



# 802.11ax and Cloud Access Points

## Accessories Guide

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# Preface

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Read the following topics to learn about:

- The meanings of text formats used in this document.
- Where you can find additional information and help.
- How to reach us with questions and comments.






## Text Conventions

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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 <i>enter</i> and <i>type</i>	When you see the word <i>enter</i> 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 <i>type</i> .
<b>Key names</b>	Key names are written in boldface, for example <b>Ctrl</b> or <b>Esc</b> . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press <b>Ctrl+Alt+Del</b>
<i>Words in italicized type</i>	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
<b>NEW!</b>	New information. In a PDF, this is searchable text.

**Table 3: Command syntax**

Convention	Description
<b>bold text</b>	Bold text indicates command names, keywords, and command options.
<i>italic text</i>	Italic text indicates variable content.
[ ]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{ <b>x</b>   <b>y</b>   <b>z</b> }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
<b>x</b>   <b>y</b>	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, <i>member [member...]</i> .
\	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.



# New in this Guide

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

## February 2024 Revisions

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**Table 4: February 2024 Revisions**

Section	Description
<a href="#">Power Accessories Matrix</a>	Updated for End of Sale , AP5010, AP3000, AP3000X, AP4000, AP5050D and AP5050U.

## October 2023 Revisions

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**Table 5: October 2023 Revisions**

Section	Description
<a href="#">Install the Access Point on a Pole Using AH-ACC-STRP-MRN Accessory</a>	Removed restriction regarding freezer usage. Documentation error.

## July 2023 Revisions

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**Table 6: July 2023 Revisions**

Section	Description
<a href="#">Ethernet Cap Accessory Information</a> on page 23	Added ACC-3000-ETH-CAP, a cable cover for AP3000 or AP3000X to hide Ethernet Port and Ethernet cable.

## May 2023 Revisions

**Table 7: May 2023 Revisions**

Section	Description
<a href="#">11.ax Access Points and Mounting Accessory Usage Options</a> on page 9	Added support for the AP3000 and AP3000X access points.
<a href="#">Indoor Mounting Accessory Compatibility with Access Points</a> on page 15	The AP3000 and AP3000X access points are Wi-Fi 6E tri-radio access points with support for multiple Extreme Networks operating systems. They offer an improved network experience for high density, indoor environments.

## March 2023 Revisions

**Table 8: March 2023 Revisions**

Section	Description
<a href="#">Outdoor Mounting Accessory Compatibility with Access Points</a>	The MBO-ART03 Articulating Mounting Bracket bracket replaces the ART02 bracket. It is a unistrut mounting bracket for use outdoors and it has the following features: <ul style="list-style-type: none"> <li>• A 2-axis with a +/- 80 degree tilt in 10 degree increments.</li> <li>• An extension of 7.5, 9.0, or 10.5 inches</li> </ul>
<a href="#">Install the Access Point on a Wall with the MBO-ART03 Articulating Mounting Bracket</a>	You can use the MBO-ART03 Articulating Mounting Bracket when you install your access point on an outside wall.
<a href="#">Install the Access Point on a Wall Using ACC-MBOKT-AX Adapter and MBO-ART03 Articulating Mounting Bracket</a>	Use the MBO-ART03 Articulating Mounting Bracket articulating mounting bracket with the ACC-MBO-KT-AX Adapter for wall installations.
<a href="#">Install the Access Point on a Unistrut Structure Using the MBO-ART03 Articulating Mounting Bracket</a>	Use the MBO-ART03 Articulating Mounting Bracket with a unistrut structure.
<a href="#">Install the Access Point on a Pole</a>	Use the KT-147407-02 and MBO-ART03 Articulating Mounting Bracket when you install your access point on an outside pole.

## December, 2022 Revisions

**Table 9: December, 2022 Revisions**

Section	Description
<a href="#">11.ax Access Points and Mounting Accessory Usage Options</a> on page 9	Added support for the AP5050D and the AP5050U outdoor access points.





# 11.ax Access Points and Mounting Accessory Usage Options

Learn about the indoor and outdoor mounting accessory ordering part numbers, compatibility, and usage with various Wi-Fi 6, 802.11ax access points.

This guide is a reference for users who install and manage the ExtremeWireless 802.11ax Wi-Fi 6 access points. The following table lists the access points that are covered in this guide:

**Table 10: Wi-Fi 6 Access Points**

Speciality Indoor Access Points	Standard Indoor Access Points	Outdoor Access Points
AP302W	AP305C/CX	AP460C, AP460S6C, and AP460S12C
-	AP410C	AP360i/e
-	AP510C/CX and AP650/X	AP460i/e
-	AP4000	AP560i and AP560h
-	AP5010	AP5050D and AP5050U
-	AP460i/e	-
-	AP3000	-
-	AP3000X	-

Perform the following tasks before you install your access point.

**Table 11: Pre-Installation Information**

For information on	Refer to
Mounting accessory compatibility with your access point model	<ul style="list-style-type: none"> <li><a href="#">Indoor Mounting Accessory Compatibility with Access Points</a> on page 15</li> <li><a href="#">Outdoor Mounting Accessory Compatibility with Access Points</a> on page 17</li> </ul>
Power accessories usage	<a href="#">Power Accessories Matrix</a> on page 20

**Table 11: Pre-Installation Information (continued)**

For information on	Refer to
Ethernet cap accessory	<a href="#">Ethernet Cap Accessory Information</a> on page 23
How to position the access point for installation	<a href="#">Position the Access Point before Installation</a> on page 25

Perform the following tasks after you have installed your access point.

