for example **Ctrl** 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**
Words in italicized type	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.
	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Bold text indicates command names, keywords, and command options.
italic text	Italic text indicates variable content.
`[ ]`	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
`{ x | y | z }`	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
`x | y`	A vertical bar separates mutually exclusive elements.
`< >`	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, *member*`[`*member*`...]`.
\	In command examples, the backslash indicates a “soft” line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Providing Feedback to Us

Quality is our first concern at Extreme Networks, and we have made every effort to ensure the accuracy and completeness of this document. 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, you can do so in two ways:

- Use our short online feedback form at https://www.extremenetworks.com/documentation-feedback/.
- Email us at documentation@extremenetworks.com.

Please provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

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

Extreme Portal

Search the GTAC (Global Technical Assistance Center) knowledge base, manage support cases and service contracts, download software, and obtain product licensing, training, and certifications.

The Hub

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

Call GTAC

For immediate support: 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

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

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3. Select the products for which you would like to receive notifications.

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Overview

The AP510e is a next generation, indoor ceiling mount model enterprise class 802.11ax access point (AP). The “e” in AP510e indicates that it comes with external antennas. The AP features dual-band radio, eight RP-SMA WiFi ports, one Bluetooth port, and one internal Bluetooth Low Energy (BLE) antenna. The Bluetooth port can be used for a remote antenna in place of the internal antenna. The AP has an extended operating temperature range.

The AP510e can be mounted on a dry or wood wall, solid flat ceiling, junction/gang box, and on a suspended or drop ceiling.

Note
The AP510e requires a minimum base firmware of WiNG 7.1.1.

New in this Guide

The following sections shows the recent documentation revisions for this guide. Use this information to locate the latest updates.

April 2023 Revisions

The following table shows the documentation updates for April 2023.

Table 4: New and revised information

Description	Section
Support for the AIO-DQ15021-RPSMA antenna.	Supported antennas
	Operational Description of Antenna Configuration and RF Output Power Setting
	AIO-DQ15021-RPSMA Antenna Information
	Install the AIO-DQ15021-RPSMA Antenna

Table 4: New and revised information (continued)

Description	Section
Compliance updates for the AIO-DQ15021-RPSMA antenna.	FCC Radiation Exposure Statement
	Industry Canada Notice
	Detachable Antenna Usage

AP510e Features

The enterprise class 802.11ax AP510e access point has the following features:

- Radios: 2 radios (1 dual band, 2.4GHz and 5GHz, and 1 band locked 5GHz); 1 IoT radio (2.4 GHz).
- Console Port: RJ45.
- Two Ethernet ports:
  - One multi-rate GE/2.5GE/5GE port (LAN1) with PoE
  - 10/100/1000 Ethernet Port (LAN2) with PoE
- LEDs: 6 – All LEDs will be on during reset (see AP510e LEDs Status for details).
- One Reset button.
- Power: PoE 802.3af; 12VDC external power in connector (see AP510e Powering Methods for details).
- Antenna Connectors:
  - Eight RP-SMA external antenna connectors
  - One RP-SMA BLE antenna connector
  - One BLE (Bluetooth Low Energy) internal antenna connector

  Note
  The BLE internal antenna is used if no BLE antenna is attached to the port. For antenna configurations, see Antenna configurations for external antenna models.

- Temperature:
  - -20°C to +50°C (-4° F to + 122° F) @ 6000 ft.
  - -20°C to +55°C (-4° F to + 131° F) @ Sea Level.
- Enclosure: Plastic with metal base.

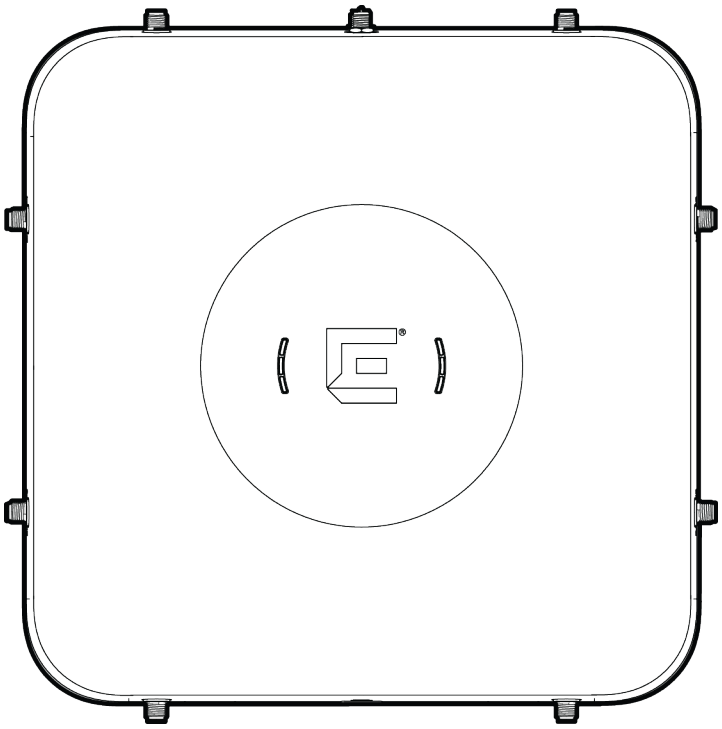


Figure 1: Top view of AP510e

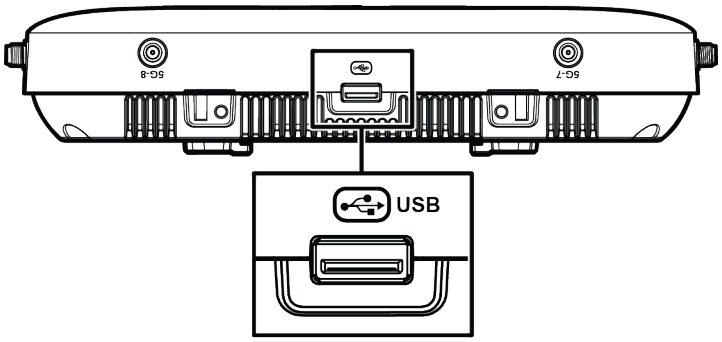


Figure 2: Side view of AP510e

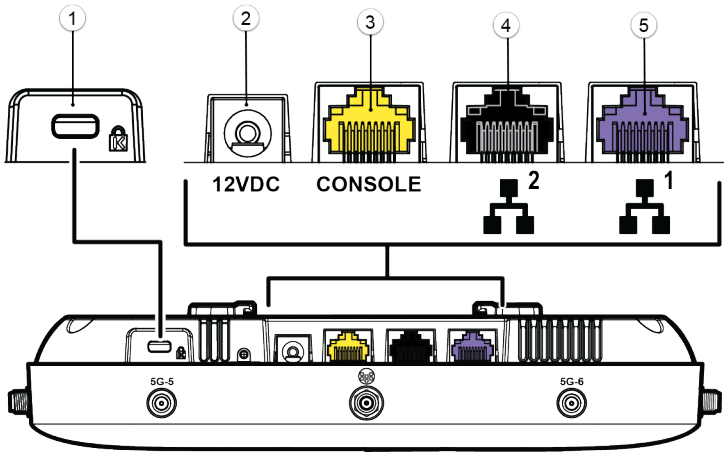


Figure 3: AP510e back ports

Table 5: Description of back ports of AP510e

Number	Description
1	Kensington lock
2	12V DC power supply
3	Console port
4	GE 2 (GE)
5	GE 1 (5 GE)

AP510e Powering Methods

You can power the AP through the RJ45 Ethernet port (LAN 1 (5GE) and LAN2 (GE) ports, see Figure 3 on page 12). If you need to power the AP510e with an external 12V DC power supply, you can plug the power cord into the power connector on the back of

the AP. There is no wall mount bracket for the 12V DC power supply. When the device is powered on, the power LED on the front face of the AP is lit.

Table 6: AP510e Powering Methods

Power Source	Description
Power over Ethernet (PoE)	Power is provided through the RJ45 Ethernet port (LAN ports on AP510e back ports, items #4 and #5) of AP510e, compliant to be powered with 802.3af and provides full functionality with 802.3at. This is the preferred method of powering the AP on ceiling and high wall installations.
External 12V DC power supply (optional; ordering part #37219 - PWR 12VDC, 3A, 2.5mm x 5.5mm connector)	The AP510e can also be powered by an external DC power supply plugged into an AC source. Plug the supply's input jack into the 12V DC (AP510e back ports, item #2) port.

Note
PoE is disabled when external power supply is used.

AP510e Power Table

The following table provides information on the status of the side ports on the access point when powered using 802.3af and 802.3at technology:

AP510e	802.3af	802.3at
Radio 1	2x2 (14dBm)	4x4 (16dBm)
Radio 2	2x2 (14dBm)	4x4 (16dBm)
BLE	ON	ON
GE1	ON	ON
GE2	ON	ON
Dual band	Yes	Yes
Dual 5G	No	Yes

AP510e LEDs Status

LEDs Status

The AP510e LEDs are located on the front face of the AP but are not visibly marked.

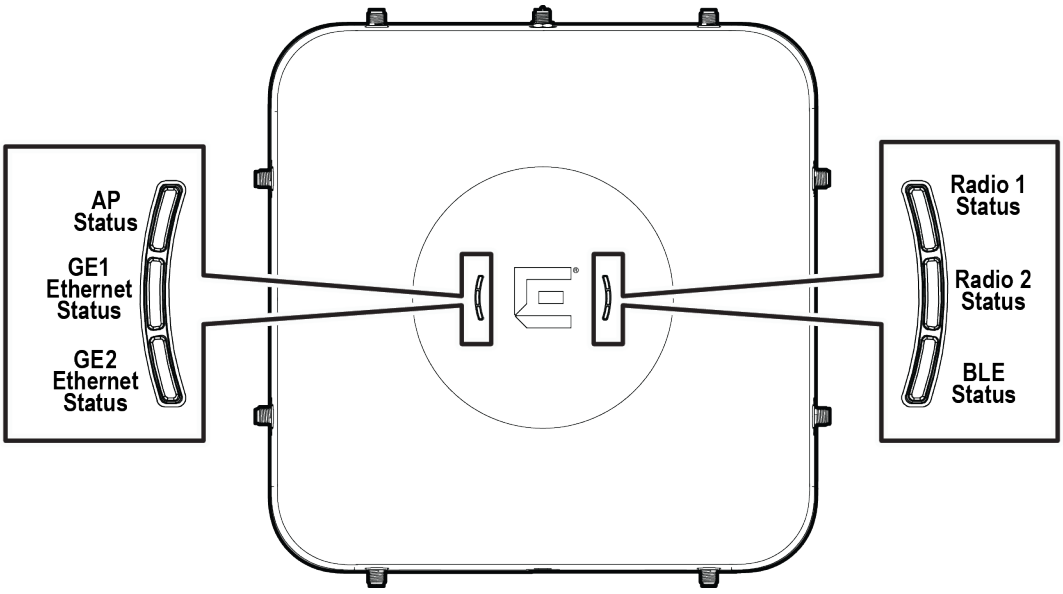


Figure 4: AP510e LEDs

Table 7: AP510e LEDs Status

LED Icon	LED Color	Description
AP Status	GREEN	Normal operational status
	AMBER	Non-operational status
GE1 Ethernet	AMBER	100 Mbps
	GREEN	1000 Mbps
	PURPLE	2.5G/5G
GE2 Ethernet	AMBER	100 Mbps
	GREEN	1000 Mbps
Radio #1 Status	GREEN	2.4GHz
	AMBER	5GHz
	WHITE	Sensor
Radio #2 Status	AMBER	5GHz
IoT (BLE)	BLUE	Indicates BLE is enabled
	OFF	Non-operational status

Install the Access Point

About This Task

Follow this procedure to install the AP510e access point:

Procedure

1. Verify the box contents.
2. Review the Safety Guidelines.
3. Mount the AP to a dry or wood wall, solid flat ceiling, on a suspended/drop ceiling, to a junction/gang box, or to a beam.
4. Connect the power supply.

Verify the Box Contents

About This Task

Before you install the AP510e access point, make sure that you have all the necessary parts.

Procedure

1. Verify that the box contains the following items:

Table 8: AP510e Box Contents

Quantity	Items
1	AP510e Quick Reference Guide
1	ExtremeCloud™ Quick Start Card
1	Mounting bracket for 802.11ax indoor access point

Table 8: AP510e Box Contents (continued)

Quantity	Items
1	AP510e access point
2	Phillips pan-head wood screws
2	Screw-in anchors

2. Perform a visual inspection of the access point for any physical damage. Contact Extreme Networks Support if there is any damage.

Mount and Connect the AP

Caution
Only qualified personnel should perform installation procedures.

Use these instructions as guidelines for mounting and connecting the AP510e easily and safely.

The AP510e comes with a stainless-steel main mounting bracket (#37201) that can be used to mount the access point on a flat t-bar with flat ceiling tiles, flat surfaces, beams, and some junction/gang boxes. An adaptor and brackets are available for mounting the AP to non-flat ceiling tiles and t-bars.

To mount the AP510e on a junction/gang box, use the optional bracket (WS-MBI-WALL04; #30516). All additional and optional parts are sold separately. For more information on brackets and accessories, refer to Mounting Brackets and Accessories Usage on page 16 section.

Mounting Brackets and Accessories Usage

The access point comes with the main mounting bracket (#37201; mounting bracket for 802.11ax indoor access points). There are various optional brackets, an adapter, and bracket accessories that can be purchased separately.

