ExtremeMobility™ AP505i FCC/WR

Installation Guide

9035992-01 Rev AA

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Table of Contents

Preface **4**
- Text Conventions 4
- Platform-Dependent Conventions 4
- Providing Feedback to Us 5
- Getting Help 5

Chapter 1: Overview **7**
- LED Indicators 9
- Powering Methods 10

Chapter 2: Installation Process **11**
- Verifying the Box Contents 11
- Mounting Brackets and Accessories Usage 12
- Mounting to a Suspended/Drop Ceiling 14
- Mounting the AP on a Dry or Wood Wall/Solid Flat Ceiling 20
- Mounting to a Junction/Gang box 26
- Mounting the AP to a Beam 26
- Connecting the Power Supply 27

Chapter 3: Specifications **29**

Chapter 4: Regulatory Information **30**
- Federal Communications Commission (FCC) Notice 30
- Industry Canada Notice 31
- Brazil Anatel Statement 32
- Hazardous Substances 32
- Supplement to Product Instructions 32
- NCC Statement 33
- Indoor Use Only 33
- CE Information 33
- European Waste Electrical and Electronic Equipment (WEEE) Notice 34
- Declaration of Conformity in Languages of the European Community 34

Appendix A: Antenna Information **36**

Index **41**

Preface

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

Text Conventions

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

Table 1: Notice Icons

Icon	Notice Type	Alerts you to...
	General Notice	Helpful tips and notices for using the product.
	Note	Important features or instructions.
	Caution	Risk of personal injury, system damage, or loss of data.
	Warning	Risk of severe personal injury.
New!	New Content	Displayed next to new content. This is searchable text within the PDF.

Table 2: Text Conventions

Convention	Description
`Screen displays`	This typeface indicates command syntax, or represents information as it appears on the screen.
The words **enter** and **type**	When you see the word "enter" in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says "type."
[Key] names	Key names are written with brackets, such as **[Return]** or **[Esc]**. If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press **[Ctrl]**+**[Alt]**+**[Del]**
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.

Platform-Dependent Conventions

Unless otherwise noted, all information applies to all platforms supported by ExtremeXOS software, which are the following:

- ExtremeSwitching® switches
- Summit® switches
- SummitStack™

When a feature or feature implementation applies to specific platforms, the specific platform is noted in the heading for the section describing that implementation in the ExtremeXOS command documentation (see the Extreme Documentation page at www.extremenetworks.com/documentation/). In many cases, although the command is available on all platforms, each platform uses specific keywords. These keywords specific to each platform are shown in the Syntax Description and discussed in the Usage Guidelines sections.

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.

Getting Help

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

- GTAC (Global Technical Assistance Center) for Immediate Support
  - **Phone:** 1-800-998-2408 (toll-free in U.S. and Canada) or +1 408-579-2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact
  - **Email:** support@extremenetworks.com. To expedite your message, enter the product name or model number in the subject line.
- Extreme Portal — Search the GTAC 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.

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

Subscribing to Service Notifications

You can subscribe to email notifications for product and software release announcements, Vulnerability Notices, and Service Notifications.

1 Go to www.extremenetworks.com/support/service-notification-form.
2 Complete the form with your information (all fields are required).
3 Select the products for which you would like to receive notifications.

Note
You can modify your product selections or unsubscribe at any time.

4 Click **Submit**.

1 Overview

LED Indicators
Powering Methods

The AP505i is a next generation, indoor ceiling mount model enterprise-class 802.11ax access point (AP). The “i” in AP505i indicates that it comes with internal antennas. The AP features two simultaneous 4 x 4 radios, eight WiFi internal antennas, and one Bluetooth Low Energy (BLE) antenna. The AP505i can be mounted on a dry or wood wall, solid-flat ceiling, junction/ gang box, and on a suspended or drop ceiling. The AP505i can be used in stadiums, public venues such as hospitals and hotels, retail industry, and educational instituitions. The 802.11ax technology supports more users and internet of things (IoT) devices.

Note
The AP505i requires a minimum base firmware of WiNG 7.1.0.0-138R.

AP505i Features:

- Radios: 2 radios (one band locked at 2.4 GHz and the other band at 5 GHz); 1 IoT radio (2.4 GHz)
- Console port: RJ45
- Two Ethernet ports:
  - 1 X 10/100/2500 Mbps auto-negotiation Ethernet port, RJ45

    1 X 10/100/1000 Mbps auto-negotiation Ethernet port, RJ45
- LEDs: Six LEDs; all LEDs will be on during reset
- One reset button
- Power: 802.3af, 802.3at as PoE power options; 12V DC power supply (see Powering Methods for details)
- Antennas:
  - Eight WiFi internal antennas
  - One BLE internal antenna
- Temperature:
  - Operating Temperature: 0° C to +40 ° C (+32° F to +104° F) at 6000 ft

    0° C to +45 ° C (+32° F to +113° F) at Sea Level
- Enclosure: Plastic only

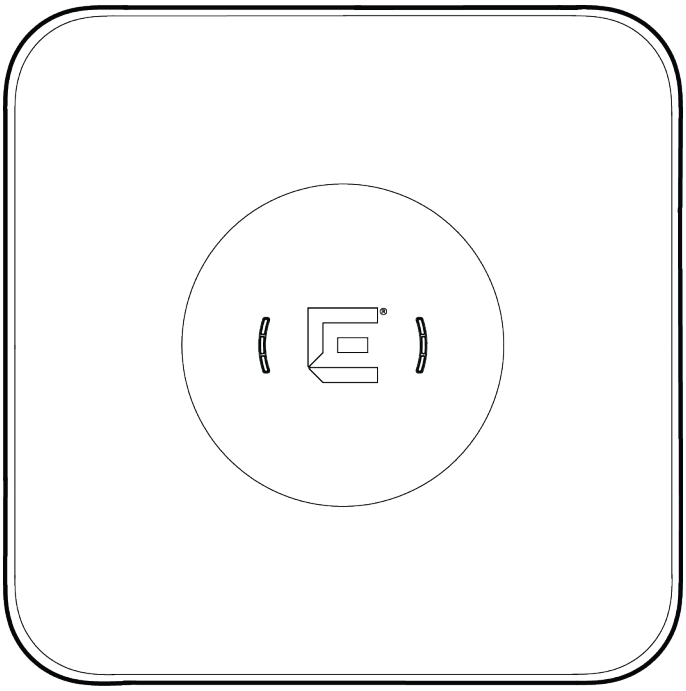


Figure 1: Top view of AP505i

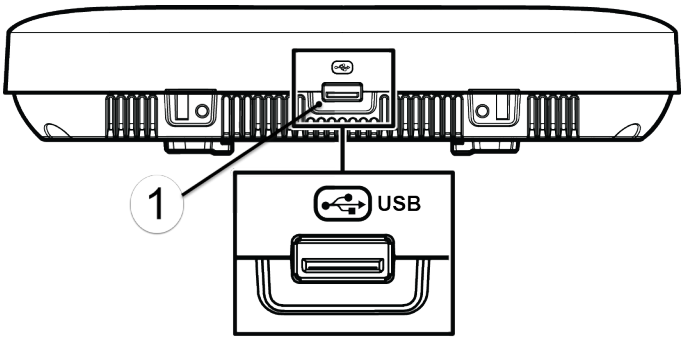


Figure 2: Side view of AP505i

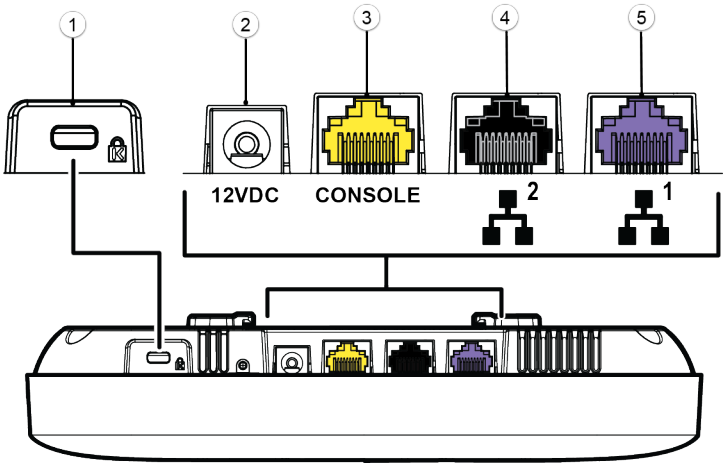


Figure 3: AP505i side ports

Table 3: Side ports on AP505i

Item	Description
1	Kensington Lock
2	12V DC Power Supply
3	Console Port (Yellow)
4	LAN2 (GE) (Black)
5	LAN1 (5GE) (Purple)

LED Indicators

AP505i access points have LED indicators on the front of the unit. The LEDs are not visibly marked.