**Table 12: Post Installation Information**

For information on	Refer to
How to secure the indoor access point after installation	<a href="#">Lock the Indoor Access Point after Installation</a> on page 60
Ground connection for outdoor access points	<a href="#">Ground Connection</a> on page 87

## Indoor Installation Options for Solid Ceiling or Wall Mount

The following indoor mounting accessories are used with the access points listed in this guide for solid ceiling or wall mount installations:

Solid Ceiling or Wall Mount Indoor Accessories		Installation information
Installation scenario	Accessory used	
~1.25 in. Wall Gap	AH-ACC-BKT-AX-WL	<a href="#">Install the Access Point Directly on a Wall Using AH-ACC-BKT-AX-WL Bracket</a> on page 47
~0.25 in. Wall Gap	AH-ACC-BKT-AX-TB	<a href="#">Install the Access Point on a Wall or a Solid Ceiling Using AH-ACC-BKT-AX-TB Accessory</a> on page 43
Junction box (worldwide)	ACC-BKT-AX-JB	<a href="#">Install the Access Point on a Junction Box Using ACC-BKT-AX-JB Accessory</a> on page 50

## Indoor Installation Options for Ceiling Tile or Grid T-Bar Mount

The following indoor mounting accessories are used with the access points listed in this guide for ceiling tile or T-bar grid mount installations:

Ceiling Tile or Grid T-bar Mounts			Installation information
Installation scenario	Protrusion	Accessory used	
<b>Silhouette*</b> (ceiling grid with a bottom opening) gap varies from 1/8 in. to 1/4 in.	Up to a 0.33 in. ceiling tile protrusion	AH-ACC-BKT-AX-SL	Install the Access Point on a Ceiling Grid With a Bottom Opening Using AH-ACC-BKT-AX-SL Accessory on page 34
<b>Interlude*</b> (9/16 in. wide T-bar with protrusion)	Up to a 0.33 in. ceiling tile protrusion	AH-ACC-BKT-AX-IL	Install the Access Point on a 9/16 in. Wide Ceiling Using AH-ACC-BKT-AX-IL Accessory on page 25
<b>T-bar (Flat) 9/16 in. and 15/16 in. width</b>	For 9/16 in. wide T-bars with protruded ceiling tiles, add AH-ACC-BKT-916-KIT. The AP305C/CX access points can be directly attached to the AH-ACC-BKT-916-KIT and do not require a AH-ACC-BKT-AX-TB bracket.	AH-ACC-BKT-AX-TB with AH-ACC-BKT-916-KIT	Install the Access Point on a 9/16 in. Wide Ceiling Rail Using AH-ACC-BKT-AX-TB Accessory and AH-ACC-BKT-916-KIT Adapter on page 28
	For 15/16 in. wide T-bars with protruded ceiling tiles, add ACC-BKT-TB-NF. The AP305C/CX access points can be directly attached to the ACC-BKT-TB-NF and do not require a AH-ACC-BKT-AX-TB bracket.	AH-ACC-BKT-AX-TB with ACC-BKT-TB-NF	Install the Access Point on a 15/16 in. Wide Ceiling Rail Using AH-ACC-BKT-AX-TB Accessory and ACC-BKT-TB-NF Adapter on page 37
<b>Flat T-bar</b>	1.5 inch wide T-bars with varying thickness from 3.175 mm to 6.350 mm, with flush ceiling tiles	ACC-BKT-AX-TBW	Install the Access Point on a T-Bar Using ACC-BKT-AX-TBW Accessory on page 44

\* = Armstrong Ceiling Solutions name



**Note**

The AP305C/CX access points come with in-built clips on the back of the access point. The in-built clips attach to the AH-ACC-BKT-916-KIT and the ACC-BKT-TB-NF bracket. For AP305C/CX installation details, refer to the following topics:

- [Install the AP305C/CX Access Point on a Flat 9/16 in. Wide Ceiling Rail Using AH-ACC-BKT-916-KIT Adapter](#) on page 33
- [Install the AP305C/CX Access Point on a 15/16 in. Wide Ceiling Rail Using ACC-BKT-TB-NF Adapter](#) on page 42

For complete installation procedures and access point information, refer to the [ExtremeWireless™ AP305C/CX Access Points Installation Guide](#).



**Note**

For all other access points, AH-ACC-BKT-AX-TB bracket is used with either AH-ACC-BKT-916-KIT for 9/16 installations or the ACC-BKT-TB-NF bracket for 15/16 installations.

## Indoor Installation Option for Beam Mount

The following indoor mounting accessory is used with the access points listed in this guide for beam mount installations:

Beam Mount		
Installation scenario	Accessory used	Installation information
Up to 0.78 in. thick beam	ACC-BKT-AX-BEAM	<a href="#">Install the Access Point on a Beam Using ACC-BKT-AX-BEAM Accessory</a> on page 54

## Indoor Installation for Concrete Wall Mount with an existing 37201 Metal Bracket

The following indoor mounting accessory is used with the access points listed in this guide for concrete wall mount installations when you have an existing 37201 metal bracket:

Concrete Wall Mount		
Installation scenario	Accessory used	Installation information
The mount for an existing WiNG 37201 metal bracket	ACC-BKT-AX-WNGADAPT	<a href="#">Install an Indoor Access Point on a Concrete Wall Using WNGADAPT Bracket on an Existing 37201 Metal Bracket</a> on page 56