Table 9: Bracket purchase order information

Part number	Description
37201	Main mounting bracket for indoor access points (included in the access point box), along with the 50 mm M3 security screw pack for main mounting bracket
30518	WS-MBI-DCMTR01 bracket

Table 9: Bracket purchase order information (continued)

Part number	Description
30516	WS-MBI-WALL04 bracket
37211	WS-MBI-DCFLUSH bracket

Table 10: Bracket purchase order information

Part number	Description
37201	Main mounting bracket for indoor access points (included in the access point box), along with the 27 mm M3 security screw pack for main mounting bracket
30518	WS-MBI-DCMTR01 bracket
30516	WS-MBI-WALL04 bracket
37211	WS-MBI-DCFLUSH bracket

Table 11: Bracket accessory purchase order information

Part number	Description
KT-135628-01	Universal mounting kit for wireless LAN (WLAN) access points
37210	Flat metal easy-attach adapter for main mounting bracket
BRKT-000147A-01	Beam clip accessory
30525; WS-CAB-RJ45-FLT01	RJ45 flat cable accessory for ceiling mount brackets

Table 12: Power supply purchase order information

Part number	Description
37215	PWR 12V DC, 3A, 2.5 mm X 5.5 mm connector

Table 13: Power supply purchase order information

Part number	Description
	PWR 12V DC, 2A, 2.5 mm X 5.5 mm connector

Table 13: Power supply purchase order information (continued)

Part number	Description
37215	

Table 14: Bracket and accessory usage for various installation options

Mounting bracket or accessory	Wall install	Solid flat ceiling install	Ceiling install (T-bar)	Ceiling install (protruded T-bar)	Junction box install	Beam install	Ceiling tile protrusion	T-bar widths	Notes
37201; main mounting bracket	Yes	Yes	Yes	Yes, by adding the optional T-bar adapter to the main mounting bracket	No	Yes, by adding the beam clip accessory to the main mounting bracket	No	15/16 in.	This bracket is shipped with the AP. Install with: Wall mount or flush ceiling mount with single width.
KT-135628-01 accessory; used with main mounting bracket	No	No	Yes	Yes	No	No	Yes	15/16 in.	Wall mount or protruded ceiling mount with single width.
30518 WS-MBI-DCMTR01 bracket	No	No	Yes	Yes	No	No	Yes	9/16 in., 3/2 in., 15/16 in.	Protruded ceiling mount with varying widths.
30516 WS-MBI-WALL04 bracket	Yes	No	No	No	Yes	No	No	No	Wall mount with single width. Junction box install.
37210 flat metal easy-attach adapter; used with main mounting bracket	Yes	Yes	No	No	No	No	No	N/A	Wall mount, ceiling mount, or install on any solid surface.

Table 14: Bracket and accessory usage for various installation options (continued)

Mounting bracket or accessory	Wall install	Solid flat ceiling install	Ceiling install (T-bar)	Ceiling install (protruded T-bar)	Junction box install	Beam install	Ceiling tile protrusion	T-bar widths	Notes
37211 WS-MBI-DCFLUSH bracket	No	No	Yes	Yes	No	No	No	9/16 in., 3/2 in., 15/16 in.	Protruded ceiling mount with varying widths.
BRKT-00014 7A-01; beam clip accessory	No	No	No	No	No	Yes	No	N/A	The beam clip is attached to the main mounting bracket.
30525 WS-CAB-RJ45-FLT01 accessory	No	Yes	Yes	No	No	No	No	N/A	This accessory can be used only with ceiling mount brackets listed in this table.

Mount the AP on a Dry or Wood Wall/Solid Flat Ceiling

About This Task

The access point is installed on drywall or wood wall or to a solid flat ceiling using:

- #37201, stainless-steel main mounting bracket that ships with the unit
- #30516, WS-MBI-WALL04 bracket, two Phillips pan-head screws, and screw-in anchors

Note
The WALL04 bracket, screws, and screw-in anchors are used for drywall mounting. For wood wall mounting, only the WALL04 bracket and screws are used.

- #37201, stainless-steel main mounting bracket with #37210, flat metal easy-attach adapter
- Phillips pan head screws

Tip
The best practice is to install the access point using the mounting brackets.

Mount the access point to a wall using the Main Mounting Bracket

About This Task

The stainless-steel main mounting bracket (#37201) ships with the access point and can be used to mount the access point onto a wall. This is the recommended method of installation for a wall mounting procedure.

Procedure

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 direction of the arrow mark on the bracket must be pointing up. The flat part of the bracket must be touching the surface it is being attached to.

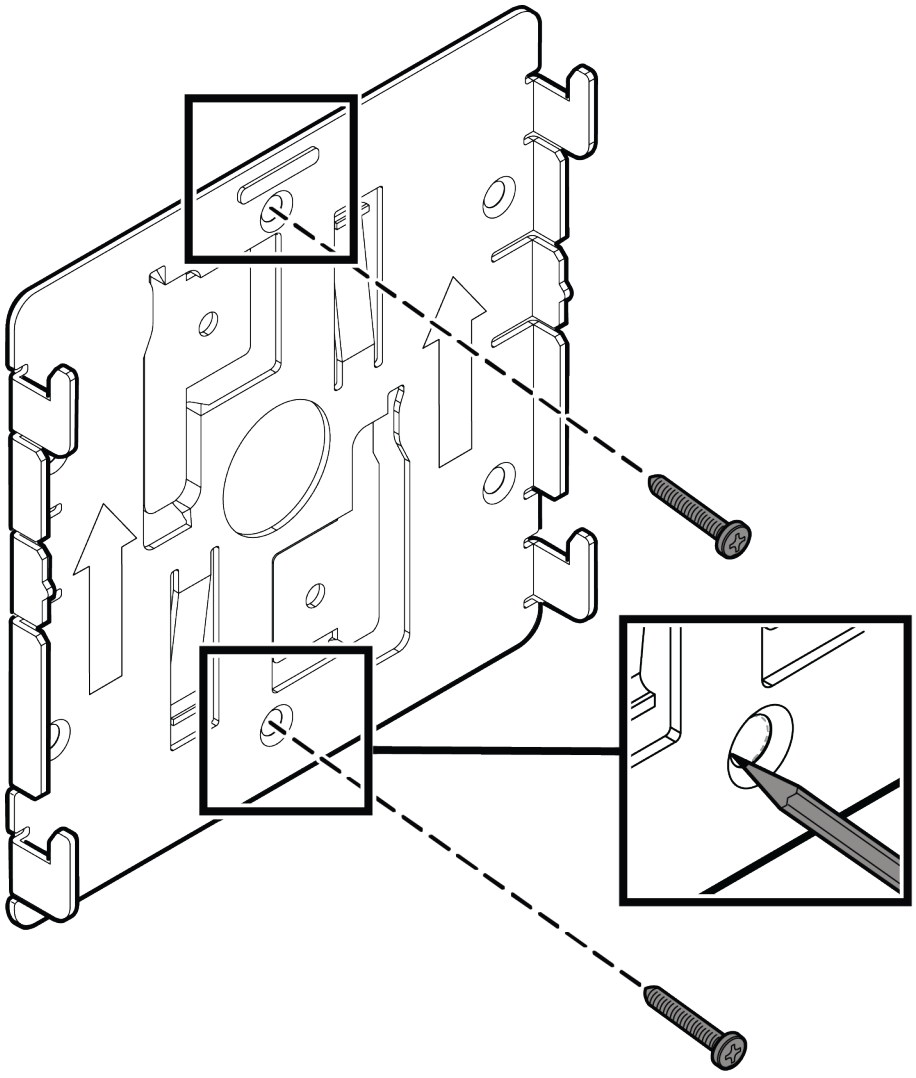


Figure 5: Main mounting bracket direction with hole centers

2. Drill two holes 83 mm (3.270") apart from each other on the wall where you want to mount the access point.

3. Insert the screws into the holes of the mounting bracket and use the screw-in anchors if needed.
4. Insert the Ethernet cable's RJ45 connector into the LAN1 port.

5. Insert the access point onto the bracket's four feet and slide it down to lock it in place.

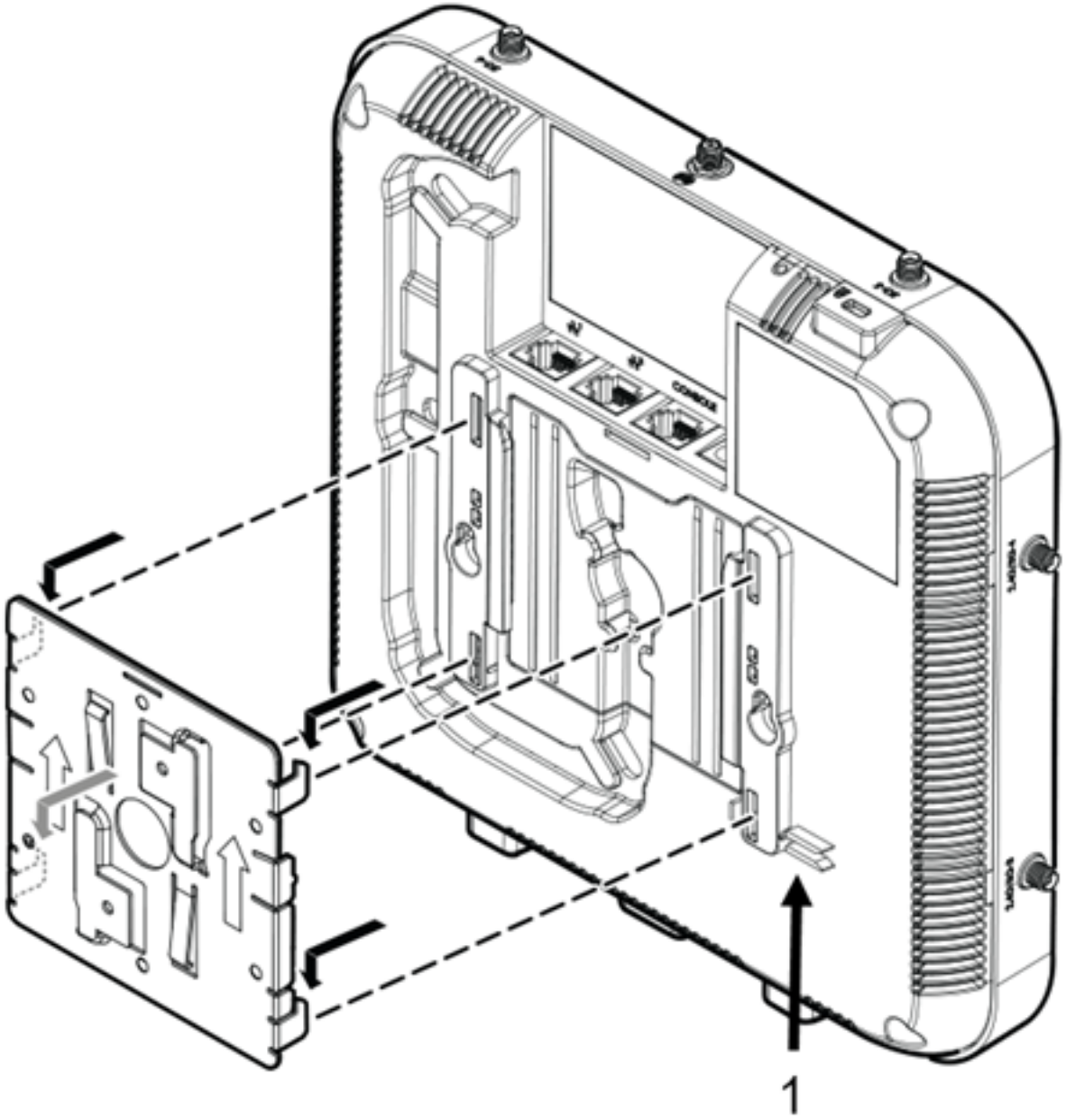


Figure 6: Main mounting bracket attachment holes on the access point

Label	Description
1	Guide posts to attach the security torx locking screw

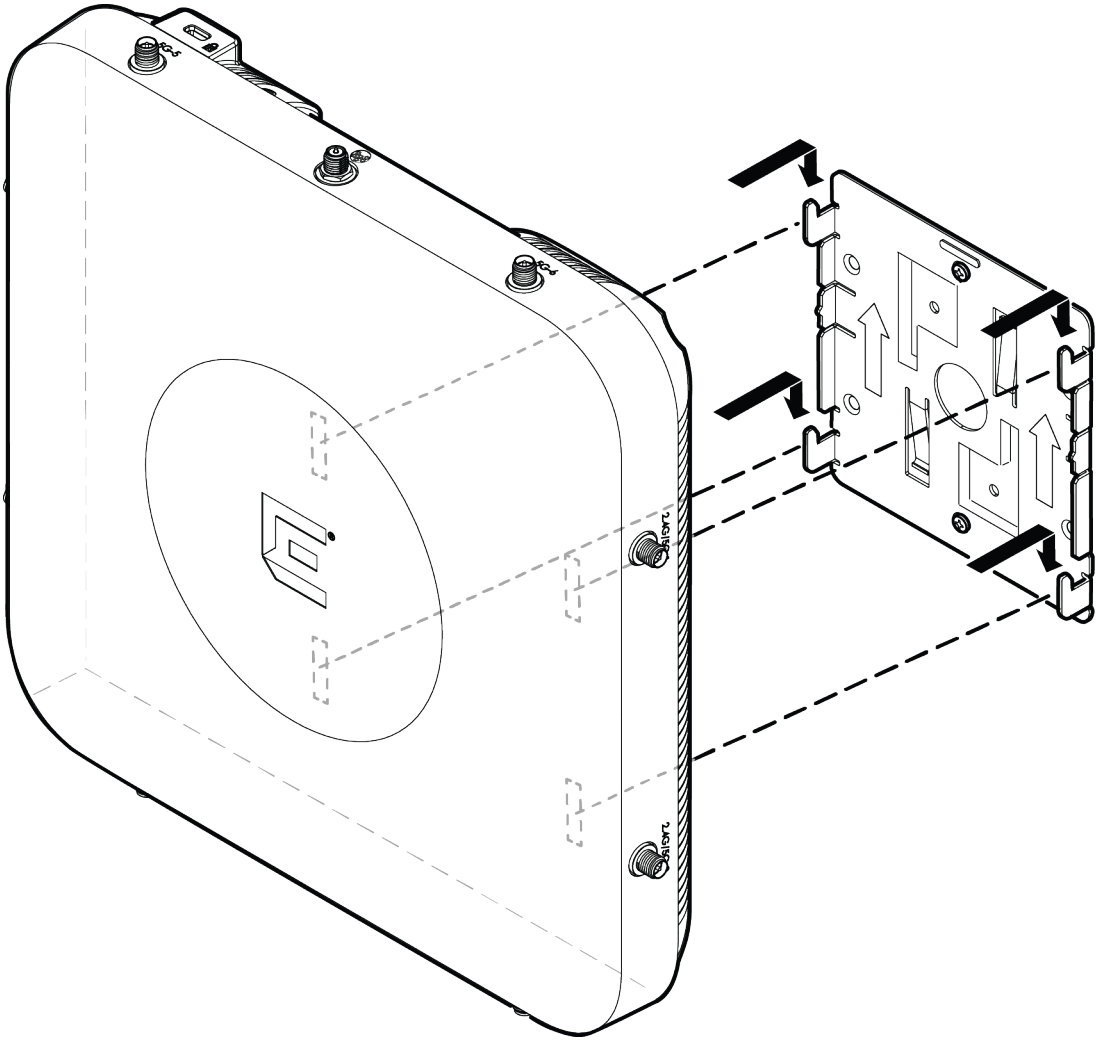


Figure 7: Mounting the access point onto the main mounting bracket

6. Attach the security torx locking screw to keep the main mounting bracket in place.
   For more information, see Install a Security Torx Locking Screw on page 23.