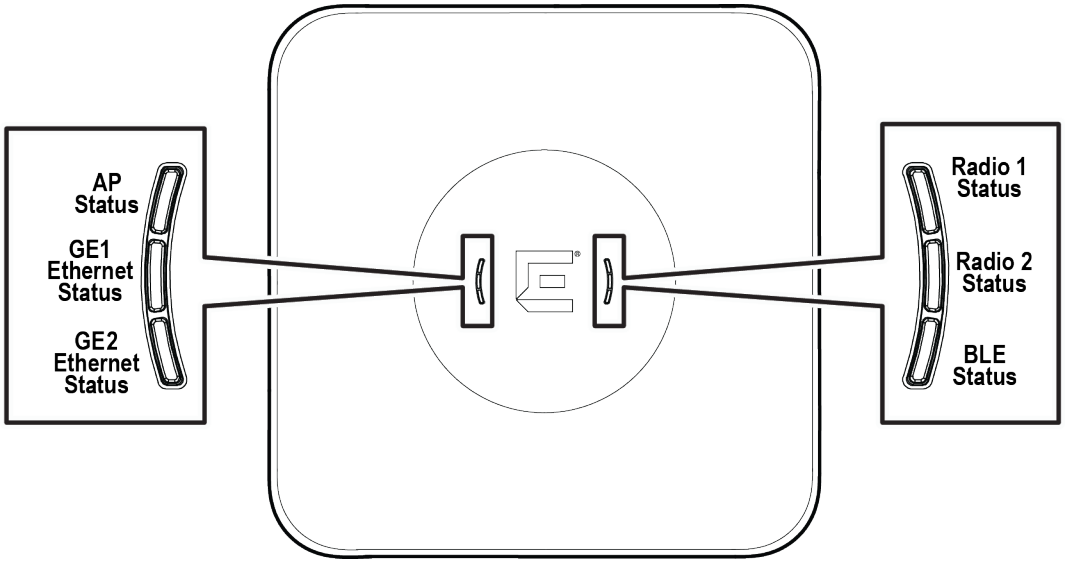


Figure 4: AP505i LED Icons

Table 4: AP505i LEDs

LED Icon	LED Color	Description
AP Status	Green	Normal operational status
	Amber	Non-operational status
GE1 Ethernet	Amber	100 Mbps
	Green	1000 Mbps
	Purple	2.5 G/5 G
GE2 Ethernet	Amber	10/100 Mbps
	Green	1000 Mbps
Radio #1 Status	Green	2.4 GHz
	Off	Non-operational status

Table 4: AP505i LEDs (continued)

LED Icon	LED Color	Description
Radio #2 Status	Green	5 GHz
	Amber	5 GHz
	Off	Non-operational status
IoT (BLE)	Blue	Indicates BLE is enabled
	Off	Non-operational status

Powering Methods

Table 5: AP505i Powering Methods

Power Source	Description
Power over Ethernet (PoE)	Power is provided through the RJ45 Ethernet port (GE1 port) to the right of the 12V DC port of AP505i, compliant to be powered by 802.3af and 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, 2.1mm x 5.5mm connector)	The AP505i can also be powered by an external DC power supply plugged into an AC source. Plug the supply's input jack into the DC-In port.

Note

If both PoE and 12V DC power supply are available, the AP will use the external power supply as the power source. If the external power supply is disconnected, the AP GE1 is connected to PoE immediately without causing the AP to reboot.

AP505i 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:

AP505i	802.3af	802.3at
Radio 1	2x2 (18dBm)	4x4 (20dBm)
Radio 2	2x2 (18dBm)	4x4 (20dBm)
BLE	ON	ON
GE1	ON	ON
GE2	ON	ON

2 Installation Process

Verifying the Box Contents
Mounting Brackets and Accessories Usage
Mounting to a Suspended/Drop Ceiling
Mounting the AP on a Dry or Wood Wall/Solid Flat Ceiling
Mounting to a Junction/Gang box
Mounting the AP to a Beam
Connecting the Power Supply

Follow this procedure to install AP505i:

1 Verify the box contents.
2 Review the Safety Guidelines.
3 Mount the AP to a flat ceiling. Alternatively, you can also mount the AP to a junction/gang box, or a suspended or drop ceiling.

Note

Before selecting a mounting option, examine the mounting brackets and accessories usage.

4 Connect the power supply to the AP505i access point.

Verifying the Box Contents

Before you install the AP505i access point, make sure you have all the necessary parts for installation.

1 Verify that the box contains the following items:

Table 6: AP505i Box Contents

Quantity	Items
1	AP505i Quick Reference Guide
1	AP505i Cloud Quick Start Guide
1	AP505i access point
1	Mounting bracket for 802.11ax indoor access point
2	Phillips pan-head wood screws
2	Screw-in anchors

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

Note

Before mounting the AP505i, read the Safety Guidelines.

Mounting Brackets and Accessories Usage

The access point comes with the Main Mounting Bracket (#37201) and the M3 security screw kit. The AP can also be used with various other brackets and accessories that can be purchased separately. Refer to the tables below for purchasing part number details, brackets and accessories usage, and specifications.

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 7: Brackets 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
30516	WS-MBI-WALL04 bracket
37211	WS-MBI-DCFLUSH bracket

Table 8: Bracket accessories 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 9: Power supply purchase order information

Part number	Description
37219	PWR 12V DC, 3A, 2.5 mm X 5.5 mm connector

Table 10: Brackets and accessories 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"	This bracket is shipped with the access point. Installation methods: 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"	Wall mount or protruded ceiling mount with single width.
30518 WS-MBI-DCMTR01 bracket	No	No	Yes	Yes	No	No	Yes	9/16", 1.5", 15/16"	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 installation.

Table 10: Brackets and accessories 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
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.
37211 WS-MBI-DCFLUSH bracket	No	No	Yes	Yes	No	No	Yes	9/16", 1.5", 15/16"	Protruded ceiling mount with varying widths.
BRKT-000147A-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; used with any ceiling bracket	No	Yes	Yes	No	No	No	No	N/A	This accessory can be used only with ceiling mount brackets listed in this table.

Mounting to a Suspended/Drop Ceiling

For suspended or drop ceiling install, 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 is mounted to a suspended or a drop ceiling using:

1 #37201, stainless-steel main mounting bracket to a flat T-bar.
2 #37201, stainless-steel main mounting bracket with KT-135628-01 adapter to a flat T-bar.
3 #37211, WS-MBI-DCFLUSH bracket to a flat T-bar.
4 #30518, WS-MBI-DCMTR01 bracket to a T-bar.

Mounting the AP using the Main Mounting Bracket to a Flat T-bar

The AP can be mounted on a t-bar using the main mounting bracket that is shipped with the unit. The mounting bracket does not come attached to the unit.

Pre-Installation Checklist:

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

1 Attach the main mounting bracket to the AP.

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.