## Outdoor Installation Options

The following outdoor mounting accessories are used with the access points listed in this guide for outdoor flat surface and pole installations:

Outdoor Flat Surface Mount			
Installation scenario	Supported access point	Accessory used	Installation information
Vertical or horizontal outdoor flat surface	<ul style="list-style-type: none"> <li>AP460C</li> <li>AP460S6C</li> <li>AP460S12C</li> </ul>	AH-ACC-BKT-ASM	<a href="#">Install the Access Point on a Flat Surface Using AH-ACC-BKT-ASM Accessory</a> on page 64 The access point is parallel to the mounting surface.
Outdoor wall or pole for the AP460C, AP460S6C, AP460S12C	<ul style="list-style-type: none"> <li>AP460C</li> <li>AP460S6C</li> <li>AP460S12C</li> </ul>	ACC-MBO-KT-AX adapter with KT-147407-02 bracket parts for up to a 15-degree tilt.	<a href="#">Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and KT-147407-02 Bracket Parts</a> on page 71 Provides a 15-degree tilt capability.
	<ul style="list-style-type: none"> <li>AP460C</li> <li>AP460S6C</li> <li>AP460S12C</li> </ul>	ACC-MBO-KT-AX adapter with KT-147407-02 bracket wall parts, and KT-150173-01 extension arm for a 7-degree tilt and a 12-inch extension.	<a href="#">Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter, KT-147407-02 Bracket Wall Parts, and KT-150173-01 Extension Arm</a> on page 76
	<ul style="list-style-type: none"> <li>AP460C</li> <li>AP460S6C</li> <li>AP460S12C</li> </ul>	ACC-MBO-KT-AX adapter with MBO-ART03 articulating mounting bracket for 2-axis angle adjustment and a variable length extension.	<a href="#">Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and MBO-ART03 Articulating Mounting Bracket</a> on page 80
	<ul style="list-style-type: none"> <li>AP460C</li> <li>AP460S6C</li> <li>AP460S12C</li> </ul>	ACC-MBO-KT-AX adapter with MBO-ART02 articulating mounting bracket.  <b>Note:</b> The MBO-ART02 wall mount bracket is End of Sale (EOS) as of January, 2023.	<a href="#">Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and MBO-ART02 Articulating Mounting Bracket</a> on page 78

Outdoor Flat Surface Mount			
Installation scenario	Supported access point	Accessory used	Installation information
		It is replaced by the MBO-ART03 bracket.	

Outdoor Pole Mount		
Installation scenario	Accessory used	Installation information
Vertical or horizontal 3 in. to 7 in. diameter pole	Two AH-ACC-STRP-MRN	<a href="#">Install the Access Point on a Pole Using AH-ACC-STRP-MRN Accessory on page 62</a>
<b>Outdoor pole for the following APs:</b> <ul style="list-style-type: none"> <li>• AP360i/e</li> <li>• AP460i/e</li> <li>• AP560i</li> <li>• AP560h</li> <li>• AP5050D</li> <li>• AP5050U</li> </ul>	ACC-MBO-KT-AX adapter with KT-147407-02 bracket parts for up to a 15-degree tilt.	<a href="#">Install the Access Point on a Pole Using ACC-MBO-KT-AX Adapter and KT-147407-02 Bracket Parts on page 82</a>
	ACC-MBO-KT-AX adapter with KT-147407-02 bracket parts, and KT-150173-01 extension arm for up to a 15-degree tilt and a 12-inch extension.	<a href="#">Install the Access Point on a Pole Using ACC-MBO-KT-AX Adapter, KT-147407-02 Bracket Parts, and KT-150173-01 Extension Arm on page 84</a>
	<b>Note:</b> The ACC-MBO-KT-AX adaptor is only used with the AP460C, AP460S6C, and AP460S12C.	
	WS-MBO-POLE01 and MBO-ART02 Accessories  <b>Note:</b> The MBO-ART02 wall mount bracket is End of Sale (EOS) as of January, 2023. It is replaced by the MBO-ART03 bracket. The WS-MBO-POLE01 bracket is End of Sale (EOS) as of January, 2023.	<a href="#">Install the Access Point on a Pole Using the WS-MBO-POLE01 and MBO-ART02 Accessories on page 86</a>
	MBO-ART03 Bracket with the KT-147407-02 Pole Part for a 2-axis angle adjustment and a variable length extension.	<a href="#">Install the Access Point on a Pole with the MBO-ART03 and KT-147407-02 Brackets on page 85</a>



# Indoor Mounting Accessory Compatibility with Access Points

Details about indoor mounting accessory part number and compatibility information with 802.11ax access points.

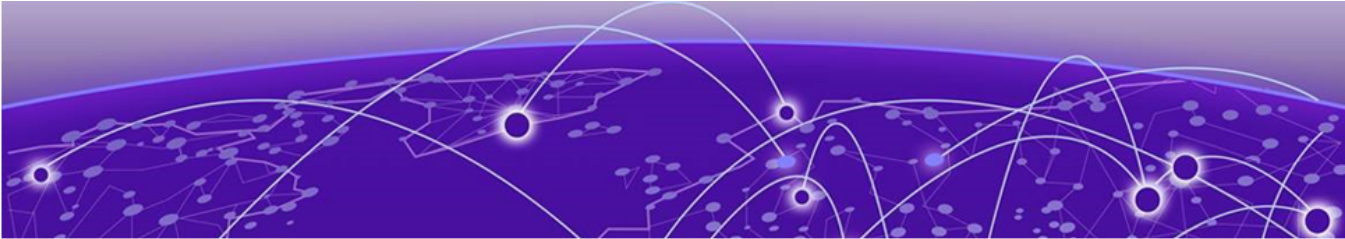
**Table 13: Access point compatibility**