Install a Security Torx Locking Screw

Details about how to install the security torx locking screw on the access point.

About This Task

The security torx locking screw is used to prevent the access point from being removed from the main mounting bracket (#37201). There are two security lock screw holes on the rear of the access point. Follow this procedure to install the security torx locking screw using one of the security lock holes on the access point.

Note
Perform this task after the access point is attached to the main mounting bracket on a drywall or wood wall.

Procedure

1. Line up the security torx locking screw using the rear guides on the access point.
2. Using a T10 bit screwdriver, tighten the security torx locking screw.
3. Turn the locking screw into the security screw hole until the security torx locking screw passes through to the other side and touches the screw stop feature.

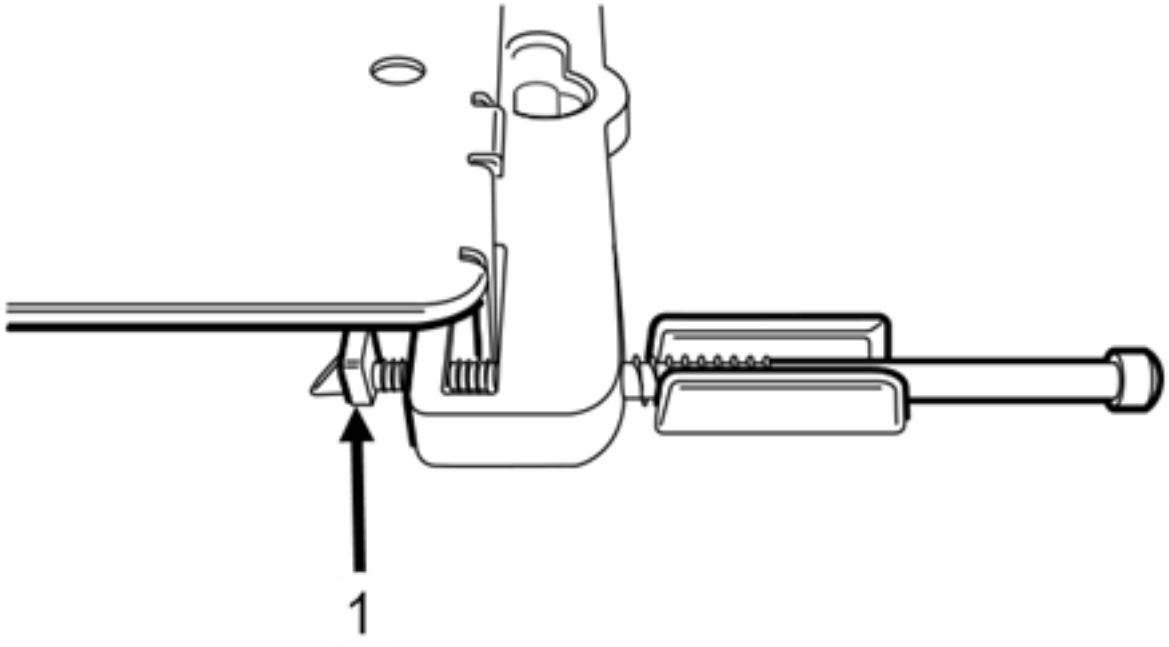


Figure 8: Security torx locking screw stop feature

Callout	Description
1	Security torx locking screw stop feature

Note
You cannot remove the access point from the main mounting bracket until the security torx locking screw is removed.

Mount the AP to a wall using the WS-MBI-WALL04 bracket

About This Task

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

Procedure

1. Install the WS-MBI-WALL04 bracket on a wall or to a flat ceiling with the two screws and screw-in anchors. Ensure that the locking tab on the WS-MBI-WALL04 bracket is on the top side during installation.

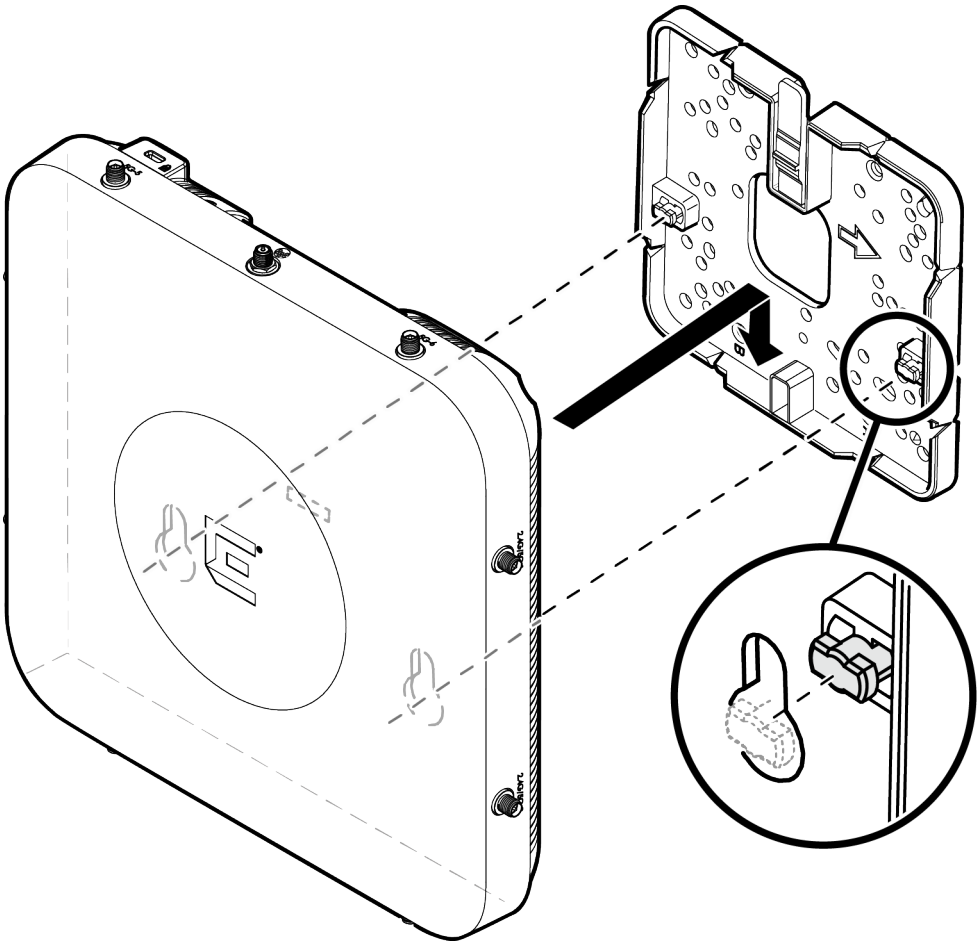


Figure 9: Mounting the access point using the WS-MBI-WALL04 bracket

- Use the WS-MBI-WALL04 as a template and mark the holes to be used to mount the access point. The recommended holes are marked "A" or "B".
- Drill the holes and attach the bracket using the screws and screw-in anchors.

Note
When using the "A" or "B" holes, if the holes are not near the corners of the bracket, you can break off the corner to decrease the bracket's visibility once the access point is installed.

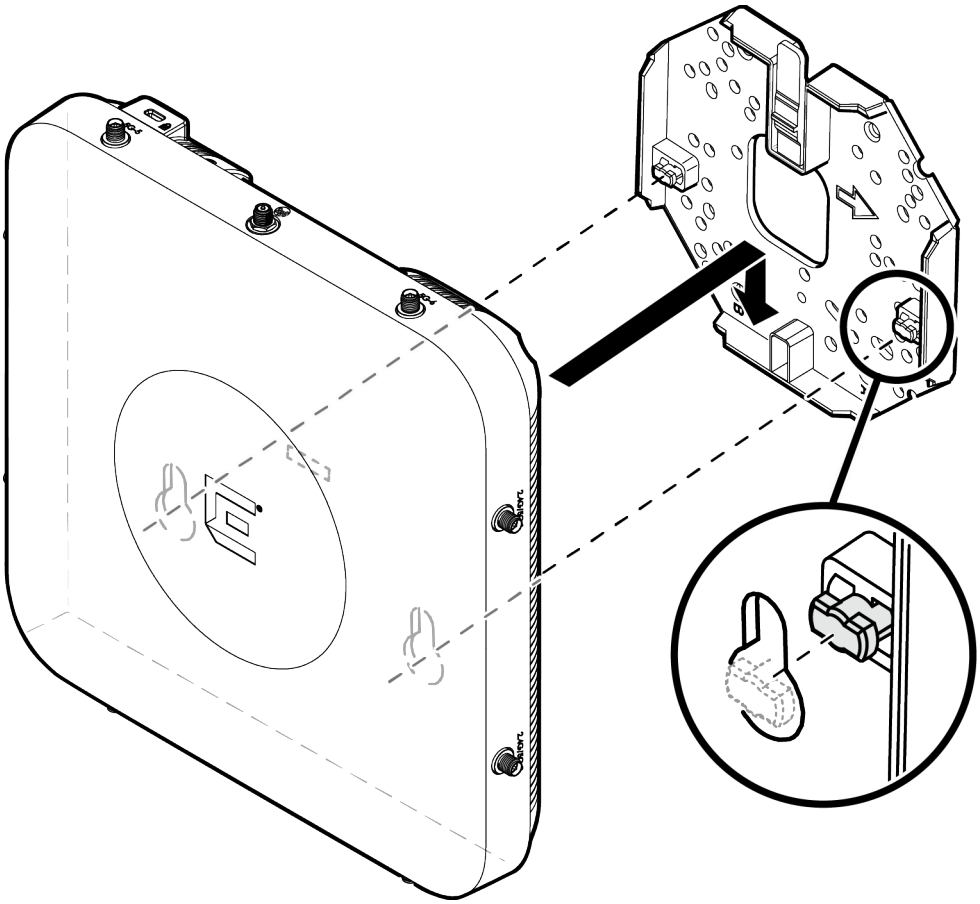


Figure 10: Mounting the access point using the WS-MBI-WALL04 bracket (when bracket corners are broken off)

2. Connect the LAN cable to the access point.
3. Insert the access point onto the keyhole posts and slide the access point until it lock into place.
4. Lock the access point into place at about ¼".

Mount the AP onto a wall using the Main Mounting Bracket and the Flat Metal Easy-Attach adaptor

About This Task

The access point can also be mounted onto a wall or a solid flat ceiling by attaching a flat metal easy-attach adaptor to the main mounting bracket. The flat metal easy-attach adaptor (#37210) must be purchased separately.

Procedure

1. Attach the flat metal easy-attach adaptor to the main mounting bracket. Keep the easy-attach adaptor to the center of the main mounting bracket's hinges, push and rotate it.