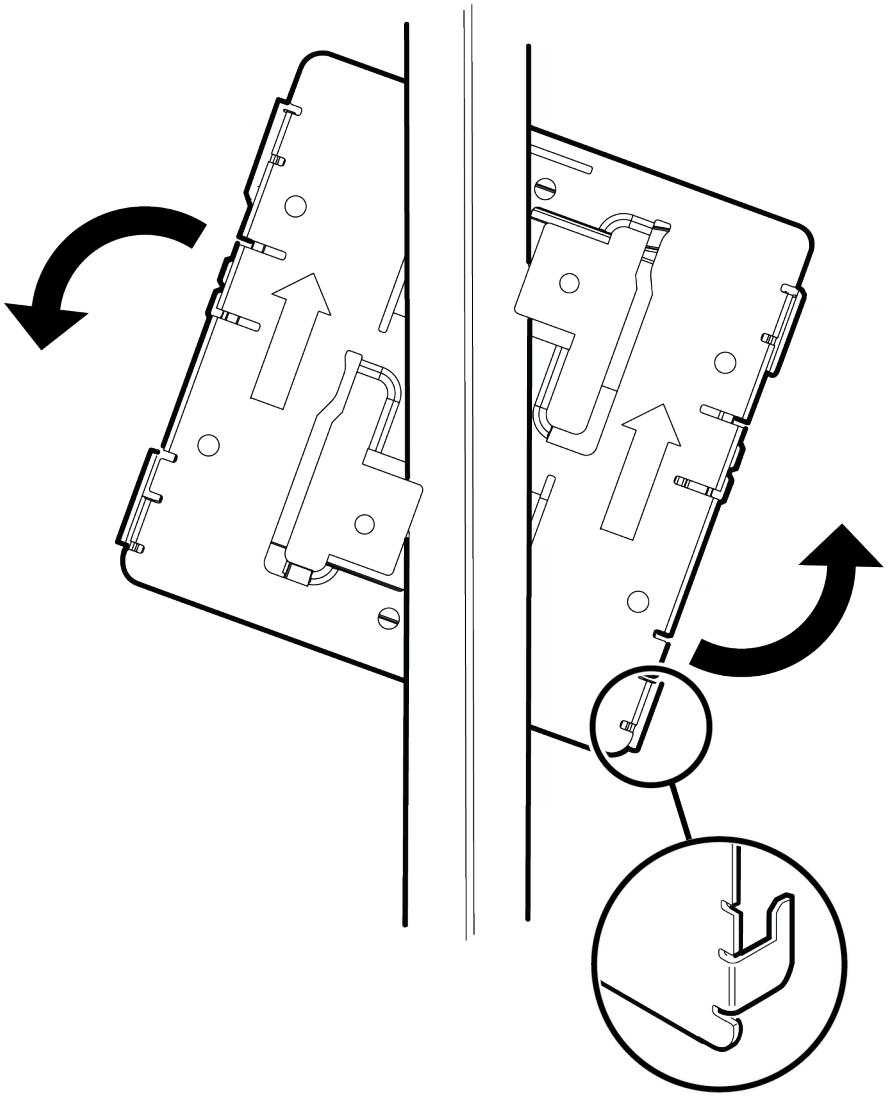


Figure 5: Attaching the main mounting bracket to a T-bar

3 Hold the AP and rock it back and forth to ensure it is securely mounted.
4 Replace the tiles.
5 Attach the Ethernet cable's RJ45 connector to the LAN1 port.

Mounting the AP using the Main Mounting Bracket and KT-135628-01 Adapter to a Flat T-bar

Mounting the AP to a suspended or drop ceiling requires the optional adaptor (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" protrusion from the bar.

Pre-Installation checklist:

- T-bar width can be either 9/16" (15mm) or 15/16" (24mm).
- 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.

1 Attach the main mounting bracket to the access point.
2 Attach the T-bar adapter 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 bracket and locks in place.

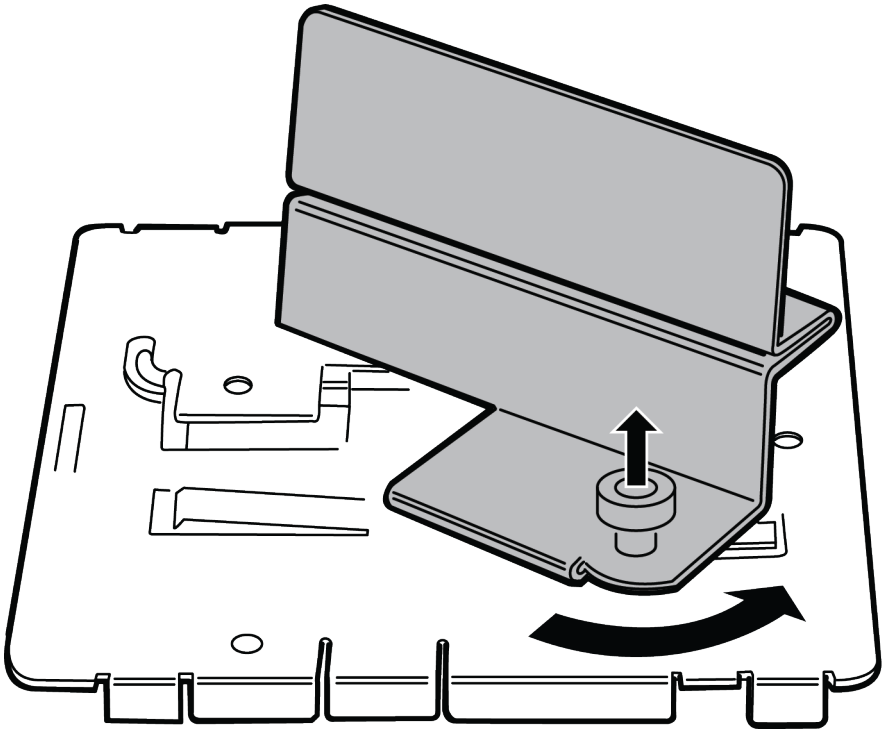


Figure 6: Attaching the KT-135628-01 adapter to the main bracket

3 Slide the T-bar holder onto the T-bar and replace the tiles to hold the adapter onto the T-bar.

4 Hold the AP and rock it back and forth to ensure that it is securely mounted.
5 Attach the Ethernet cable's RJ45 connector to the LAN1 port.

Mounting the AP using the WS-MBI-DCFLUSH Bracket to a Flat T-bar

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

Pre-Installation checklist:

- T-bar width must be 9/16" (15mm), 15/16" (24mm), 1.5" (38mm).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" (0.38mm).

1 Remove the ceiling panels around the drop ceiling T-bar rail.
2 Open the movable sliding part of the T-bar to give the stationary and slider T-bar more space.
3 Hook the stationary end of the T-bar 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. Squeeze the bracket parts together until you hear the T-bar locking tab click into place.

5 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 AP.

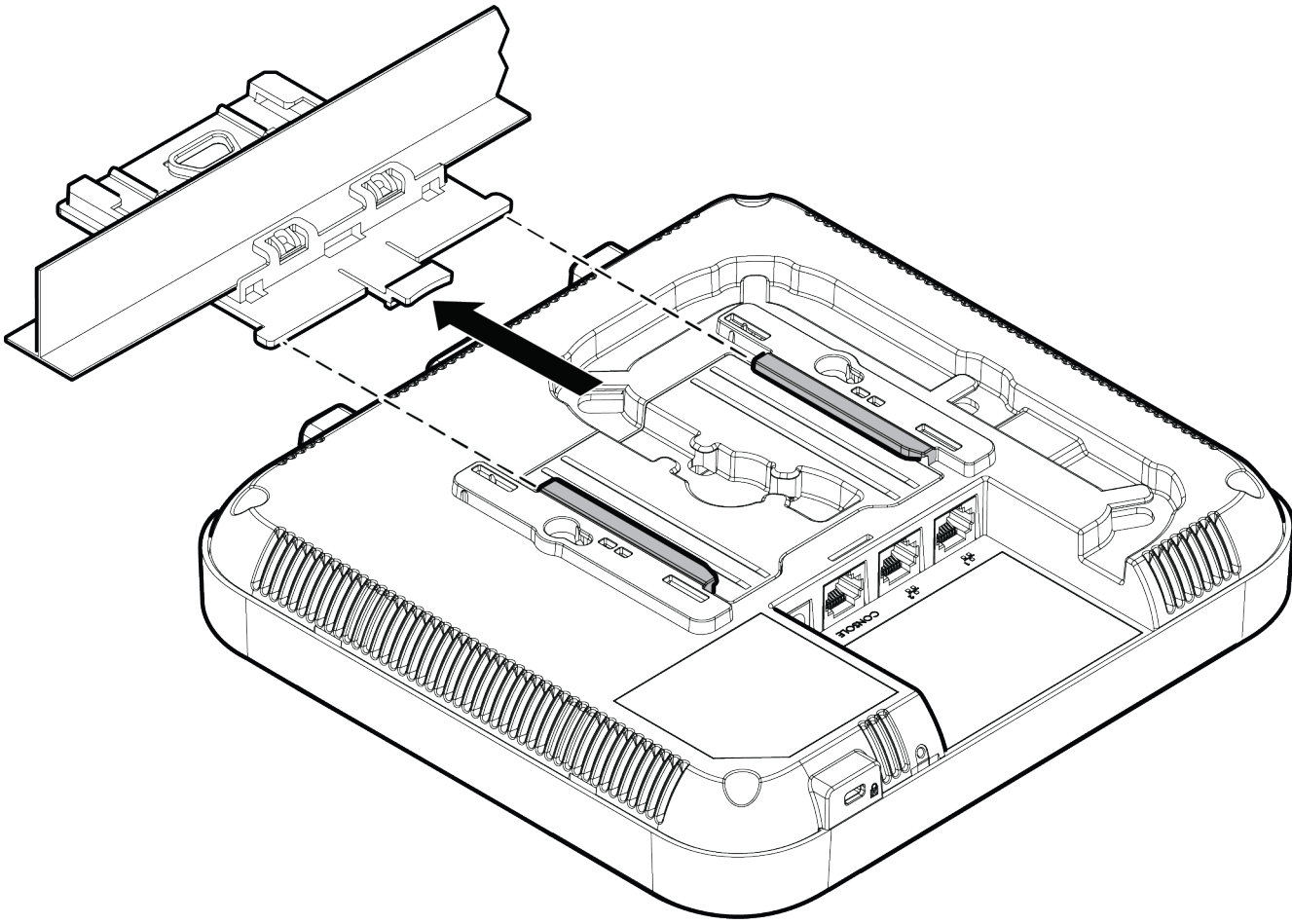


Figure 7: Attaching the AP unit onto the WS-MBI-DCFLUSH bracket

6 Hold the AP and rock it back and forth to ensure that it is securely mounted.

7 Attach the Ethernet cable's RJ45 connector to the LAN1 port and place the ceiling tile back in place.

Mounting the AP using the WS-MBI-DCMTR01 Bracket

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

Pre-Installation checklist:

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

1 Remove the ceiling panels around the drop ceiling T-bar rail.

2 Open the movable sliding part of the T-bar to give the stationary and slider T-bar more space.
3 Hook the stationary end of the T-bar 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 AP.