Indoor mounting accessory part number	Description	Indoor access points				
		AP305C/CX	AP410C	AP510C/CX and AP650/X	AP4000 and AP5010	AP3000 and AP3000X
AH-ACC-BKT-AX-IL	Mounting bracket for Interlude (9/16 wide T-bar with protrusion) ceilings	✓	✓	✓	✓	✓
AH-ACC-BKT-AX-SL	Mounting bracket for Silhouette ceilings (ceiling grid with 1/8 in. or 1/4 in. bottom opening)	✓	✓	✓	✓	✓
AH-ACC-BKT-AX-TB	Mounting bracket for Prelude ceilings (15/16 in. ceiling grid), Suprafine ceilings (9/16 in. ceiling grid), and walls	✓	✓	✓	✓	✓

**Table 13: Access point compatibility (continued)**

Indoor mounting accessory part number	Description	Indoor access points				
		AP305C/CX	AP410C	AP510C/CX and AP650/X	AP4000 and AP5010	AP3000 and AP3000X
<a href="#">ACC-BKT-AX-TBW</a>	Mounting bracket for 1.5 inch wide T-bars (with varying thickness from 3.175 mm to 6.350 mm) with flush ceiling tiles	✓	✓	✓	✓	✓
<a href="#">AH-ACC-BKT-AX-WL</a>	Mounting bracket for direct-to-wall installations	✓	✓	✓	✓	✓
<a href="#">ACC-BKT-AX-JB</a>	Junction box or wall mounting for indoor access points	✓	✓	✓	✓	✓
<a href="#">ACC-BKT-AX-BEAM</a>	Beam mounting for indoor access points	✓	✓	✓	✓	✓
<a href="#">ACC-BKT-AX-WNGADAPT</a>	Adapter bracket for cloud access points to use with WiNG access point mounting plate (37201)	✓	✓	✓	✓	✓





# Outdoor Mounting Accessory Compatibility with Access Points

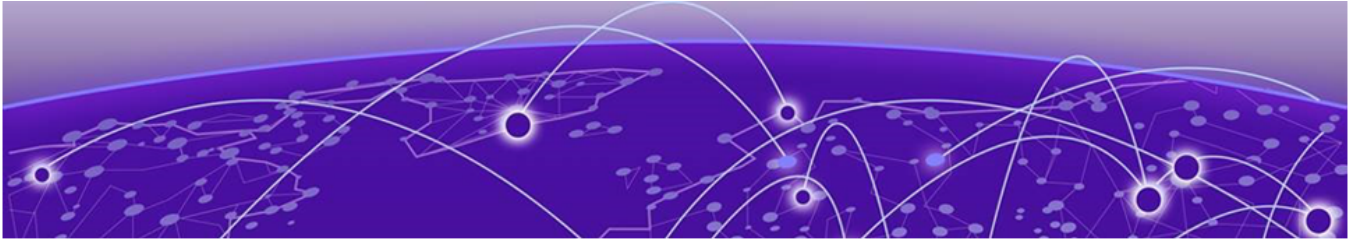
Details about outdoor mounting accessory part number and compatibility information with 802.11ax access points.

**Table 14: Access point compatibility**

Part number		Description	Access point compatibility	
			Outdoor access points	
			AP460C, AP460S6C, and AP460S12C	AP360i/e, AP460i/e, AP560i/AP560h, and AP5050D/AP5050U
Outdoor mounting accessory	<a href="#">AH-ACC-STRP-MRN</a>	Outdoor access point stainless steel hose strap for 3 in. – 7 in. diameter pole	✓	✓
	<a href="#">AH-ACC-BKT-ASM</a>	Outdoor access point stainless steel wall bracket assembly	✓	—
	<a href="#">ACC-MBO-KT-AX</a>	Adapter bracket for outdoor access point tilt	✓	—
	<a href="#">KT-147407-02</a>	Wall and pole mounting bracket with +/- 15-degrees 1-axis tilt	✓ (must be used with the -AX adapter bracket)	✓
	<a href="#">KT-150173-01</a>	Straight 12 inches extension arm	✓ (must be used with the -AX adapter bracket)	✓
	<a href="#">WS-MBO-POLE01</a> <b>Note:</b> The WS-MBO-POLE01 bracket is End of Sale (EOS) as of January, 2023. For more information, see <a href="#">End</a>	Pole mounting bracket for MBO-ART02 bracket	✓ (must be used with the -AX adapter bracket.)	✓

**Table 14: Access point compatibility (continued)**

Part number		Description	Access point compatibility		
			Outdoor access points		
			AP460C, AP460S6C, and AP460S12C	AP360i/e, AP460i/e, AP560i/AP560h, and AP5050D/ AP5050U	
	<a href="#">of Sale and End Service Life.</a>				
	<a href="#">MBO-ART03</a>	Unistrut mounting bracket with +/- 80-degree (in 10-degree increments) 2-axis tilt and variable 7 inches to 10 inches extension	✓ (must be used with the -AX adapter bracket)		✓
	<a href="#">MBO-ART02</a> <b>Note:</b> The MBO-ART02 wall mount bracket is End of Sale (EOS) as of January, 2023. It is replaced by the MBO-ART03 bracket. For more information, see <a href="#">End of Sale and End Service Life.</a>	Wall mounting bracket with +/- 80-degree (in 20-degree increments) 2-axis tilt and 10 inches extension	✓ (must be used with the -AX adapter bracket.)		✓



# Power Accessories Matrix

This section lists the power accessories that are compatible with the 802.11ax access points.