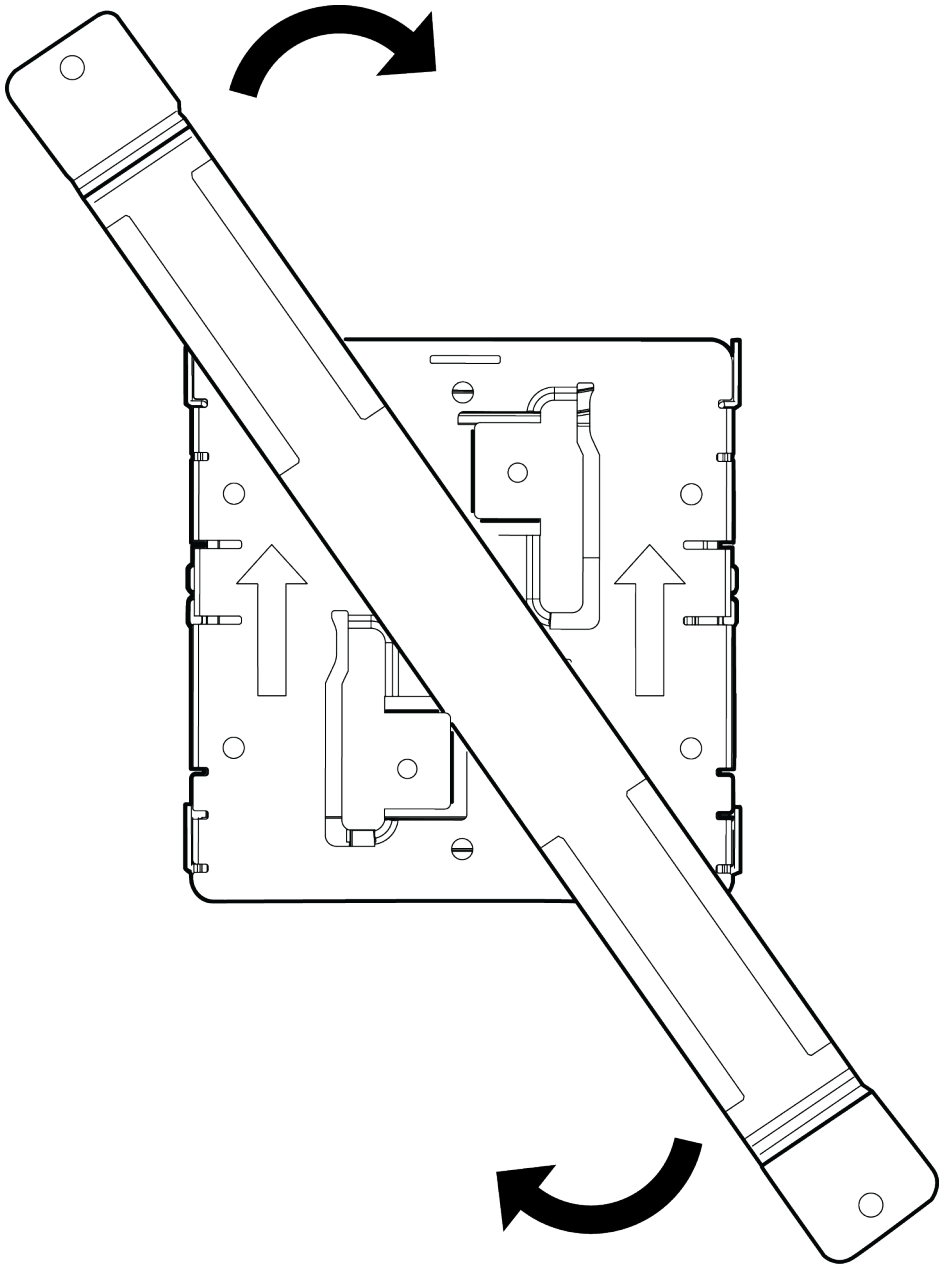


Figure 11: Attaching the optional flat metal easy-attach adaptor to the main mounting bracket

2. Use the easy-attach adaptor's end holes as a template to mark the attachment holes.
3. Drill two holes on the wall where you want to mount the access point.
4. Attach the main mounting bracket with the easy-attach adaptor to the access point.

5. Connect the LAN cable to the back of the access point.
6. Hold the access point to the wall, insert the two screws onto the mounting holes of the flat metal easy-attach adaptor.
7. Tighten the two screws until you lock it into place.

Mount the access point to a wall using the Phillips pan-head screws

About This Task

You can mount the access point directly onto a dry or a solid wall using the Phillips pan-head screws. This is an optional installation method and not the preferred method of installation.

Procedure

1. Drill two holes 104 mm (4.100”) apart from each other on the wall where you want to mount the access point.
2. Insert the screws into the holes and use the screw-in anchors, if needed.

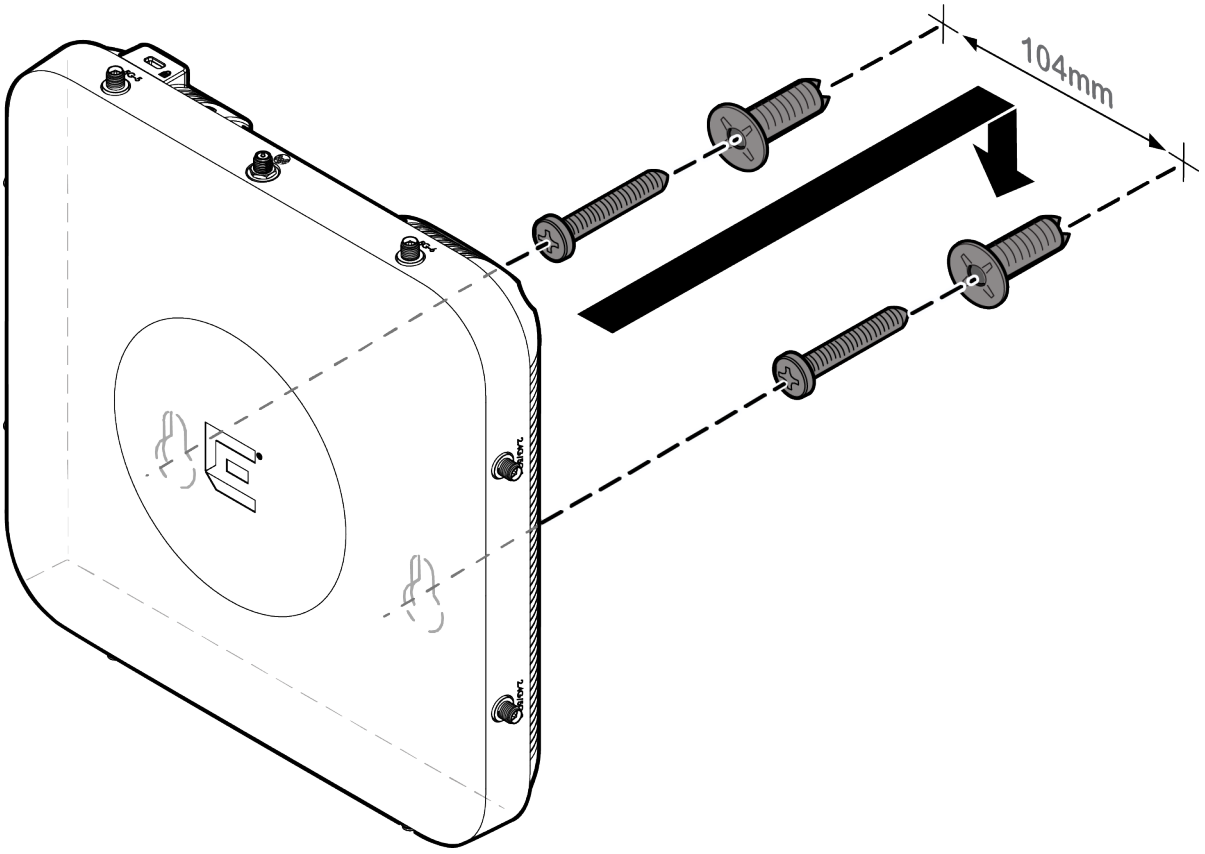


Figure 12: Mounting the access point directly on a dry or a wood wall using the Phillips pan-head screws

3. Insert the Ethernet cable’s RJ45 connector into the **Console** port.

4. Align the access point against the screw heads and slide it down.

   Ensure that the access point is secured in place and tightened.

   Note
   When installing the access point, the “E” logo on it must be pointing up.

5. If the access point is loose, unmount the access point, and decrease the distance between the screw heads and the wall.
6. Remount the access point.

Mount to a Suspended/Drop Ceiling

About This Task
For suspended ceiling or drop ceiling installation, the main mounting bracket is used directly on the T-bar. If there is a ceiling tile protrusion, the optional T-bar adapter is attached to the main mounting bracket prior to T-bar installation.

The access point may be mounted to a suspended or a drop ceiling using:

- #37201, stainless-steel main mounting bracket to a flat 15/16 in. wide T-bar, with flat ceiling tiles
- #37201, stainless-steel main mounting bracket with KT-135628-01 adapter to a flat T-bar
- #37211, WS-MBI-DCFLUSH bracket to a flat T-bar, with flat ceiling tiles
- #30518, WS-MBI-DCMTR01 bracket to a T-bar

Mount the access point using the Main Mounting Bracket to a Flat T-bar

About This Task
The access point can be mounted on a flat T-bar using the main mounting bracket that is shipped with the unit.

Pre-Installation checklist:

- T-bar width can be either 9/16" (15 mm) or 15/16” (24 mm).
- T-bar bottom must be flat all the way across.
- T-bar minimum base thickness: N/A; must be structurally sound.
- T-bar maximum base thickness: 0.055”.
- Ceiling tile must be flat all the way across.

Procedure

1. Attach the main mounting bracket to the access point. To know how to attach the main mounting bracket to the access point, see Mounting the AP onto the main mounting bracket.
2. Remove the ceiling tiles, push and rotate the main mounting bracket onto the T-bar in such a way that the center angled locking tabs of the main bracket gets attached to the T-bar.
3. Hold the access point and rock it back and forth to ensure it is securely mounted.

4. Replace the ceiling tiles.
5. Attach the Ethernet cable's RJ45 connector to the LAN1 port.

Mounting the access point using the Main Mounting Bracket with KT-135628-01 adaptor to a flat T-bar

About This Task

Mounting the access point to a suspended or a drop ceiling requires the optional adaptor (Universal Mounting Kit for WLAN APs; # KT- 135628-01). The adaptor requires a flat t-bar and fits a ceiling tile with up to a 0.35" protrusion from the bar.

Pre-Installation checklist:

- T-bar width can be either 9/16" (15 mm) or 15/16" (24 mm).
- T-bar bottom must be flat all the way across.
- T-bar minimum base thickness: N/A; must be structurally sound.
- T-bar maximum base thickness: 0.055". Due to manufacturing variation, some adaptors may be able to accommodate up to 0.060".
- Ceiling tile may protrude up to 0.3" below the T-bar.

Procedure

1. Attach the KT- 135628-01 adaptor by lining up the small bends on the adaptor with the long raised parts on the main bracket, pull up on the adaptor's locking pin, and twist.

   Make sure the locking pin goes into the locking pin hole on the main mounting bracket and locks in place.
2. Slide the T-bar holder onto the T-bar and replace the tiles to hold the adaptor 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's RJ45 connector to the LAN1 port.

Mounting the access point using the WS-MBI-DCFLUSH Bracket to a flat T-bar

About This Task

The optional WS-MBI-DCFLUSH (#37211) bracket is used for T-bar installations without the main mounting bracket.

Pre-Installation checklist:

- T-bar width must be 9/16" (15 mm), 15/16" (24mm), 1.5" (38 mm).
- T-bar bottom must be flat all the way across.
- T-bar minimum base thickness: N/A; must be structurally sound.
- T-bar maximum base thickness is 0.080" (2mm).
- Ceiling tile must be flat all the way across.
- Maximum ceiling tile protrusion allowed is 0.015" (0.38 mm).

Procedure

1. Remove the ceiling panels around the drop ceiling T-bar rail.
2. Open the movable sliding part of the DCFLUSH bracket to give the stationary and slider T-bar more space.

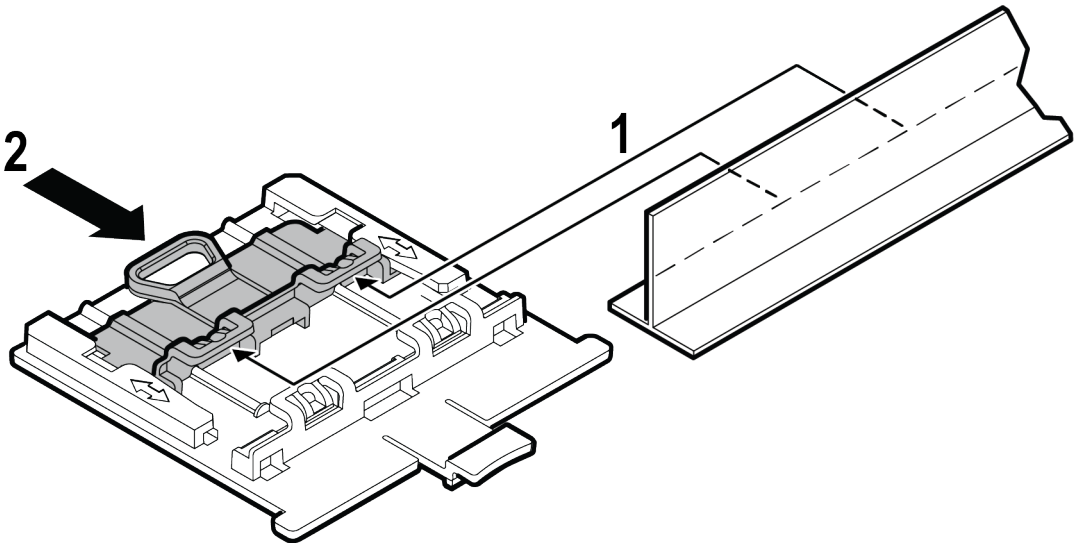


Figure 13: DCFLUSH bracket parts

Label	Description
1	T-bar
2	Movable sliding part of the DCFLUSH bracket

3. Hook the stationary end of the DCFLUSH bracket onto the T-bar.
4. Tilt the T-bar up slightly in such a way that you are holding the stationary and movable sides of the bracket.
5. Squeeze the bracket parts together until you hear the T-bar locking tab click into place.

6. Slide the T-bar ceiling mount bracket base into the back of the access point.
   The locking tab fits into a groove in the outside of the access point.