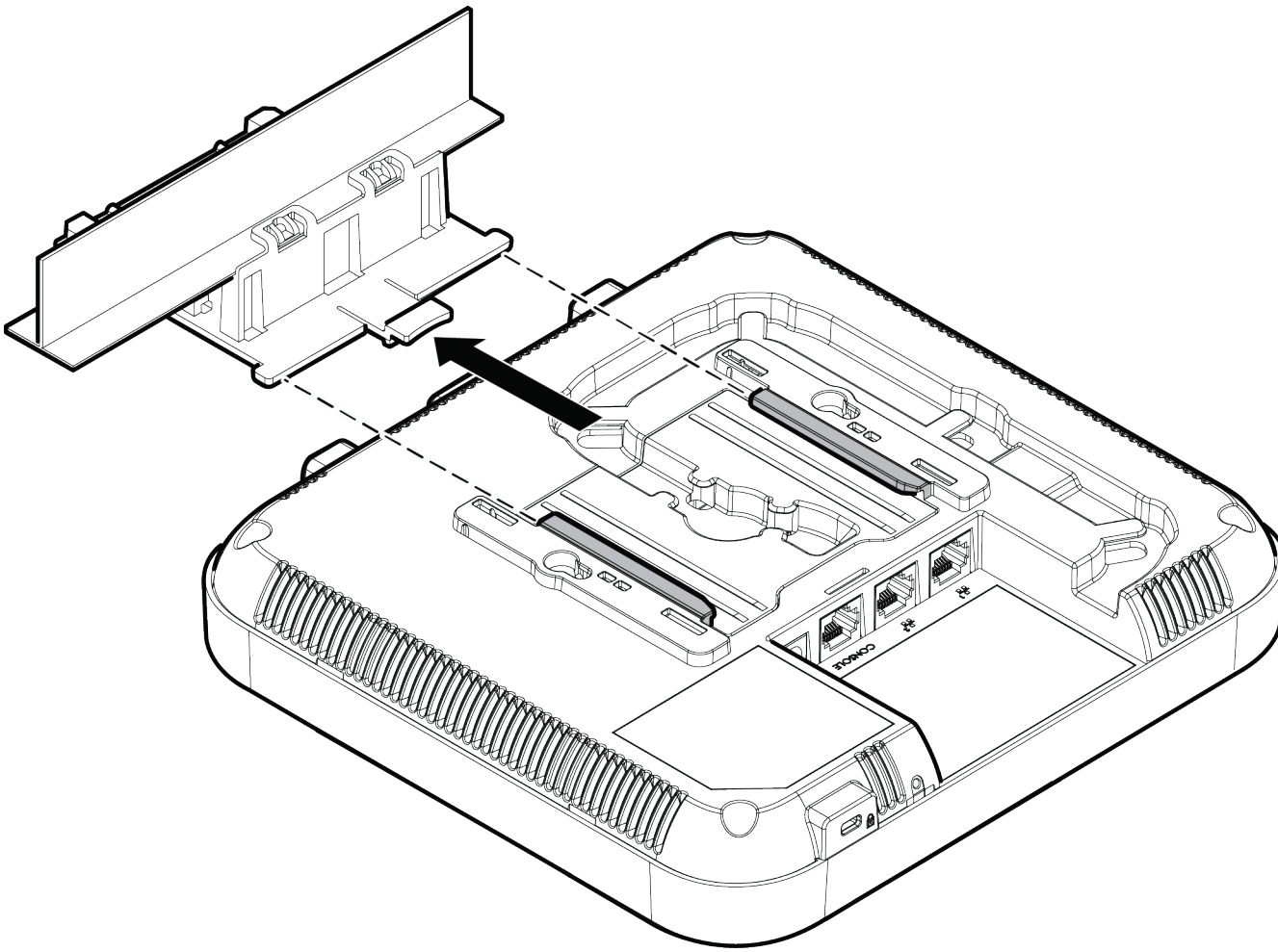


Figure 8: Attaching the AP unit onto the WS-MBI-DCMTR01 bracket

7 Hold the AP 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.

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

The AP505i can be mounted to a dry/wood wall or a solid flat ceiling using various mounting brackets listed in this section.

Note

The recommended method of installation is using the Main Mounting Bracket.

Pre-Installation checklist:

- The mounting surface, item, and hardware must be able to support the AP in all environmental conditions.
- The mounting surface should be flat.

1 #37201, stainless-steel main mounting bracket that ships with the unit.

2 #30516, WS-MBI-WALL04 bracket, two Phillips pan-head screws, and screw-in anchors.

Note

The WALL04 bracket and screw-in anchors are used only for dry or wood wall mounting.

3 #37201, stainless-steel main mounting bracket with #37210, flat metal easy-attach adapter.

4 Phillips pan head screws.

Tip

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

Mounting the AP to a wall using the Main Mounting bracket

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

1 Use the mounting bracket as a template and mark the hole centers on the wall.

Note

The four feet of the bracket must be vertical and pointing up and the flat part of the bracket must be touching the surface it is being attached to.

2 Insert the screws into the holes of the mounting bracket and use the screw-in anchors if needed.

3 Insert the Ethernet cable's RJ45 connector into the LAN1 port.

4 Insert the AP onto the bracket's four feet and slide it to the right to lock it in place.

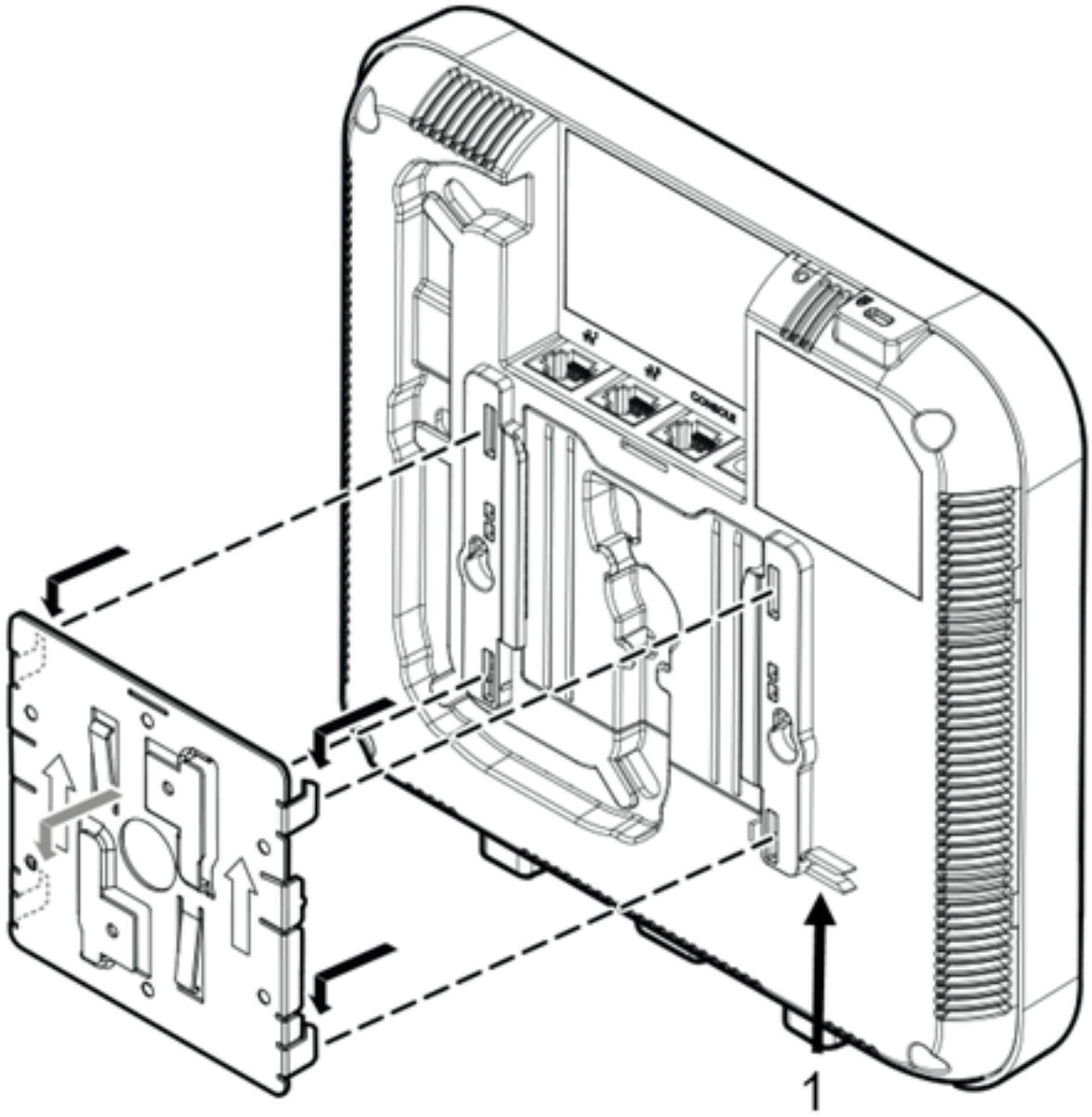


Figure 9: Attaching the access point to the main mounting bracket

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

5 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 22.