All power cables and accessories must be purchased separately. Use the power accessory part number provided in the following tables to purchase the correct power accessory for your access point.



**Note**

You should check [End of Sale announcements](#) regularly so you have access to the latest equipment.

## Indoor APs

The following table shows power cord cables and their corresponding indoor access points. You use this information when you order a power cable.

**Table 15: Indoor Access Points**

Part Number and Description	AP302W	AP305C/CX	AP410C	AP510C/CX	AP3000/X	AP4000	AP5010
<b>10033</b> Power Cord, 10A,CEE 7/7,IEC320- C13,250V, 0.75MMSQ (for EU and Korea)	—	—	—	—	✓	✓	✓
<b>10034</b> Formerly: <b>AH-ACC-PW- CBL-UK</b> Power Cord, 10A,BS1363, IEC320-C13, 250V, 0.75MMSQ (for UK)	—	✓	✓	✓	✓	✓	✓

**Table 15: Indoor Access Points (continued)**

Part Number and Description	AP302W	AP305C/CX	AP410C	AP510C/CX	AP3000/X	AP4000	AP5010
<b>10036</b> Power Cord, 10A, AS3112, IEC320-C13, 250V, 0.75MMSQ (for AU)	—	—	—	—	✓	✓	✓
<b>10043</b> Formerly: <b>AH-ACC-PW-CBL-EU</b> 6 ft. universal power cord with European Union plug	—	✓	✓	✓	—	—	—
<b>10061</b> Formerly: <b>AH-ACC-PW-CBL-US</b> Power Cord, 10A, NEMA 5-15P, IEC320-C13, 125V, 18AWG (for US)	—	✓	✓	✓	✓	✓	✓
<b>10062</b> Formerly: <b>AH-ACC-PW-CBL-JP</b> Power Cord, 12A, JISC8303, IEC320-C13, 125V, 1.25MMSQ (for Japan)	—	✓	✓	✓	✓	—	✓
<b>10089</b> Formerly: <b>AH-ACC-PW-CBL-AU</b> 6 ft. universal power cord with Australia plug	—	✓	✓	✓	—	—	—
<b>37215</b> PWR12VDC, 2A, 2.5mm x 5.5mm connector	✓	—	—	—	—	—	—

**Table 15: Indoor Access Points (continued)**

Part Number and Description	AP302W	AP305C/CX	AP410C	AP510C/CX	AP3000/X	AP4000	AP5010
<b>37219</b> PWR 12VDC, 3A, 2.5mm x 5.5mm connector	—	—	—	—	—	—	✓
<b>PD-3501G-ENT</b> Indoor single port 802.3af compliant mid span	✓	✓	✓	✓	—	—	—
<b>AH-ACC- PW-30W</b> 30W power adapter (12VDC, 2.5A)	—	—	—	✓	—	—	—
<b>AH-ACC-PW- CBL-KR</b> 6 ft. universal power cord with Korea plug	—	✓	✓	✓	—	—	—
<b>PD-9001GO-ENT</b> Outdoor 802.3at compliant PoE single port mid span	—	✓	✓	✓	—	—	—
<b>PD-9001GR-ENT</b> Indoor 802.3at compliant single port mid span	✓	✓	✓	✓	✓	✓	—

## Outdoor APs

The following table shows power cord cables and their corresponding outdoor access points. You use this information when you order a power cable.

**Table 16: Outdoor APs**

Part Number and Description	AP460C, AP460S6C, and AP460S12C	AP5050D/U
<b>PD-9001GO-ENT</b> Outdoor 802.3at compliant PoE single port mid span	✓	✓
<b>PD-9001GR-ENT</b> Indoor 802.3at compliant single port mid span	✓	—



## Ethernet Cap Accessory Information

Details about the Ethernet cap used with AP305C/CX and AP410C indoor access points.

The Ethernet cap accessory is used to stop damage from dirt and debris on open ports and to cover any unused ports on an access point.

Before installing the accessory bracket onto the AP305C/CX, AP410C, or the AP4000 access points, install the Ethernet cap on the access point.



### Note

You must purchase the Ethernet cap kit separately.

**Table 17: Ethernet cap accessory order details**

Part number	Description
ACC-3000-ETH-CAP	Cable cover for AP3000 or AP3000X to hide Ethernet Port and Ethernet cable. Includes a 7" Flat Cat5e RJ45 Cable and inline coupler (five Pack Kit).
ACC-305C-ETH-CAP	Cable cover for AP305C/CX to cover the Ethernet port and Ethernet cable. The package includes a 5 in. flat Cat5e RJ45 cable and inline coupler (five pack kit).
ACC-410C-ETH-CAP	Cable cover for AP410C to cover the Ethernet port and Ethernet cable. The package includes a 7 in. flat Cat6 RJ45 cable and inline coupler (five pack kit).
ACC-4000-ETH-CAP	Cable cover for AP4000 to cover the Ethernet port and Ethernet cable. The package includes a 7 in. flat Cat6 RJ45 cable and inline coupler (five pack kit).