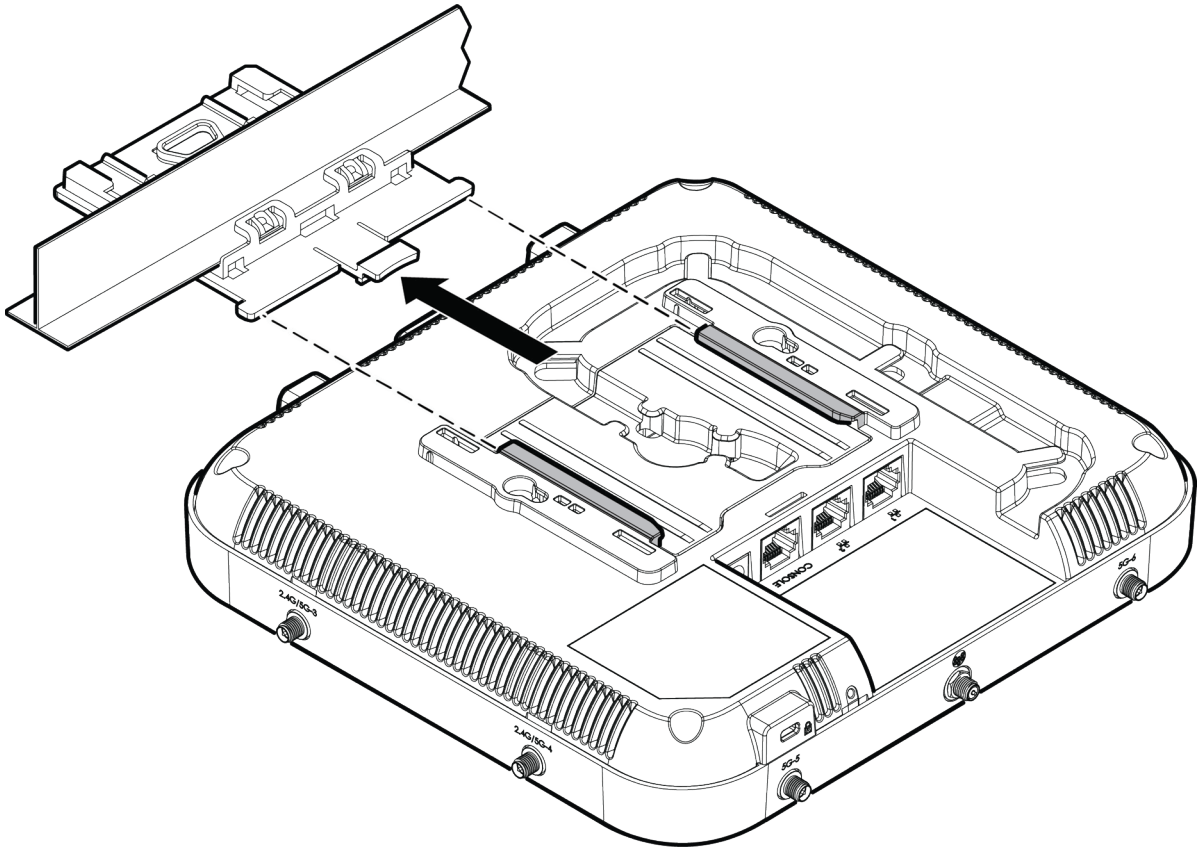


Figure 14: Attaching the DCFLUSH bracket to the access point

7. Hold the access point and rock it back and forth to ensure that it is securely mounted.
8. Attach the Ethernet cable's RJ45 connector to the LAN1 port.
9. Place the ceiling tile back in place.

Mounting the AP using the WS-MBI-DCMTR01 Bracket

About This Task

The optional WS-MBI-DCMTR01 (#30518) bracket is used for T-bar installations without the main mounting bracket.

Pre-Installation checklist:

- T-bar width must be 9/16" (15 mm), 15/16" (24 mm), 1.5" (38 mm).
- T-bar minimum base thickness: N/A; must be structurally sound.
- T-bar maximum base thickness is 0.118" (3 mm).
- T-bar can have a maximum protrusion of 0.625" (15.8 mm).
- Maximum protrusion of the ceiling tile can be 0.625" (15.8 mm).

Procedure

1. Remove the ceiling panels around the drop ceiling T-bar rail.
2. Open the movable sliding part of the DCMTR01 bracket to give the stationary and slider T-bar more space.

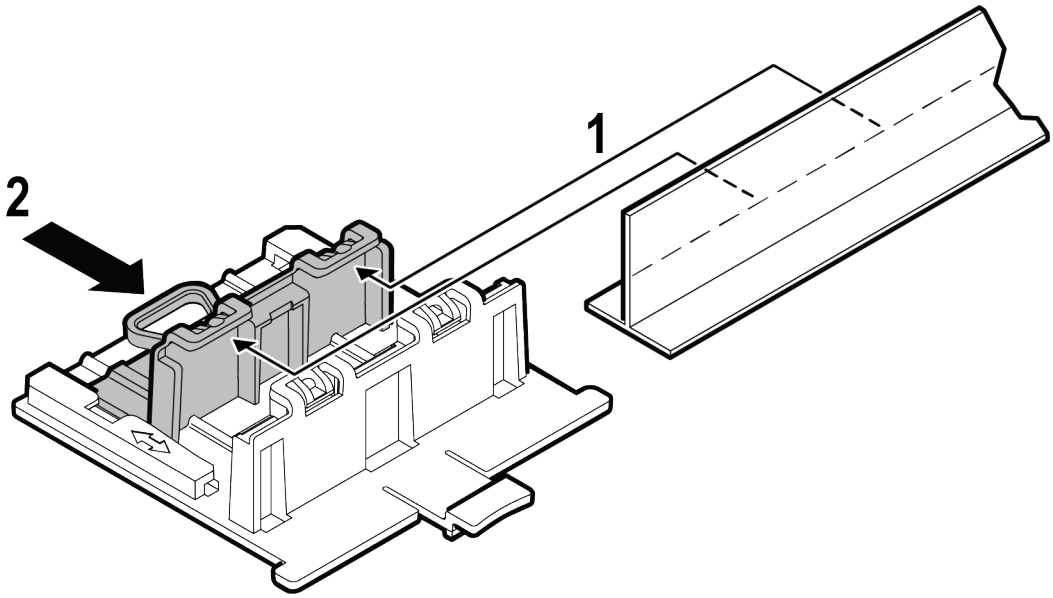


Figure 15: DCMTR01 bracket parts

Label	Description
1	T-bar
2	Movable sliding part of the DCMTR01 bracket

3. Hook the stationary end of the DCMTR01 bracket onto the T-bar.
4. Tilt the T-bar up slightly in such a way that you are holding the stationary and movable sides of the bracket.
5. Squeeze the bracket parts together until you hear the T-bar locking tab click into place.

6. Slide the T-bar ceiling mount bracket base into the back of the access point.
   The locking tab fits into a groove in the outside of the access point.

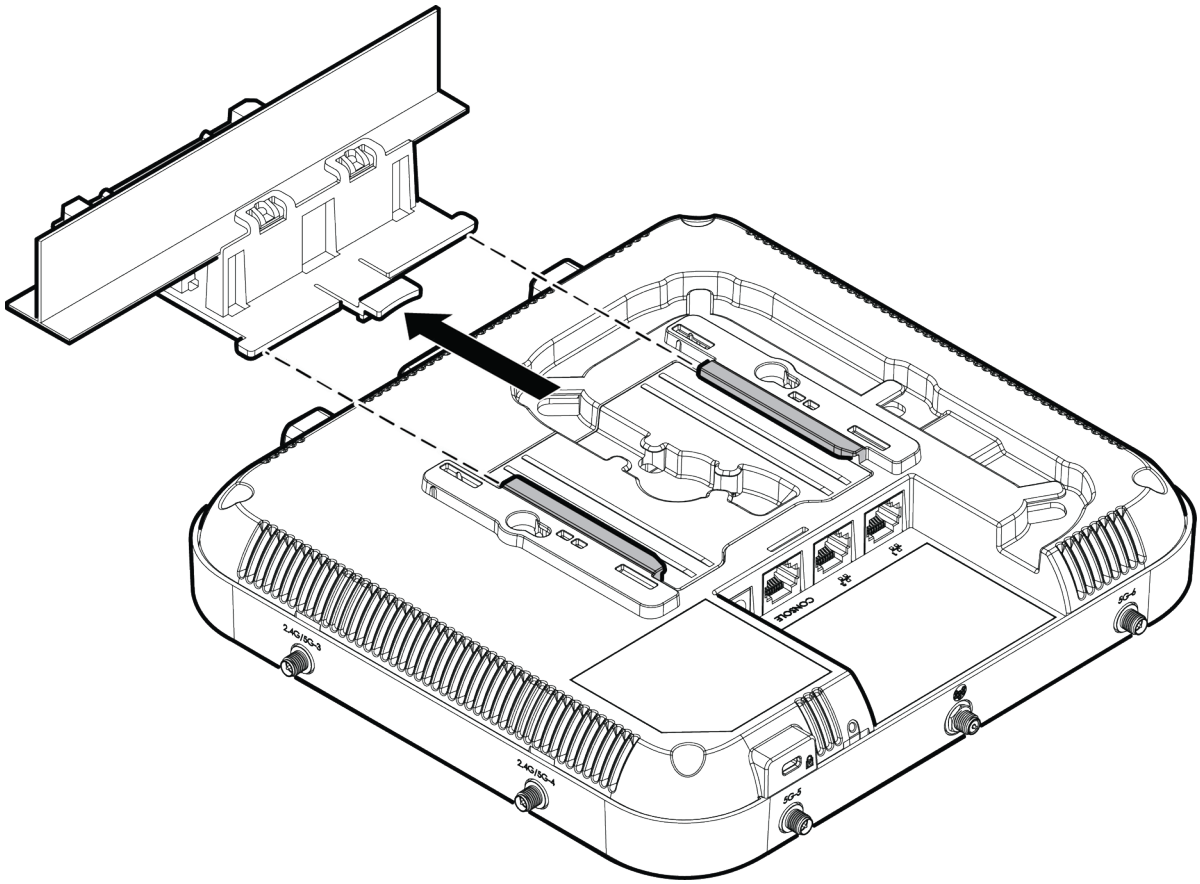


Figure 16: Attaching the access point onto the WS-MBI-DCMTR01 bracket

7. Hold the access point and rock it back and forth to ensure that it is securely mounted.
8. Attach the Ethernet cable's RJ45 connector to the LAN1 port and place the ceiling tile back in place.

Mount the AP to a Junction/Gang box

About This Task

You can mount the access point to a junction/gang box using the #37201 stainless-steel main mounting bracket that comes with the unit or a WS-MBI-WALL04 bracket, which must be purchased separately.

Note
The junction/gang box models are limited to USA box models when using the #37201 main mounting bracket.

Procedure

1. Remove the screws holding the junction/gang box coverplate and remove the LAN cable from the coverplate if necessary.

2. Line up the #37201 main mounting bracket holes on the junction/gang box and ensure that they align.

   If the holes do not align, then use the WS-MBI-WALL04 bracket.

   Note
   When you line up the holes, the locking tab on the WALL04 bracket must be pointing up and the junction/gang 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 WALL04 bracket.

   Note
   If the holes that you need to use are not near the corners of the WALL04 bracket, break off the corner to decrease bracket's visibility once the access point is installed.

3. Using the holes aligned together or the new ones drilled, attach the bracket to the junction/gang box using the screws removed from the junction box earlier.

   Do not over tighten.

   Caution
   Over tightening the screws will cause the WALL04 bracket to bend. If the bracket bends, you will not be able to align and 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 slide the access point onto the bracket until you hear it lock in place.

Mount the access point to a Beam

About This Task
The access point can be mounted onto a beam using a beam clip accessory (BRKT-000147A-01) to the main mounting bracket.

Pre-Installation checklist:

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

Before attaching the AP 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.

Procedure

1. Attach the beam clip accessory, BRKT-000147A-01 to the main mounting bracket by placing it between the center hinges of the main mounting bracket.

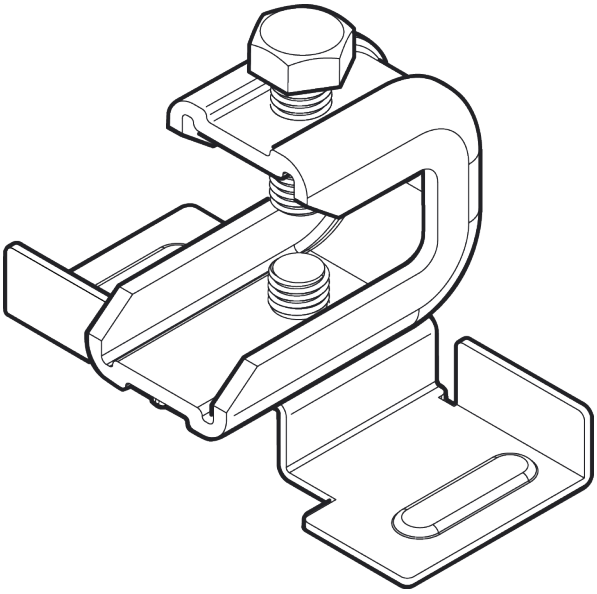


Figure 17: Beam clip accessory, BRKT-000147A-01

2. Using a twisting motion between the main mounting bracket hinges, attach the beam clip accessory

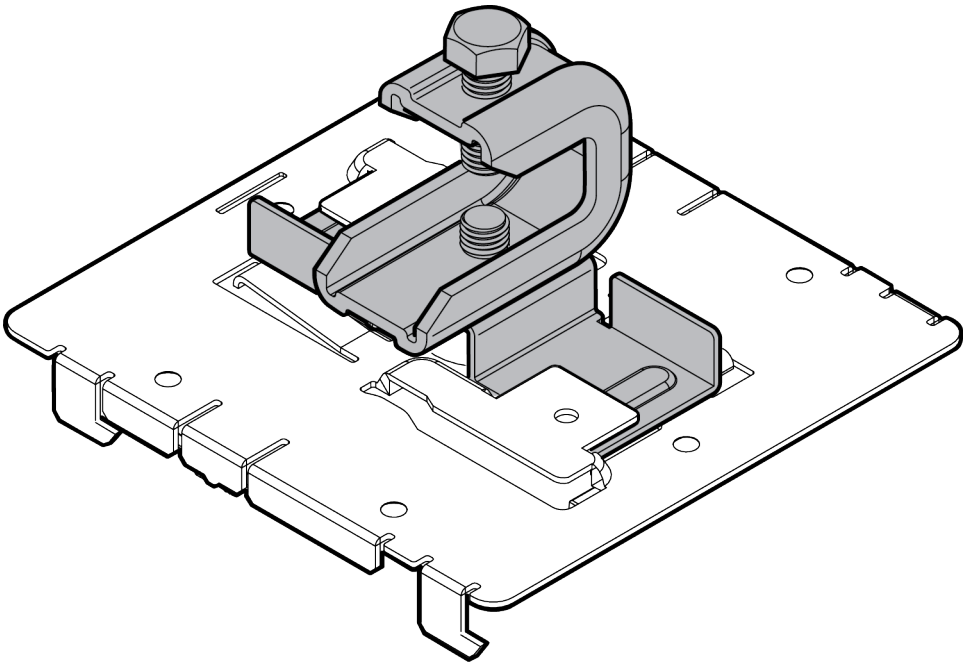


Figure 18: Attaching the beam clip accessory to the main mounting bracket

3. Attach the main mounting bracket with the beam clip accessory to the access point.

4. Place the beam clip accessory on a beam in such a way that there is enough space between the screw and clamp to be tightened.