Install a Security Torx Locking Screw

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 dry or wood wall.

1 Line up the security torx locking screw using the rear guides on the access point.
2 Tighten the security torx locking screw using a T8 bit screwdriver.
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.

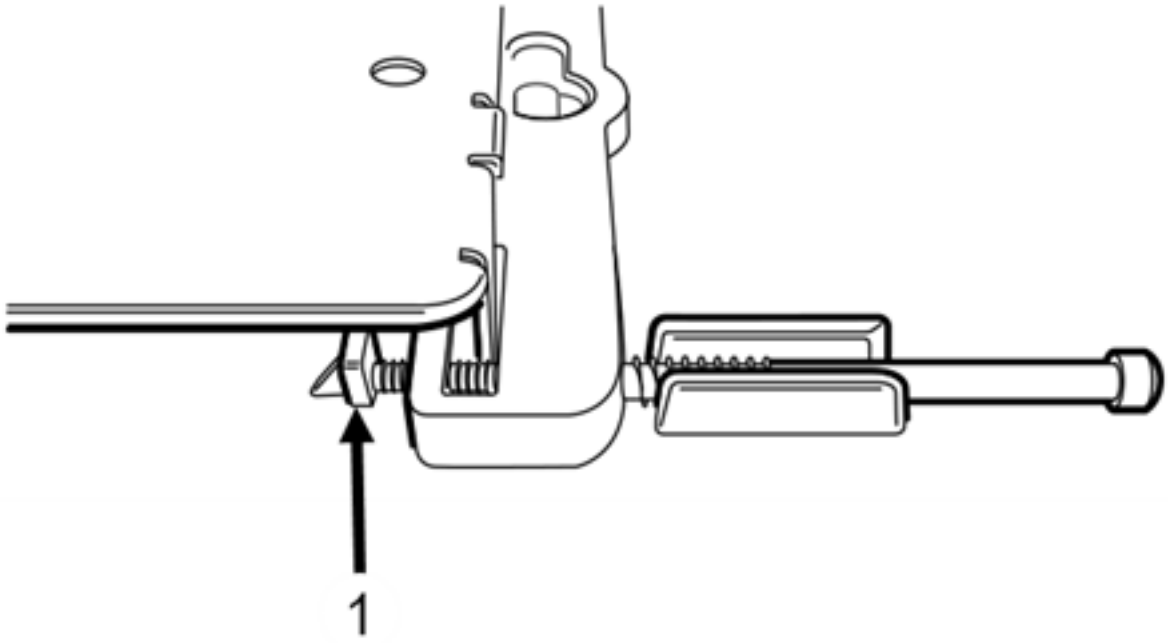


Figure 10: Security torx locking screw stop feature

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.

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

Mounting the AP to a flat ceiling requires the WS-MBI-WALL04 (#30516) bracket, two Philips Pan-head screws, and two screw-in anchors. They must be purchases separately.

1 Install the WS-MBI-WALL04 bracket on a wall/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.

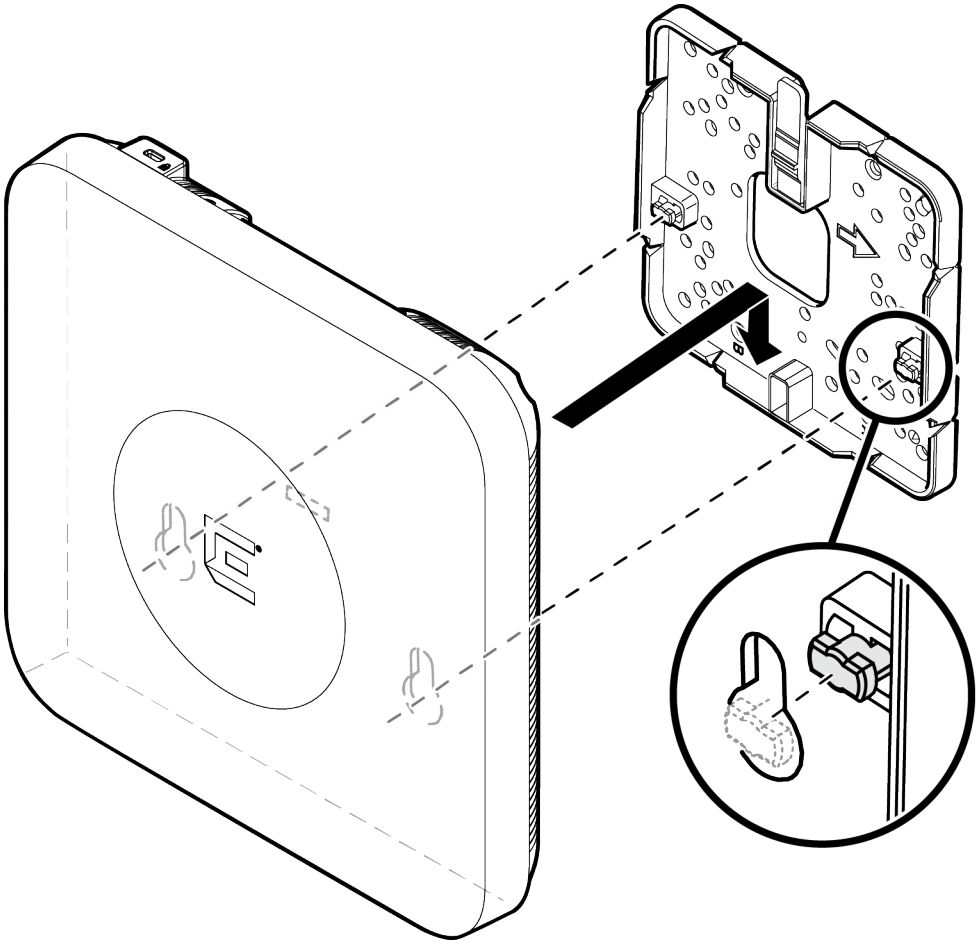


Figure 11: Mounting the AP using the WS-MBI-WALL04 Bracket

- Use the WS-MBI-WALL04 as a template and mark the holes to be used to mount the AP. It is recommended to use the holes 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 AP is installed.

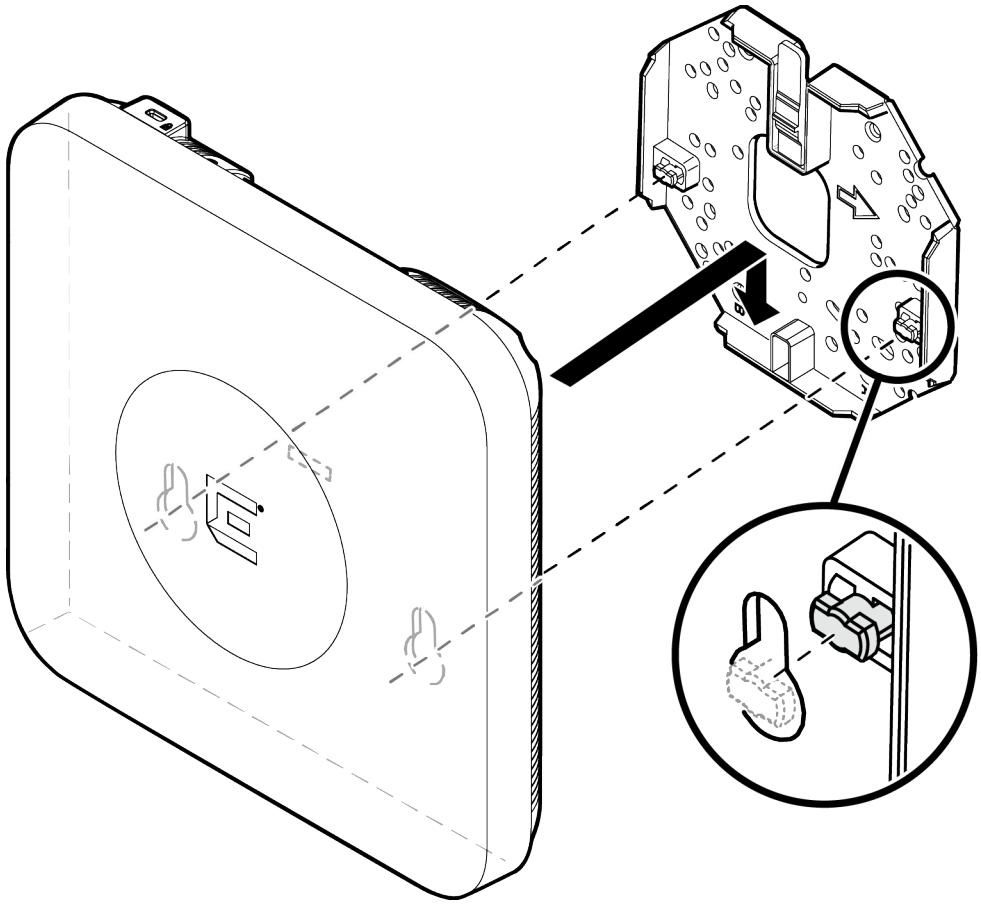


Figure 12: Mounting the AP using the WS-MBI-WALL04 Bracket (when bracket corners are broken off)

2 Connect the LAN cable to the AP.
3 Insert the AP onto the keyhole posts and slide the AP.
4 Lock the AP into place at about 1/4 inch.