# Indoor Mounting Accessory Installation Instructions

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[Position the Access Point before Installation on page 25](#)

[Install the Access Point on a 9/16 in. Wide Ceiling Using AH-ACC-BKT-AX-IL Accessory on page 25](#)

[Install the Access Point on a 9/16 in. Wide Ceiling Rail Using AH-ACC-BKT-AX-TB Accessory and AH-ACC-BKT-916-KIT Adapter on page 28](#)

[Install the AP305C/CX Access Point on a Flat 9/16 in. Wide Ceiling Rail Using AH-ACC-BKT-916-KIT Adapter on page 33](#)

[Install the Access Point on a Ceiling Grid With a Bottom Opening Using AH-ACC-BKT-AX-SL Accessory on page 34](#)

[Install the Access Point on a 15/16 in. Wide Ceiling Rail Using AH-ACC-BKT-AX-TB Accessory and ACC-BKT-TB-NF Adapter on page 37](#)

[Install the AP305C/CX Access Point on a 15/16 in. Wide Ceiling Rail Using ACC-BKT-TB-NF Adapter on page 42](#)

[Install the Access Point on a Wall or a Solid Ceiling Using AH-ACC-BKT-AX-TB Accessory on page 43](#)

[Install the Access Point on a T-Bar Using ACC-BKT-AX-TBW Accessory on page 44](#)

[Install the Access Point Directly on a Wall Using AH-ACC-BKT-AX-WL Bracket on page 47](#)

[Install the Access Point on a Junction Box Using ACC-BKT-AX-JB Accessory on page 50](#)

[Install the Access Point on a Beam Using ACC-BKT-AX-BEAM Accessory on page 54](#)

[Install an Indoor Access Point on a Concrete Wall Using WNGADAPT Bracket on an Existing 37201 Metal Bracket on page 56](#)

[Lock the Indoor Access Point after Installation on page 60](#)

Learn about various indoor mounting accessories that can be used to install the access point.

The indoor mounting accessories can only be used with indoor access points. The AH-ACC-BKT-AX-TB accessory is shipped only with AP410C and AP510C/CX indoor access points. The AP305C/CX access point has a built-in tab for installation. All other indoor accessories must be purchased separately.



## Related Topics

[11ax Access Points and Mounting Accessory Usage Options](#) on page 9

[Indoor Mounting Accessory Compatibility with Access Points](#) on page 15

## Position the Access Point before Installation

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Details about access point pre-installation position.

There is a red dot on the back of the access point and the bracket that will work as a guide to position the access point for installation. Line up the red dot on the access point and the bracket for ease of installation.

## Install the Access Point on a 9/16 in. Wide Ceiling Using AH-ACC-BKT-AX-IL Accessory

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Learn how to install any indoor access point on a 9/16 in. wide T-bar up to a 0.175 in. ceiling tile protrusion using the AH-ACC-BKT-AX-IL accessory.

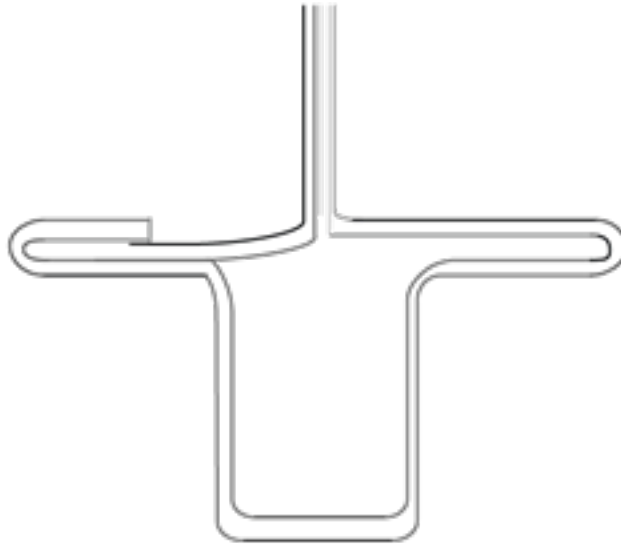
### Before You Begin

The following hardware is required to install the access point on an Interlude ceiling (9/16 in. wide T-bar with protrusion):

- An indoor access point
- One AH-ACC-BKT-AX-IL accessory bracket

### About This Task

The AH-ACC-BKT-AX-IL accessory is used on 9/16 in. wide Interlude (9/16 wide T-bar with protrusion) ceiling rails. The ceiling grid cross-section is printed on the back of the accessory for your reference.