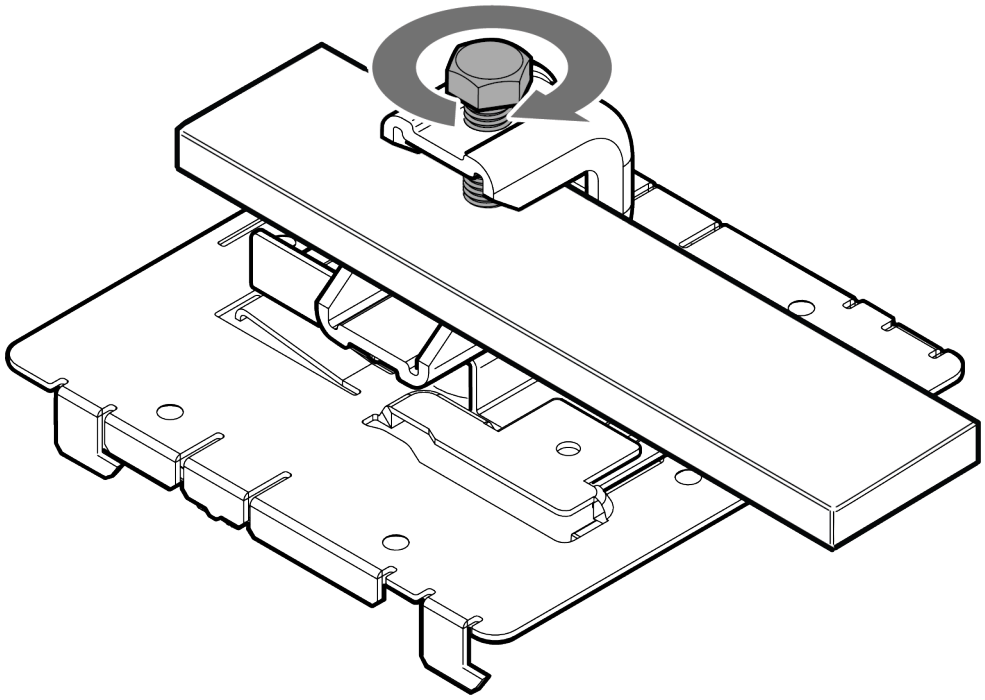


Figure 19: Attaching the beam clip accessory to the beam

5. Use the screw and clamp on the top of the beam clip accessory to secure the access point in place on the beam.
6. Insert the Ethernet plug into the LAN port.

Install the AIO-DQ15021-RPSMA Antenna

Before You Begin

Install the AIO-DQ15021-N in accordance with all applicable local and national electrical code guidelines. Be familiar with the guidelines in your area before you install the antenna.

Read the Technical specifications and Radiation patterns as they can determine the antenna's location.

Confirm that the mounting hardware shipped with the antenna as listed in the table below.

Note
The AIO-DQ15021-RPSMA antenna is only supported on the AP510e. It is supported on ExtremeCloud™ IQ Controller and it is intended for indoor stadiums and arenas for a campus mode deployment only. It is available in US and Canada only and only in 5G.

Table 15: Mounting hardware

Quantity	Item
2	Bracket, Flange
1	Bracket, Linkage
2	5/16 in Flat Washer
2	5/16 in Lock Washer
2	5/16 in x 1-5/8 in Hex Head Bolt
2	5/16 in Nut
2	Double Serrated Lock Washer
8	1/4 in Flat Washer
8	1/4 in Lock Washer
4	1/4 in Nut
2	Clamp
4	Expansion Anchor
4	1/4 in x 1-3/4 in Hex Head Bolt

The AIO-DQ15021-N ships with an articulating mount for mast and wall installation. If you install on a wall, then use wall anchors or molly bolts so the antenna is secure.

Caution
Do not tighten or tamper with the cable entry glands on the antenna. This antenna is water proofed to IP67 specifications. Tampering with or tightening the cable entry glands damages the antenna water proofing and voids the warranty.

About This Task

Install an internal antenna if you need greater control over Wi-Fi coverage or if you need to customize your coverage area.

For best results, mount the antenna in the center of the coverage area. A line-of-sight path between the antenna and the active area works best. Avoid mounting next to a column or vertical support that creates a shadow zone and reduces coverage.

Note
Install the antenna before you connect the cable so the cable is not twisted or damaged.

Procedure

1. Attach the antenna mount to the exposed studs on the back of the antenna with four 1/4 in -20 hex nuts, four 1/4 in-20 flat washers, and four 1/4 in -20 lock washers.
2. Secure one side of the articulating arm to the antenna mount using one bolt size 5/16 in x 1-5/8 in (5), 1 5-16 in split lock wash, and two flat washer 5-16 in and one hex nut 5-16.
3. Mount the antenna on a wall:
   a. Mark holes locations.

      Use the other supplied antenna mount bracket as a template.
   b. Install four wall expansion anchors.
   c. Install the antenna mount bracket to the wall.

      Use four the hex 1/4-20 screws, four 1/4-20 flat washers, and four 1/4-20 lock washers.
4. (Optional) Mount the antenna on a pole or mast:
   a. Attach the two hose clamps to the antenna mount bracket.

      You can encircle the pole with each clamp. Tighten the clamps securely.
5. Attach the pre-assembled antenna to the other bracket.

   Use one external serrated washer, use one bolt size 5/16 in -1 5/8 in, one 5-16 in split lock washer, two flat washer 5-16 in and one hex nut 5-16 in.

   Use the screw to attach the free end of the articulating arm to the mount and then secure it in place with a hex nut.
6. Adjust the antenna for azimuth and elevation.
   a. Loosen the 1-5/8 in bolt pivot screw.
   b. Adjust the antenna for azimuth and elevation.
   c. Tighten the hardware securely.

Antenna Information

Supported Antennas

The following table shows the antennas supported on the AP510e.

Table 16: Supported antennas

	Brand	Model name	Antenna type	Connector	Elevation angle above 30 degree Max Gain (dBi)	Use condition
1	Extreme	ML-2452-APA2-01	Omni	RP SMA male	-	Indoor/ Outdoor
2	Extreme	ML-2452-APA2-02	Omni	RP SMA male	-	Indoor/ Outdoor
3	Extreme	ML-2452-APA5-036	Omni	RP SMA male	-	Indoor/ Outdoor
4	Extreme	ML-2452-HPAG4A6-01	Omni	N male	5.7	Indoor/ Outdoor
5	Extreme	ML-2452-PNA5-01R	Panel	N male	5.26	Indoor/ Outdoor
6	Extreme	ML-2452-HPAG5A8-01	Omni	N male	-6.05	Indoor/ Outdoor
7	Extreme	ML-2452-PTA4M4-036	Omni	RP SMA male	-	Indoor/ Outdoor
8	Extreme	WS-AO-DQ04360N	Omni	N male	-	Indoor/ Outdoor
9	Extreme	ML-2452-SEC6M4-036	Panel	RP SMA male	-	Indoor/ Outdoor
10	Extreme	WS-AI-DQ05120	Panel	RP SMA male	-	Indoor/ Outdoor

Table 16: Supported antennas (continued)

	Brand	Model name	Antenna type	Connector	Elevation angle above 30 degree Max Gain (dBi)	Use condition
11	Extreme	ML-2452-PNA7-01R	Panel	RP SMA male	7.9	Indoor/ Outdoor
12	Extreme	ML-2499-HPA8-01	Omni	N male	-	Indoor/ Outdoor
13	Extreme	AI-DQ04360S	Omni	RP SMA male	-	Indoor/ Outdoor
14	Extreme	AIO-DQ15021-RPSMA **Note:** The AIO-DQ15021-RPSMA antenna is only supported on the AP510e. It is supported on ExtremeCloud™ IQ Controller and it is intended for indoor stadiums and arenas for a campus mode deployment only. It is available in US and Canada only and only in 5G.	Panel	RP SMA male	-	Indoor

Operational Description of Antenna Configuration and RF Output Power Setting

Per KDB 353028 D01 Antennas Part 15 Transmitters v01 requirement, Applications must contain an exhibit listing each antenna, the antenna gain, antenna type, antenna manufacturer/vendor, and output power that can be used for the device. To comply with this requirement, refer to the following information.

Approved Antenna List

Table 17: Approved Antenna List

Frequency band	Antenna type	Model	Antenna gain 2.4G	Antenna gain 5G	Cable loss 2.4G	Cable loss 5G	True gain 2.4G	True gain 5G
2.4G/5G	Omni	ML-2452-APA2-01	3.17	4.85	1	2	2.17	2.85
2.4G/5G	Omni	ML-2452-APA2-02	3.17	4.85	1	2	2.17	2.85
2.4G/5G	Omni	ML-2452-HPA5-036	3.9	5.7	1	2	2.9	3.7

Table 17: Approved Antenna List (continued)

Frequency band	Antenna type	Model	Antenna gain 2.4G	Antenna gain 5G	Cable loss 2.4G	Cable loss 5G	True gain 2.4G	True gain 5G
2.4G/5G	Omni	ML-2452-HPAG4A6-01	4	7.3	1	2	3	5.3
2.4G/5G	Panel	ML-2452-PNA5-01R	4.5	5	1	2	3.5	3
2.4G/5G	Omni	ML-2452-HPAG5A8-01	5	8	1	2	4	6
2.4G/5G	Omni	ML-2452-PTA4M4-036	5	6.6	1	2	4	4.6
2.4G/5G	Omni	WS-AO-DQ04360N	5.5	6	1	2	4.5	4
2.4G/5G	Panel	ML-2452-SEC6M4-036	6.92	7.23	1	2	5.92	5.23
2.4G/5G	Panel	WS-AI-DQ05120	6.9	7.23	1	2	5.92	5.23
2.4G(BT/Thread)/5G	Panel	ML-2452-PNA7-01R	7.8	10.7	1	2	6.8	8.7
2.4G(BT/Thread)	Omni	ML-2499-HPA8-01	8	-	1	2	7	-
2.4G/5G	Omni	AI-DQ04360S	5.5	6	1	2	4.5	4
5G	Omni	AIO-DQ15021-RPSMA	-	15	-	2	-	13
			Note: The AIO-DQ15021-RPSMA antenna is only supported on the AP510e. It is supported on ExtremeCloud™ IQ Controller and it is intended for indoor stadiums and arenas for a campus mode deployment only. It is available in US and Canada only and only in 5G.					

Antenna configurations for external antenna models

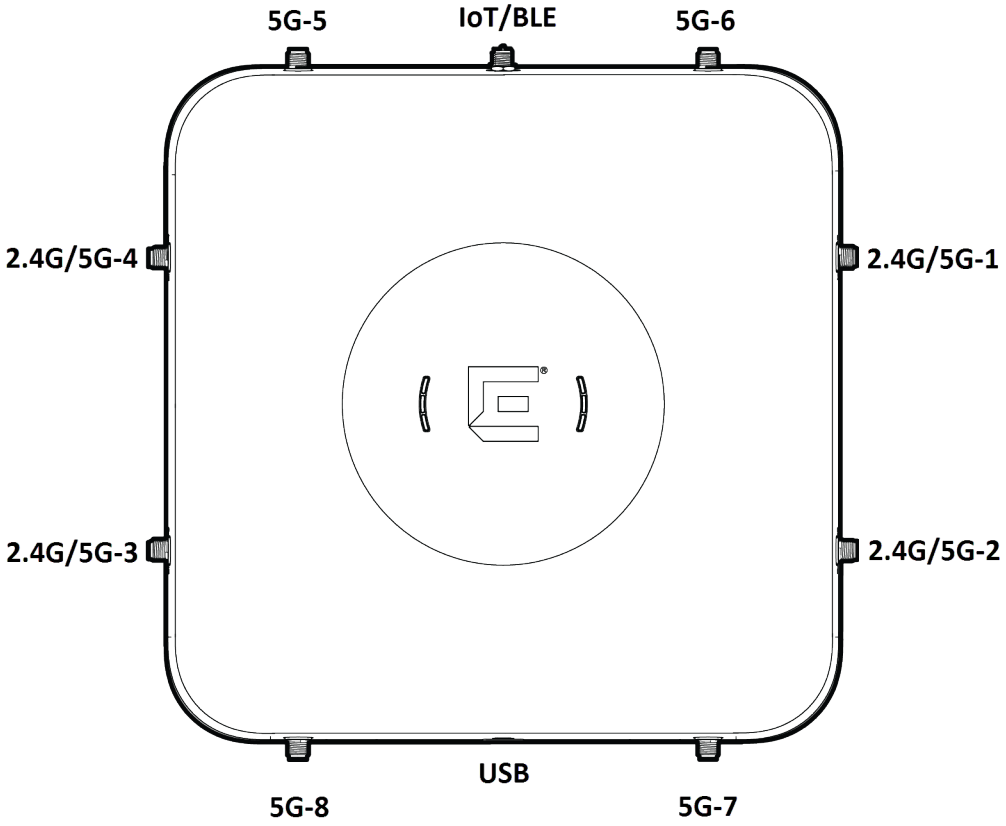


Figure 20: AP510e external antenna configuration

Table 18: AP510e antenna configuration

Software mode	Radio 1	Radio 2	Antenna ports 1,2,3,4	Antenna ports 5,6,7,8
Mode 1	2.4 GHz	5 GHz	Dual-band 2.4/5 GHz	None
Mode 2	Band unlocked sensor	5 GHz	Dual-band 2.4/5 GHz	5 GHz
Mode 3	5 GHz	5 GHz	5 GHz	5 GHz

AP510e Antenna Information

AP510e BLE Antenna Information

Note
The BLE internal antenna is used if no BLE antenna connector is attached to the port.