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

The AP can also be mounted onto a wall or solid 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.

1 Attach the flat metal indoor bracket to the main bracket.

   Keep the bracket to the center of the main bracket, push and rotate it.
2 Hold the AP to the surface to which it needs to be attached and use the optional bracket's end holes as a template to mark the attachment holes.
3 Drill two holes on the wall where you want to mount the AP.
4 Connect the LAN cable to the back of the AP.

5 Hold the AP, insert and tighten the 2 screws until you lock it into place.

Note

The “E” logo must be in the right orientation before tightening the screws.

Mounting to a wall using the Philips Pan-head screws

You can mount the AP505i access point directly onto a dry/solid wall using the Philips Pan-Head screws. This is an optional installation method and not the preferred mode of installation.

1 Drill two holes 104 mm (4.100”) apart from each other on the wall where you want to mount the AP.

2 Insert the screws into the holes and use the screw-in anchors if needed.

Note

Leave 1/8” gap between the screw head and the wall.

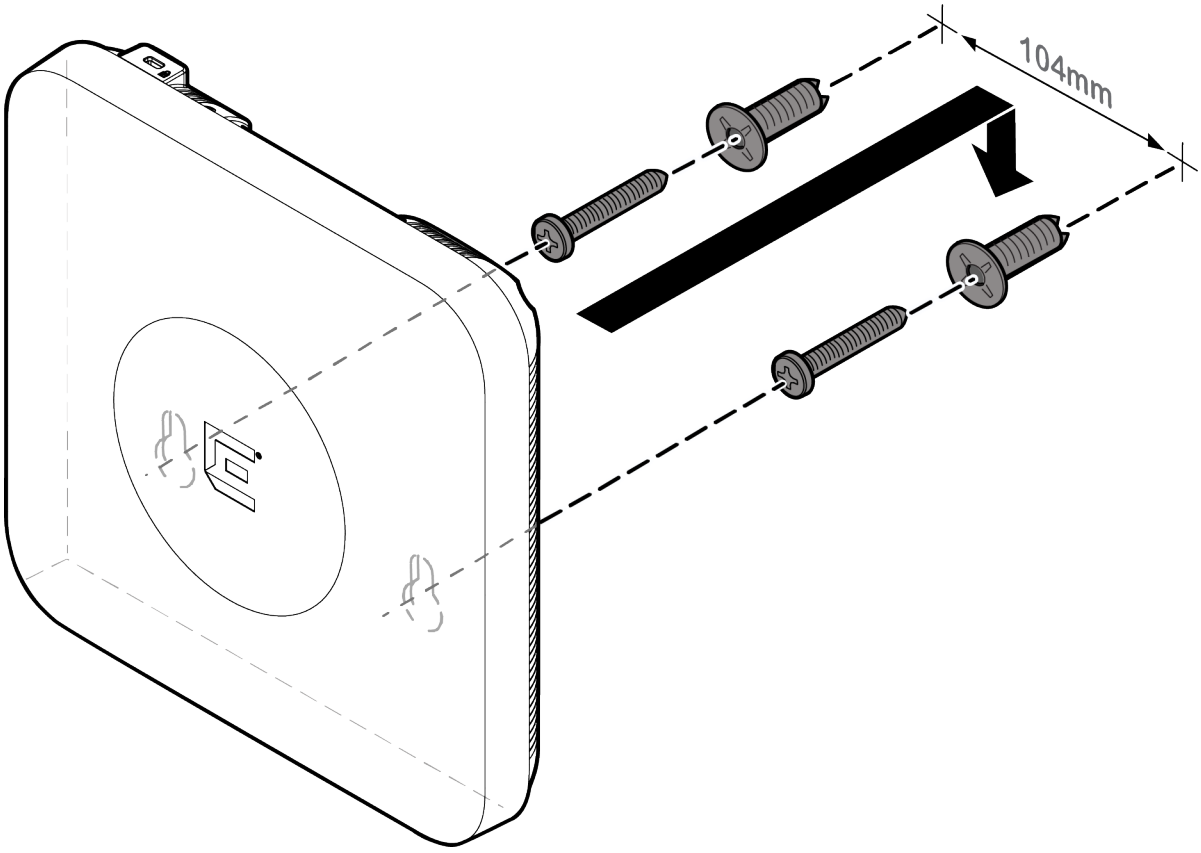


Figure 13: Mounting the AP directly on a dry/wood wall using the Philips Pan-Head screws

3 Insert the Ethernet cable’s RJ45 connector into the LAN1 port.

4 Align the AP against the screw heads and slide it down. Ensure that the AP is secured in place and tightened. If the AP is loose, unmount the AP and decrease the distance between the screw head and the wall. Remount the AP.

Note

When installing the AP, the “E” logo should be in the right orientation.

Mounting to a Junction/Gang box

You can mount the AP505iAP505i to a junction/gang box using the #37201 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.

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

2 Line up the 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 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 AP 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 bracket to bend. If the bracket bends, you will not be able to align and slide the AP onto the keyhole posts.

4 Connect the LAN cable to the AP.

5 Align the keyhole slots and posts and slide the AP onto the bracket until you hear it lock in place.

Mounting the AP to a Beam

The AP505i 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 AP505i access point can be mounted onto a beam using a beam clip accessory (BRKT-000147A-01) to the main mounting bracket.
- The beam should be flat.

Before attaching the AP onto a beam, verify that:

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

To attach an AP to a beam, attach a beam clip (Accessory BRKT-000147A-01) to the main mounting bracket:

1 Attach the main mounting bracket to the AP.
2 Attach the adapter to the mounting bracket by using a twisting motion.
3 Attach the mounting bracket to the AP.
4 Place the adapter on a beam in such a way that there is enough space between the screw and clamp to be tightened.
5 Use the screw and clamp on the top of the adapter to secure the AP in place on the beam.
6 Insert the Ethernet plug into the AP.

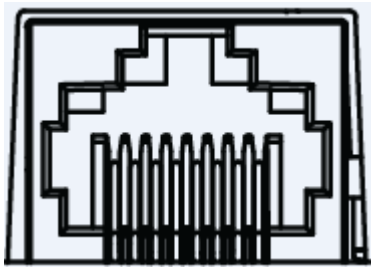
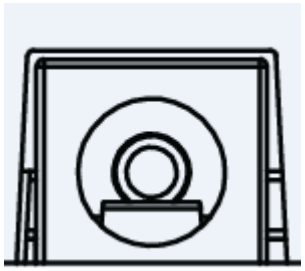
Connecting the Power Supply

You can connect the power supply to the AP using the PoE option or the optional 12V DC power supply.

1 Power is provided through the RJ45 Ethernet port (LAN1 port) to the right of the 12V DC port of AP505i, compliant to be powered by 802.3af. This is the preferred method of powering the AP on ceiling and high wall installations.

2 The AP505i can also be powered by an external DC power supply plugged into an AC source. Plug the supply's input jack into the DC-In port.

Table 11: AP505i Power Supply Options

AP505i Port	Function
	LAN1 Port
	12V DC Power Supply

Note

PoE is disabled when external power supply is used.

3 Specifications

This section lists the specifications for the ExtremeMobility™ Indoor Access Point AP505i.