**Figure 1: 9/16 in. wide T-bar with protrusion**

**Procedure**

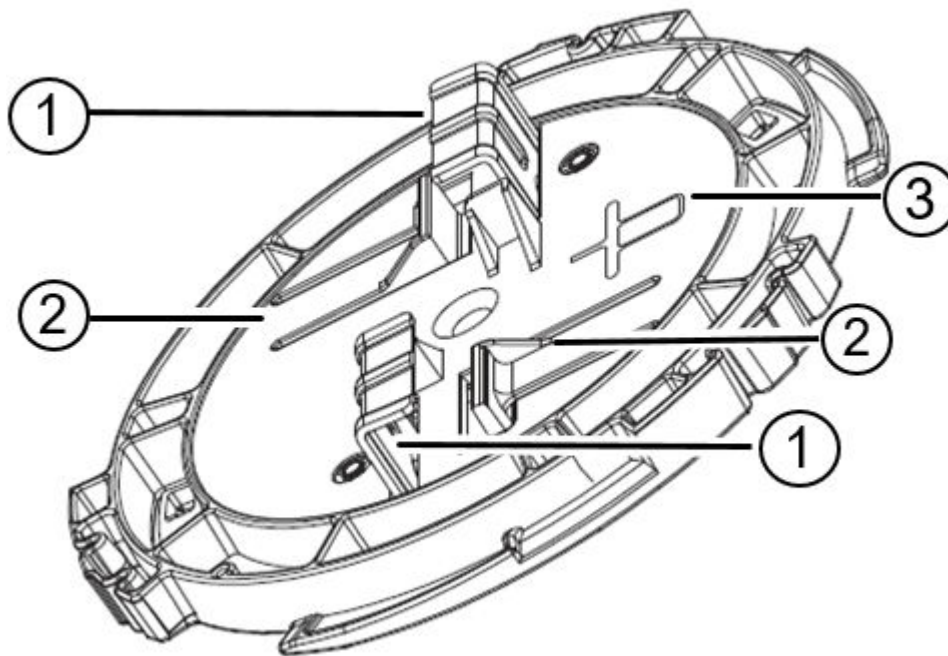
1. Remove the ceiling tiles.
2. Place the bracket on the ceiling rail in such a way that the accessory center is over the protrusion and the metal hinges are between perpendicular and about one-eighth of a turn from the sides of the ceiling rail.
3. Push up gently and rotate the bracket clockwise until the hinges hook over the edge of the rail and the white tabs click in place.



**Note**

There are two white tabs in the back of the accessory bracket that holds on to the ceiling rail in place. Use your finger to pull and unhook one side of the white tab if you want to remove the accessory from the ceiling rail.

Gently rotate the bracket counterclockwise and if there is resistance, the other white tab in the back of the accessory must also be released.



**Figure 2: AH-ACC-BKT-AX-IL accessory bracket**

Call out	Description
1	Metal hinges on the AH-ACC-BKT-AX-IL bracket.
2	White tabs on the AH-ACC-BKT-AX-IL bracket.
3	Drawing of 9/16 in. ceiling grid, for your reference.

4. When using a AP305C/CX or AP410C access point, attach the Ethernet port cap to the access point Ethernet port.

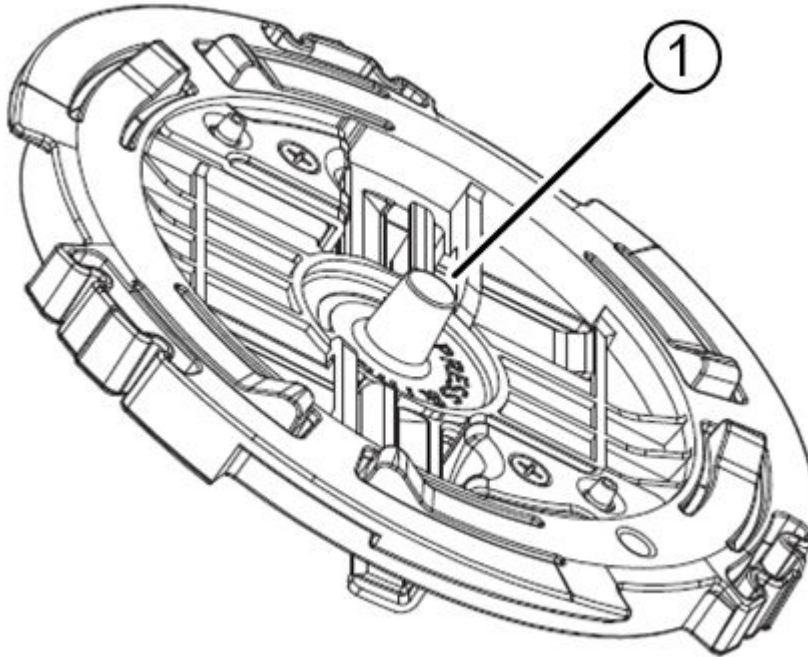
For more information about Ethernet cap, refer to [Ethernet Cap Accessory Information](#) on page 23.

5. Align the red dot on the back of the access point against the accessory red dot.



**Note**

The bracket has a circular tip that fits into the circular depression on the back of the access point.



**Figure 3: AH-ACC-BKT-AX-IL accessory bracket circular tip**

Call out	Description
1	AH-ACC-BKT-AX-IL bracket circular tip

6. Press and rotate the access point clockwise about one-sixth of a turn until it locks into place on the accessory bracket.
7. Attach the Cat5e RJ45 cable to the ETH0 port on AP305C/CX or the Cat6 RJ45 cable to the ETH0 or ETH1 port on all other indoor access points.
8. Place the cable cover over the Ethernet cable.
9. Replace the ceiling tiles.

## Install the Access Point on a 9/16 in. Wide Ceiling Rail Using AH-ACC-BKT-AX-TB Accessory and AH-ACC-BKT-916-KIT Adapter

### Before You Begin



**Note**

This procedure is not applicable for AP305C/CX access points, if you choose to use the integral bottom clips on the back of the access point. For mounting the AP305C/CX access points on a 9/16 in. wide T-bar, see [Install the AP305C/CX Access Point on a Flat 9/16 in. Wide Ceiling Rail Using AH-ACC-BKT-916-KIT Adapter](#) on page 33.