Wi-Fi	Part number	Brand	Model name	Description
Panel	ML-2452-PNA7-01R	Extreme	ML-2452-PNA7-01R	2.4G omni and directional support antenna
Omni	ML-2499-HPA8-01	Extreme	ML-2499-HPA8-01	2.4G omni and directional support antenna

Note
You can also use any other antenna with lesser gain than 2.4G omni and directional antennas as BLE antenna.

AP510e Antenna Information

Wi-Fi	Part number	Brand	Model name	Description
Omni	ML-2452-APA2-01	Extreme	ML-2452-APA2-01	3dBi/4.85dBi, dual-band, black
Omni	ML-2452-APA2-02	Extreme	ML-2452-APA2-02	3dBi/4.85dBi, dual-band, white
Omni	ML-2452-HPA5-036	Extreme	ML-2452-HPA5-036	3dBi/5dBi, dual-band, outdoor, white
Omni	ML-2452-HPAG4A6-01	Extreme	ML-2452-HPAG4A6-01	4dBi/7.3dBi, N-type male, dual-band, outdoor, white
Omni	ML-2452-HPAG5A8-01	Extreme	ML-2452-HPAG5A8-01	ML-2452-HPAG5A8-01
Omni	ML-2452-PTA4M4-036	Extreme	ML-2452-PTA4M4-036	4dBi/5dBi, 4 port, dual-band
Omni	AI-DQ04360S	Extreme	AI-DQ04360S	Dual-band, four input omni, 36-inch cable, RP SMA male

Wi-Fi	Part number	Brand	Model name	Description
Omni	WS-AO-DQ04360N	Extreme	WS-AO-DQ04360N	Dual-band, four input omni, 36-inch cable
Omni	ML-2452-PNA5-01R	Extreme	ML-2452-PNA5-01R	Antenna: 2.4/5 GHz, outdoor, panel, 5dBi Beam width: • E-plane: 65 degrees • H-plane: 120 degrees Connector type: N-male
Omni	ML-2452-SEC6M4-036	Extreme	ML-2452-SEC6M4-036	Dual-polarized, dual-band, wide-beam directional antenna with 36-inch cable
Omni	30702.	Extreme	WS-AI-DQ05120	Dual-polarized, dual-band, wide-beam directional antenna with 36-inch cable
Omni	ML-2452-PNA7-01R	Extreme	ML-2452-PNA7-01R	Antenna: 2.4/5 GHz, outdoor, panel, 8/12dBi Beam width: • E-plane: 66 degrees • H-plane: 68 degrees Connector type: N-male
Panel	AIO-DQ15021-RPSMA	Extreme	AIO-DQ15021-RPSMA	Indoor antenna; 4-port; dual-band directional; 4.9-5.950 GHz;

AP510e Bluetooth Antenna Information

Wi-Fi	Part number	Brand	Model name	Description
Dipole	ML-2499-HPA8-01	Extreme	ML-2499-HPA8-01	Outdoor, 8dBi, 2.4 GHz
Panel	ML-2452-PNA7-01R	Extreme	ML-2452-PNA7-01R	2.4/5 GHz, outdoor, panel, 8/12 dBi Beam width: • E-plane: 66 degrees • H-plane: 68 degrees Connector type: N-male

AIO-DQ15021-RPSMA Antenna Information

The AIO-DQ15021-RPSMA antenna is an indoor stadium antenna. The antenna is a 4-port dual-band directional antenna that operates within the 4900-5950 MHz frequency ranges. The four antenna leads are used on ports 1 through 4. The antenna has a N type connector.

It is designed to handle the greater capacity of 5G networks and is available as 5G only. When you order this antenna, use the part number AIO-DQ15021-RPSMA.

Note
The AIO-DQ15021-RPSMA antenna is only supported on the AP510e. It is supported on ExtremeCloud™ IQ Controller and it is intended for indoor stadiums and arenas for a campus mode deployment only. It is available in US and Canada only and only in 5G.

The following tables provide the technical specifications of the AIO-DQ15021-RPSMA. Familiarize yourself with this information before you install the antenna.

Table 19: Order information

Product SKU	Description	Disc. Cat
AIO-DQ15021-RPSMA	15 dBi Indoor/Outdoor Sector 21 Deg, 36 inch cable, N type	B

Table 20: AIO-DQ15021-RPSMA antenna technical specifications

Item	Description
Polarization	2 Ports Horizontal, 2 Ports Vertical
Voltage Standing Wave Radio (VSWR)	<2.0:1 max across the bands
Front-to-back ratio	>25 dB

Table 20: AIO-DQ15021-RPSMA antenna technical specifications (continued)

Item	Description
Port-to-Port Isolation	>30 dB
Nominal impedance	50Ω
Radome material	ASA, White
Cable	Low temperature, plenum rated cable
Mounting method	(44-57 mm) Mast or concrete wall
Maximum input power (per port)	10 Watts

Table 21: AIO-DQ15021-RPSMA antenna electrical specifications

Item	Parameter
Part number	AIO-DQ15021-RPSMA
Frequency range	4900 MHz-5950 MHz
Typical gain	13.4 dBi
Peak gain	15.0
Azimuth Plane 3-dB Beam width V-Pol, typical	21°
Azimuth Plane 3-dB Beam width H-Pol, typical	21°
Elevation Plane 3-dB Beam width V-Pol, typical	18°
Elevation Plane 3-dB Beam width H-Pol, typical	20°
Connector	Pigtail: • 4X Type-RPSMA • 4X Type-RPSMA Fix: • 4X Type-RPSMA

Table 22: AIO-DQ15021-RPSMA antenna mechanical specifications

Dimensions	Weight	Operating temperature range	Storage temperature range
373.3 x 411.4 mm (14.7 x 16.2 inches)	Approx. 1.58 Kg (3.48 lb)	-40°C to +70°C (-40°F - +158°F)	-40°C to +85°C (-40°F to +185°F)

The following diagrams show the radiation patterns for the AIO-DQ15021-RPSMA antenna. Use this information when you install the antenna.

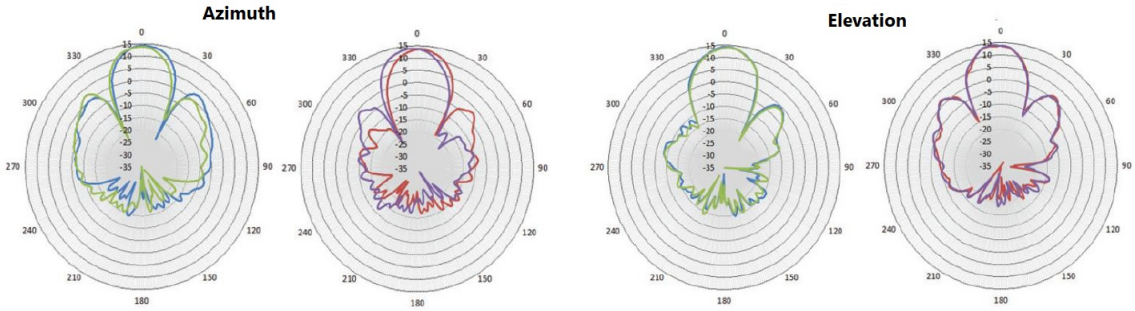


Figure 21: AIO-DQ15021-RPSMA antenna radiation patterns - 4.9GHz

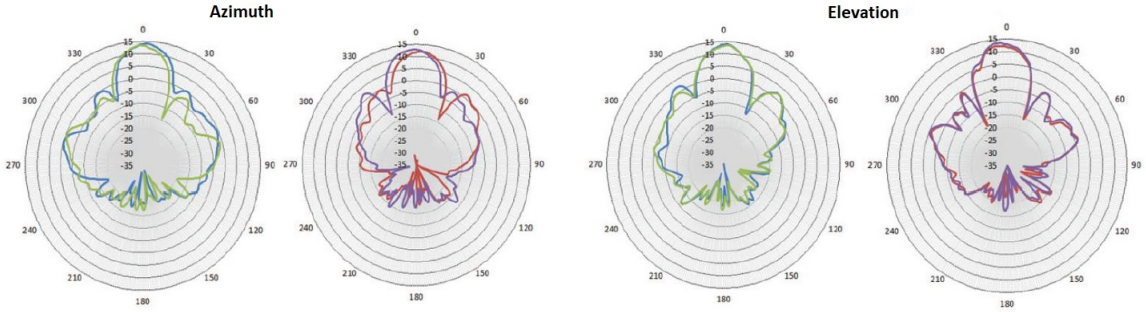


Figure 22: AIO-DQ15021-RPSMAantenna radiation patterns - 5.5GHz

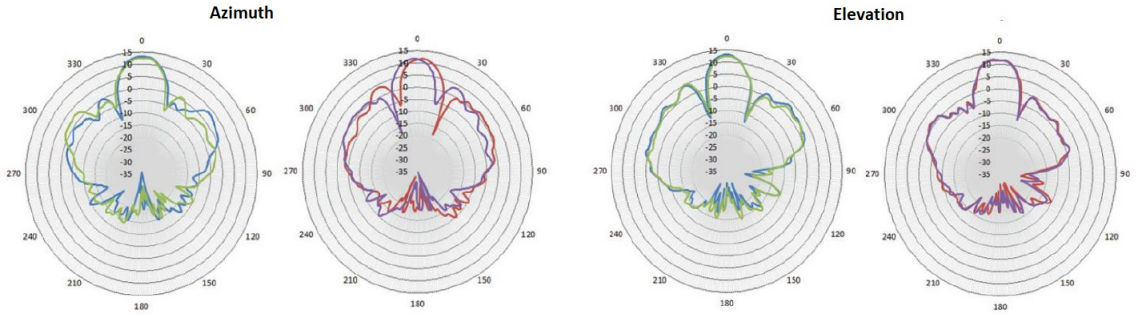
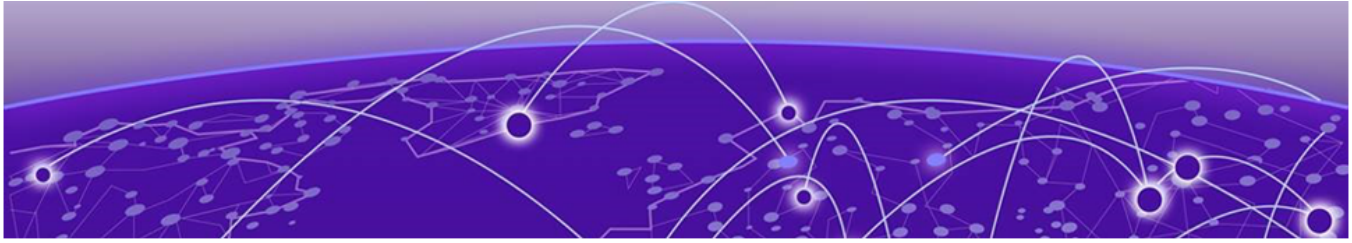


Figure 23: AIO-DQ15021-RPSMA antenna radiation patterns - 5.95GHz



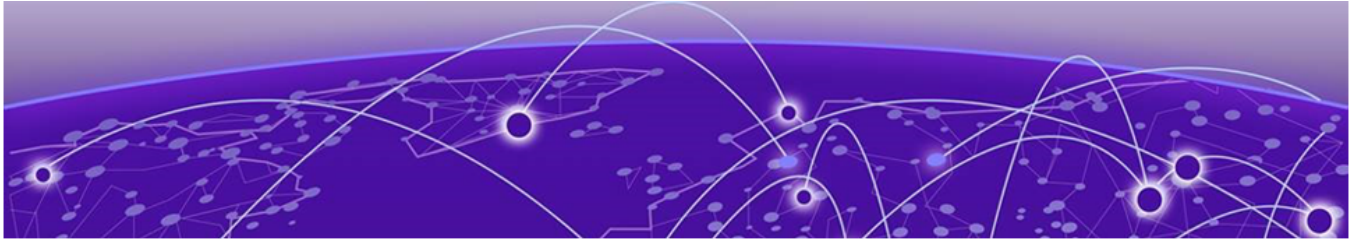
Specifications

Physical Specifications

Dimensions	9" x 9" x 1.89" (229 mm x 229 mm x 48.15 mm)
Weight	3.45 lbs (1.56 kg)
Antenna connectors	Nine RP SMAs
Mean time between failures (MTBF)	323,158 hours @ 25° C

Environmental Specifications

Operating Temperature	-4° F to + 122° F (-20 ° C to +50 ° C) @ 6000 ft -4° F to + 131° F (-20 ° C to +55 ° C) @ Sea Level
Humidity	0 - 95% (non-condensing)
Storage and transportation temperature	-40 ° F to + 158° F (-40 ° C to +70 ° C)



Regulatory and Compliance Information

Learn about safety guidelines, compliance notices, and regulatory information pertaining to various countries in which the device can be used.