AP505i Specifications

Table 12: Physical Specifications

Part Number: AP505i-FCC	Cloud-ready, Dual Radio 802.11ax/ac/abgn, 4 x 4:4 MIMO Indoor 11ax access point. Internal Antenna. Domain: US, Puerto Rico, and Colombia
Part Number: AP505i-WR	Cloud-ready, Dual Radio 802.11ax/ac/abgn, 4 x 4:4 MIMO Indoor 11ax access point. Internal Antenna. Domain: EMEA and Rest of the World
Dimensions	8.26" x 8.26" x 1.89" (210mm x 210mm x 48mm)
Weight	3.21 lbs
Enclosure Material	Plastic only

Table 13: Environmental Specifications

Operating Temperature	0°C to +40°C (32°F to 104°F) at 6000 ft. 0°C to +45°C (32°F to 113°F) at sea level
Storage and Transportation Temperature	-40°C to +70°C (-40°F to 158°F)
Humidity	0% to 95% (non-condensing)

Table 14: Other Specifications

ExtremeCloud™ enabled	Yes

4 Regulatory Information

Federal Communications Commission (FCC) Notice
Industry Canada Notice
Brazil Anatel Statement
Hazardous Substances
Supplement to Product Instructions
NCC Statement
Indoor Use Only
CE Information
European Waste Electrical and Electronic Equipment (WEEE) Notice
Declaration of Conformity in Languages of the European Community

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.

Operations in the 5.15-5.25GHz band are restricted to indoor usage only.

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 23cm between the radiator & 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 27cm 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 27cm de distance entre la source de rayonnement et votre corps.

Warning
DFS Warning: Dynamic Frequency Selection (DFS) for devices operating in the bands 5250-5350 MHz, 5470-5600 MHz and 5650-5725 MHz.

Warning
DFS Warning: Sélection dynamique de fréquences (DFS) pour les dispositifs fonctionnant dans les bandes 5250-5350 MHz, 5470-5600 MHz et 5650-5725 MHz.

Insert a section title

Insert content for the first section.

Brazil Anatel Statement

Este produto está homologado pela ANATEL, de acordo com os procedimentos regulamentados pela Resolução n°. 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.

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, 送測產品實測值為 0.963mW/cm²

1. 使用此產品時應避免影響附近雷達系統之操作。

Indoor Use Only

Warning
Indoor use only. この製品は屋内においてのみ使用可能です

CE Information

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

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

	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), Bluetooth (LE), 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: 19.99 dBm
- 2402-2480MHz (LE): 7.56 dBm
- 5180-5240MHz: 22.99 dBm
- 5260-5320MHz: 22.99 dBm
- 5500-5700MHz: 22.99 dBm
- 2405-2480MHz: 5.72 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 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 (AP505i) 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 (AP505i) tyyppinen laite on direktiivin 2014/53/EU oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

Dutch	Hierbij verklaart Extreme Networks dat het toestel Radio LAN device (AP505i) in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EU.
French	Par la présente Extreme Networks déclare que l'appareil Radio LAN device (AP505i) est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2014/53/EU.
Swedish	Härmed intygar Extreme Networks överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/ EU.
Danish	Undertegnede Extreme Networks erklærer herved, at følgende udstyr Radio LAN device (AP505i) overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EU.
German	Hiermit erklärt Extreme Networks die Übereinstimmung des "WLAN Wireless Controller bzw. Access Points" (AP505i) mit den grundlegenden Anforderungen und den anderen relevanten Festlegungen der Richtlinie 2014/53/EU.
Greek	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Extreme Networks ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN device (AP505i) ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/EU.
Icelandic	Extreme Networks lysir her med yfir að thessi bunadur, Radio LAN device (AP510i), uppfyllir allar grunnkrofur, sem gerdar eru i R&TTE tilskipun ESB nr 2014/53/EU.
Italian	Con la presente Extreme Networks dichiara che questo Radio LAN device (AP505i) è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/EU.
Spanish	Por medio de la presente Extreme Networks declara que el Radio LAN device (AP505i) cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/EU.
Portuguese	Extreme Networks declara que este Radio LAN device (AP505i) está conforme com os requisitos essenciais e outras disposições da Directiva 2014/53/EU.
Malti	Hawnhekk, Extreme Networks, jiddikjara li dan Radio LAN device (AP505i) jikkonforma mal-htigijiet essenzjali u ma provvedimenti ohrajn relevanti li hemm fid-Dirrettiva 2014/53/EU.

A Antenna Information

Internal Antenna access point

The AP505i is an indoor access point with eight WiFi internal antennas and one BLE internal antenna.

Table 15: AP505i Internal Antenna

Access point model	Application	Description	Gain (dBi)	Frequency (GHz)	Connector
AP505i	Indoor	MIMO	4 dBi	2.4	None
			6 dBi	5	None