Safety Guidelines

The following safety guidelines are intended to protect your personal safety and prevent damage to the equipment.

Important
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, 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.

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.

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 51 cm between the radiator and your body.

FCC Radiation Exposure Statement

Warning
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance 51 cm between the radiator and your body.

FCC OEM Integrator Note

Note
This module is intended for OEM integrator. The OEM integrator is responsible for the compliance to all the rules that apply to the product into which this certified RF module is integrated. Additional testing and certification may be necessary when multiple modules are used.

Industry Canada Notice

This device complies with Innovation, Science and Economic Development (ISED) Canada'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.
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 31 cm between the radiator & 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 31 cm de distance entre la source de rayonnement et votre corps

Detachable Antenna Usage

This radio transmitter [4141B-AP510E] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that

have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio [4141B-AP510E] a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal d'antenne. Les types d'antennes non inclus dans cette liste qui ont un gain supérieur au gain maximal indiqué pour tout type listé sont strictement interdits pour une utilisation avec cet appareil.

Frequency Band	Antenna Type	Model	Antenna Gain		Cable Loss		True Gain	
			2.4G	5G	2.4G	5G	2.4G	5G
2.4G/5G	Omni	ML-2452-APA2-01	3.17	4.85	1	2	2.17	2.85
2.4G/5G	Omni	ML-2452-APA2-02	3.17	4.85	1	2	2.17	2.85
2.4G/5G	Omni	ML-2452-HPA5-036	3.9	5.7	1	2	2.9	3.7
2.4G/5G	Omni	ML-2452-HPAG4A6-01	4	7.3	1	2	3	5.3
2.4G/5G	Panel	ML-2452-PNA5-01R	4.5	5	1	2	3.5	3
2.4G/5G	Omni	ML-2452-HPAG5A8-01	5	8	1	2	4	6
2.4G/5G	Omni	ML-2452-PTA4M4-036	5	6.6	1	2	4	4.6
2.4G/5G	Omni	WS-AO-DQ04360N	5.5	6	1	2	4.5	4
2.4G/5G	Panel	ML-2452-SEC6M4-036	6.92	7.23	1	2	5.92	5.23
2.4G/5G	Panel	WS-AI-DQ05120	6.9	7.23	1	2	5.92	5.23
2.4G(BT/Thread)/5G	Panel	ML-2452-PNA7-01R	7.8	10.7	1	2	6.8	8.7
2.4G(BT/Thread)	Omni	ML-2499-HPA8-01	8	-	1	2	7	-
2.4G/5G	Omni	AI-DQ04360S	5.5	6	1	2	4.5	4
5G	Panel	AIO-DQ15021-RPSMA	-	15	-	2	-	13

Figure 24: AP510e approved antenna list

This device and its antenna(s) must not be co-located with any other transmitters except in accordance with IC multi-transmitter product procedures. Referring to the multitransmitter policy, multiple-transmitter(s) and module(s) can be operated simultaneously without reassessment permissive change.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionnement en association avec une autre antenne ou transmetteur.

Korea BLE Antennas Support

AP510e BLE Antennas supported for Korea

Wi-Fi	Part number	Brand	Model name	Description
Omni	ML-2452-APA2-01	Extreme	ML-2452-APA2-01	3dBi/4.85dBi, dual-band, black
Omni	ML-2452-APA2-02	Extreme	ML-2452-APA2-02	3dBi/4.85dBi, dual-band, white
Omni	ML-2452-HPA5-036	Extreme	ML-2452-HPA5-036	3dBi/5dBi, dual-band, outdoor, white

Wi-Fi	Part number	Brand	Model name	Description
Omni	ML-2452-HPAG4A6-01	Extreme	ML-2452-HPAG4A6-01	4dBi/7.3dBi, N-type male, dual-band, outdoor, white
Omni	ML-2452-HPAG5A8-01	Extreme	ML-2452-HPAG5A8-01	ML-2452-HPAG5A8-01

Supplement to Product Instructions

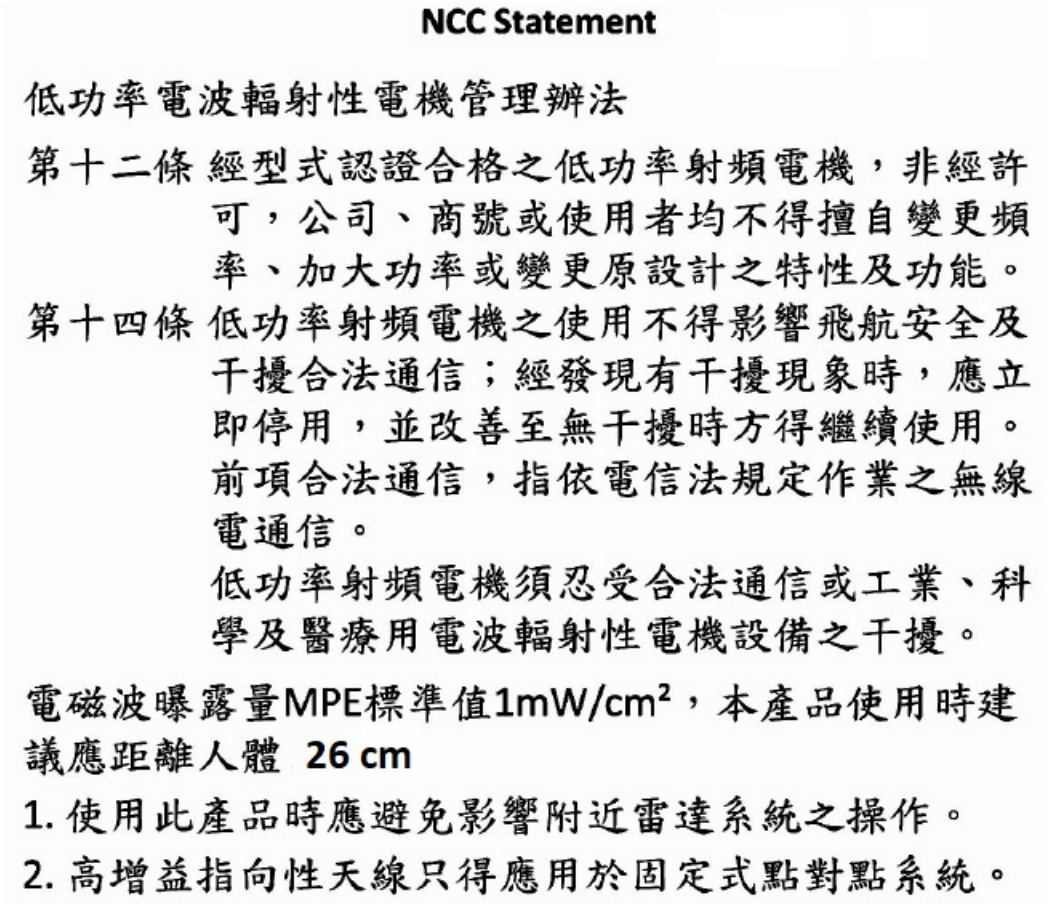
單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
金屬零件 (Metal Parts)	○	○	○	○	○	○
電路模組 (Circuit Modules)	—	○	○	○	○	○
電纜及電纜組件 (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



NCC Statement

低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。

電磁波曝露量MPE標準值1mW/cm², 本產品使用時建議應距離人體 **26 cm**

1. 使用此產品時應避免影響附近雷達系統之操作。
2. 高增益指向性天線只得應用於固定式點對點系統。

Brazil Agência Nacional De Telecomunicações (Anatel) Statement

Details about certification from Brazil's local authority Agência Nacional De Telecomunicações (Anatel) for access point usage in Brazil.

Este produto está homologado pela Anatel, de acordo com os procedimentos regulamentados 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

MPE Distance - Mobile Devices

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

CE Statement

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

Table 23: Selling Countries:

	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:

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), 802.11ac (VHT160)

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

- 2412-2472 MHz: 20 dBm
- 2402-2480 MHz (BR and EDR): 6 dBm
- 2402-2480 MHz (LE): 8 dBm
- 5180-5240 MHz: 23 dBm
- 5260-5320 MHz: 23 dBm
- 5500-5700 MHz: 30 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):

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 user's 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.

Hazardous Substances

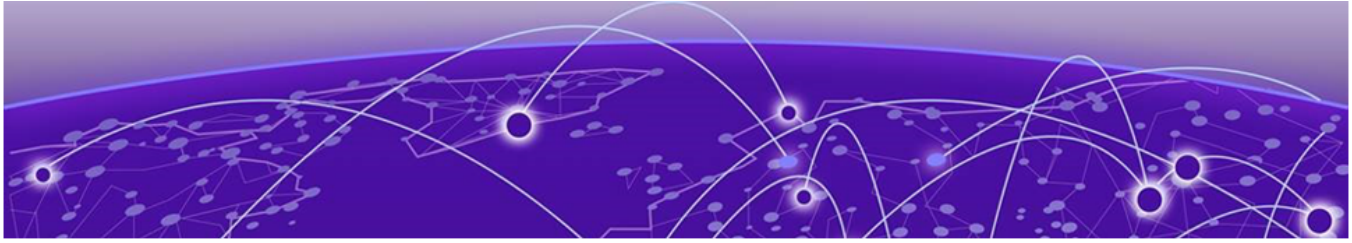
This product complies with the requirements of Directive 2011/65/EU and its amendments of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Declaration of Conformity in Languages of the European Community

English	Hereby, Extreme Networks, declares that the radio equipment type (AP510e) 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	Valmistaja Extreme Networks vakuuttaa täten että Radio LAN device (AP510e) tyyppinen laite on direktiivin 2014/53/EU oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen. Täydellinen teksti EU: n vaatimustenmukaisuuden hidastumisesta, ota yhteyttä Extreme Regulatory Complianceyn osoitteessa compliancerequest@extremenetworks.com
Dutch	Hierbij verklaart Extreme Networks dat het toestel Radio LAN device (AP510e) in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EU. Neem voor een volledige tekst van de EU Deceleration of Conformity contact op met Extreme Regulatory Compliance op compliancerequest@extremenetworks.com

French	Par la présente Extreme Networks déclare que l'appareil Radio LAN device (AP510e) est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2014/53/EU. Pour obtenir le texte intégral du processus de décélération de la conformité de l'UE, veuillez contacter la conformité réglementaire extrême à l'adresse suivante: compliancerequest@extremenetworks.com
Swedish	Härmed intygar Extreme Networks överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/ EU. För fullständig text om EU-deceleration av överensstämmelse, vänligen kontakta Extreme Regulatory Compliance på compliancerequest@extremenetworks.com
Danish	Undertegnede Extreme Networks erklærer herved, at følgende udstyr Radio LAN device (AP510e) overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EU. For fuld tekst af EU's deceleration of Conformity, kontakt venligst Extreme Regulatory Compliance på compliancerequest@extremenetworks.com
German	Hiermit erklärt Extreme Networks die Übereinstimmung des "WLAN Wireless Controller bzw. Access Points" (AP510e) mit den grundlegenden Anforderungen und den anderen relevanten Festlegungen der Richtlinie 2014/53/EU. Den vollständigen Text der EU-Konformitätsverzögerung erhalten Sie von Extreme Regulatory Compliance unter compliancerequest@extremenetworks.com
Greek	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Extreme Networks ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN device (AP510e) ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/EU. Για το πλήρες κείμενο της Σταθμιστικής Συμμόρφωσης της ΕΕ, επικοινωνήστε με την Extreme Regulatory Compliance στη διεύθυνση compliancerequest@extremenetworks.com

Icelandic	Extreme Networks lysir her med yfir að thessi bunadur, Radio LAN device (AP510e), uppfyllir allar grunnkrofur, sem gerdar eru i R&TTE tilskipun ESB nr 2014/53/EU. Vinsamlegast hafið samband við Extreme Regulatory Compliance í compliancerequest@extremenetworks.com fyrir fullan texta af samruna Evrópusamningsins.
Italian	Con la presente Extreme Networks dichiara che questo Radio LAN device (AP510e) è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/EU. Per il testo completo della Decelerazione di conformità UE, contattare Extreme Compliance Regulatory all'indirizzo compliancerequest@extremenetworks.com
Spanish	Por medio de la presente Extreme Networks declara que el Radio LAN device (AP510e) cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/EU. Para obtener el texto completo de la desaceleración de la conformidad de la UE, comuníquese con Extreme Regulatory Compliance en compliancerequest@extremenetworks.com
Portuguese	Extreme Networks declara que este Radio LAN device (AP510e) está conforme com os requisitos essenciais e outras disposições da Directiva 2014/53/EU. Para obter o texto completo da desaceleração de conformidade da UE, entre em contato com a Extreme Regulatory Compliance em compliancerequest@extremenetworks.com
Malti	Hawnhekk, Extreme Networks, jiddikjara li dan Radio LAN device (AP510e) jikkonforma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 2014/53/EU. Għal test sħiħ tad-Deċellerazzjoni tal-Konformità tal-UE, jekk jogħġbok ikkuntattja l-Konformità Regolatorja Estrema fi compliancerequest@extremenetworks.com



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