Antenna Patterns - 2.4 GHz

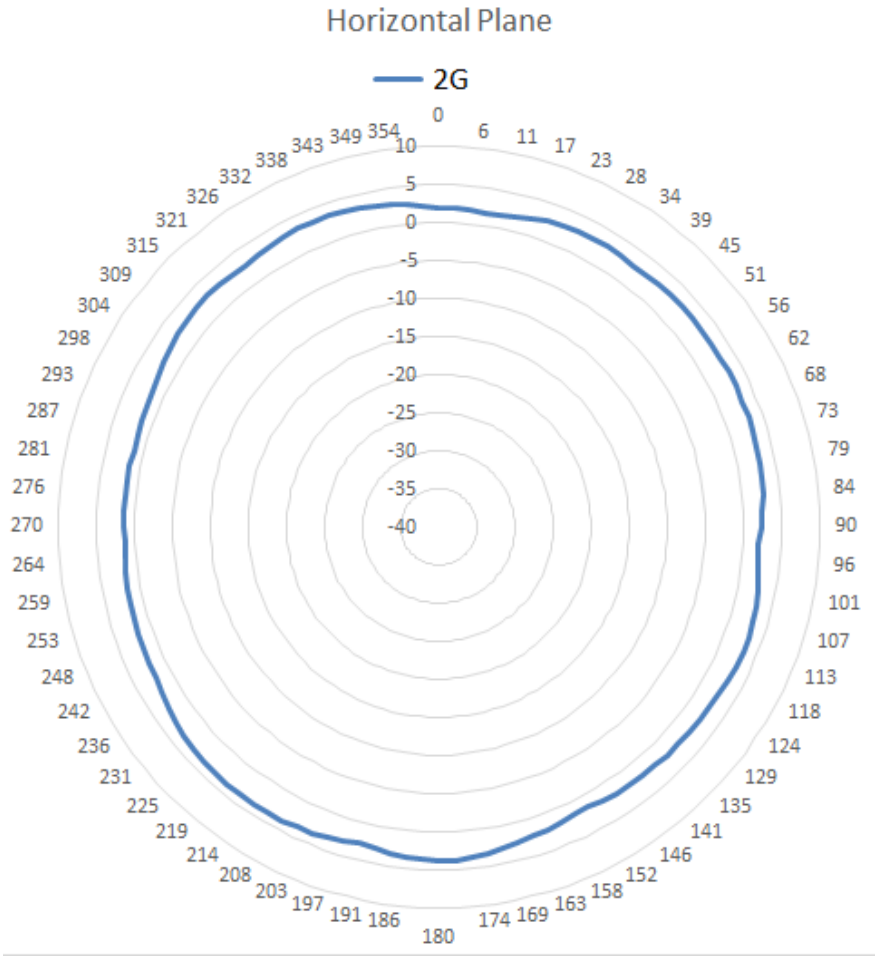


Figure 14: Horizontal Radiation Pattern 2.4 GHz

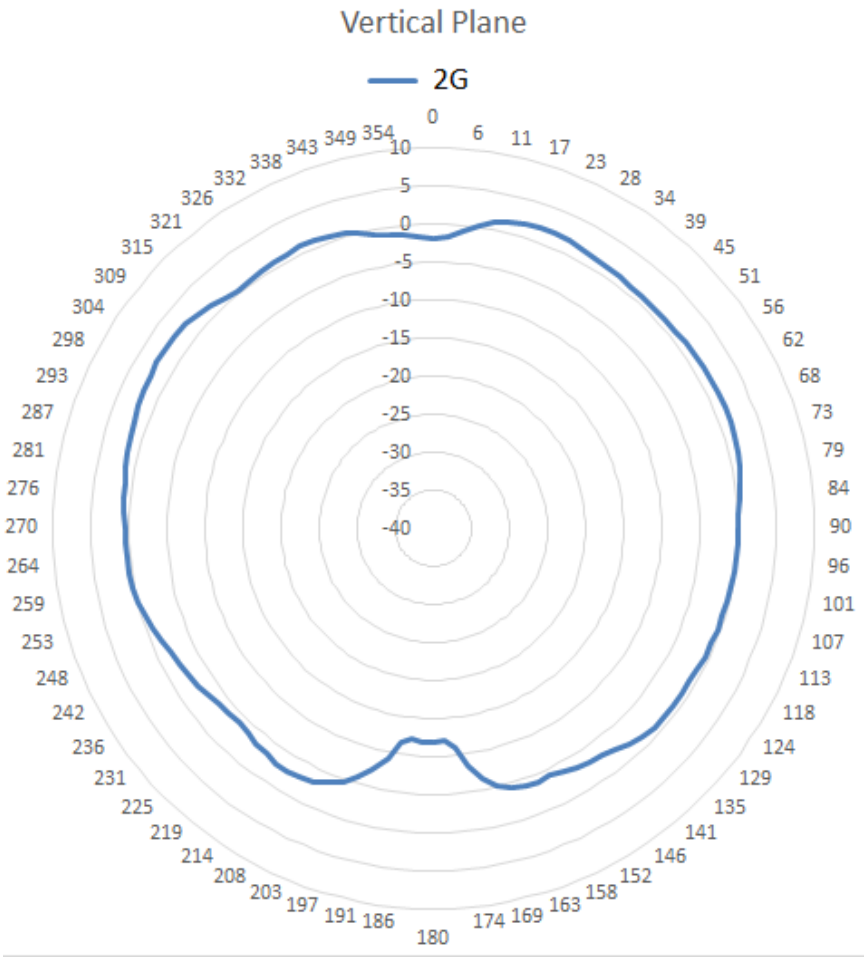


Figure 15: Vertical Radiation Pattern 2.4 GHz

Antenna Patterns - 5 GHz

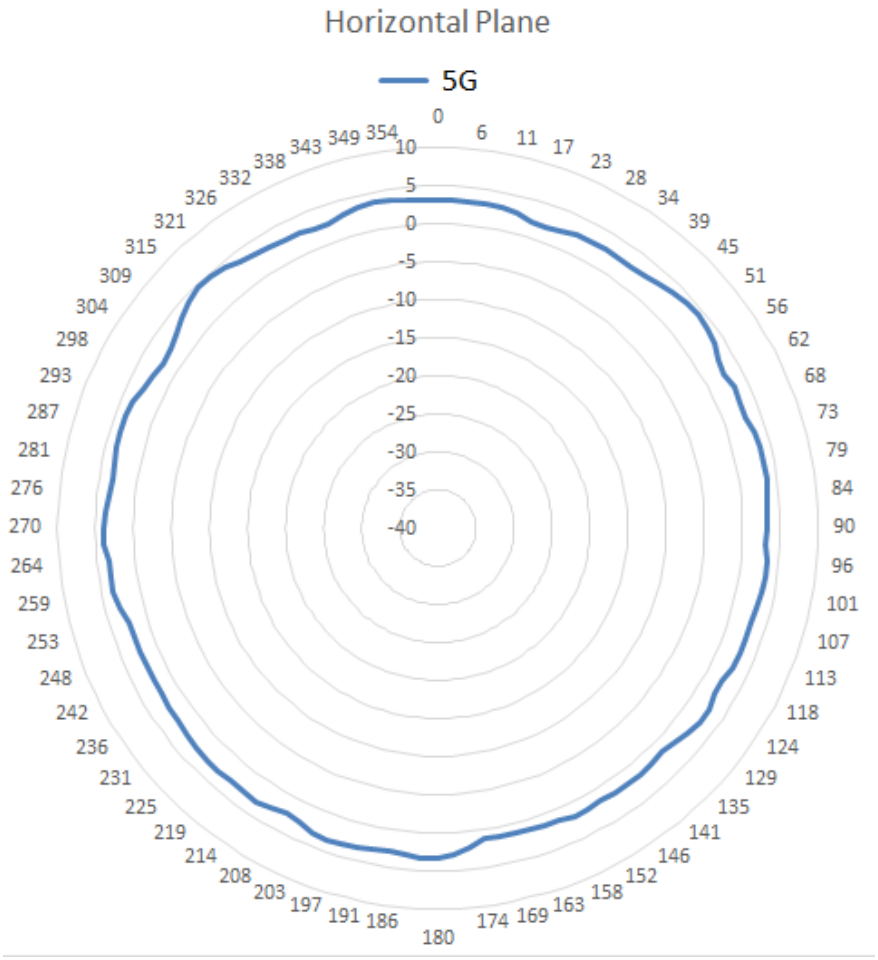


Figure 16: Horizontal Radiation Pattern 5 GHz

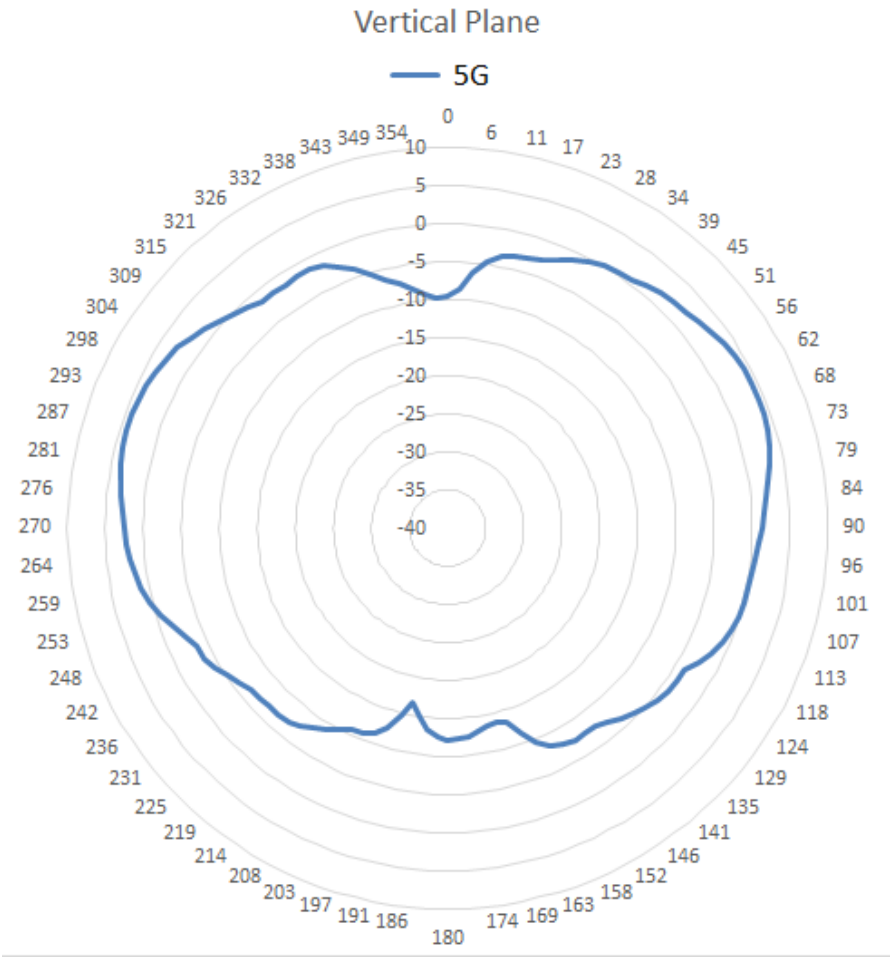


Figure 17: Vertical Radiation Pattern 5 GHz

Index

A

AP505i, Antenna Specifications, Antenna Patterns 36, 37, 39
AP505i, AP505i brackets, AP505i accessories, brackets usage, accessories usage 12
AP505i, Beam Mounting, Mounting Procedure 26
AP505i, Box Contents, Contents, AP505i Box 11
AP505i, Industry Canada Notice 31, 32
AP505i, Installation Process, AP505i Installation 11
AP505i, LED Indicators 9
AP505i, Mounting procedure, mounting bracket, mounting, wall mounting 20
AP505i, Mounting Procedure, Wall Mounting, Dry Wall Mounting 20
AP505i, Mounting Procedure, WS-MBI-DCFLUSH Bracket 17
AP505i, Mounting, Main Mounting Bracket, Flat T-bar 15
AP505i, Mounting, Suspended Ceiling, Ceiling Mount, Drop Ceiling 14
AP505i, Overview 7
AP505i, Power Supply, Connecting to a Power Supply 27
AP505i, Powering Methods, Power Connections 10
AP505i, Regulatory Information 30, 33, 34
AP505i, Specifications, Physical Specifications 29
AP505i, Wall Mounting, Easy-attach adapter 24
AP505i, Wall Mounting, Mounting Procedure, WALL04 Bracket 23
AP505i, Wall Mounting, Philips Pan-Head screws, Mounting procedure 25

C

conventions
    notice icons 4
    text 4

D

documentation
    feedback 5

F

features
    platform-specific 4

J

Junction Box Mounting, Gang Box Mounting, Mounting Procedure 26

M

Main Mounting Bracket, KT-135628-01 Adapter, Flat T-bar, Mounting Procedure, AP505i 16
Mounting Procedure, Installation, AP505i, DCMTR01 Bracket 18

N

NCC Statement 33

P

platform dependence 4

R

Regulatory Information 32

S

security torx locking screw
    M3 security screw kit 22
    security screw 22
support, *see* technical support

T

technical support
    contacting 5, 6