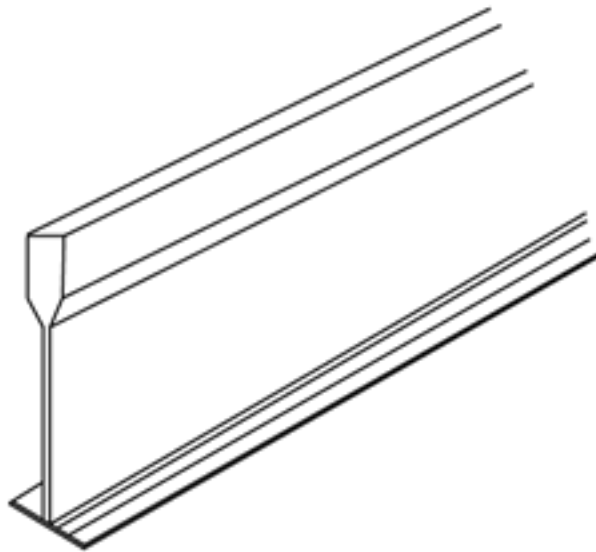
The following hardware is required for installing the AH-ACC-BKT-AX-TB accessory on a 9/16 in. wide ceiling rail:

- An indoor access point

- One AH-ACC-BKT-AX-TB accessory
- AH-ACC-BKT-916-KIT adapter

### About This Task

The AH-ACC-BKT-AX-TB accessory is not shipped with the AP305C/CX access points. The -TB accessory is used for standard drop ceiling rail that is 9/16 in. wide and has a flush ceiling tile with the metal T-bar.



**Figure 4: 9/16 in. wide ceiling rail**

Refer to the following table for guidelines on how to use the AH-ACC-BKT-AX-TB accessory for installations with various protrusion use cases:

**Table 18: AH-ACC-BKT-AX-TB accessory usage**

Installation scenario	Installation option
Ceiling tiles are flat without any protrusion and the T-bar is flat without any central protrusion	Use the AH-ACC-BKT-AX-TB accessory by itself with the access point and on the ceiling grid
Ceiling tiles have protrusion (edge steps), but the T-bar does not have a central protrusion	Use the AH-ACC-BKT-AX-TB accessory with the AH-ACC-BKT-916-KIT adapter
T-bar has central protrusion	Use the <a href="#">AH-ACC-BKT-AX-IL accessory</a> on the T-bar

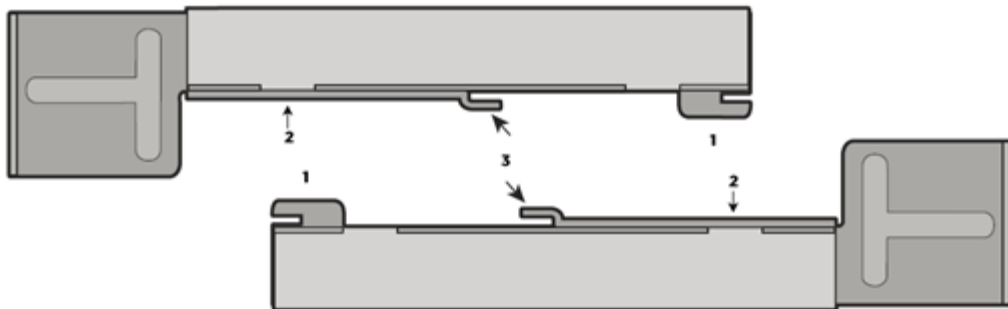
The AH-ACC-BKT-916-KIT adapter comes with four interlocking pieces of which only the two tall ones will be used.

To install an indoor access point on a 9/16 in. wide T-bar without central protrusion using the AH-ACC-BKT-AX-TB accessory and the AH-ACC-BKT-916-KIT adapter:

**Procedure**

1. Remove the ceiling tiles.
2. Attach the AH-ACC-BKT-916-KIT to the ceiling rail T-bar:
  - a. Insert the bracket tabs into the slots.

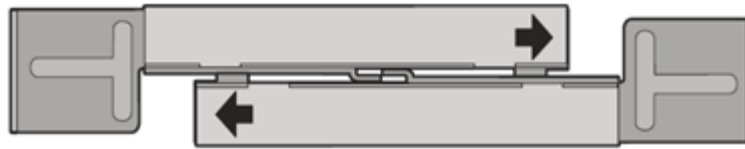
Ensure that the locking tabs slide smoothly one behind the other.



**Figure 5: Locking tabs and bracket slots**

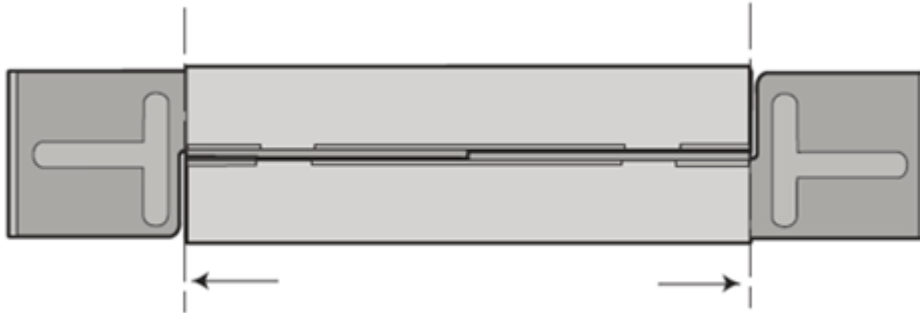
Callout	Description
1	Bracket tabs
2	Bracket slots
3	Locking tabs

- b. Slide the two bracket halves in the direction shown in the following figure.



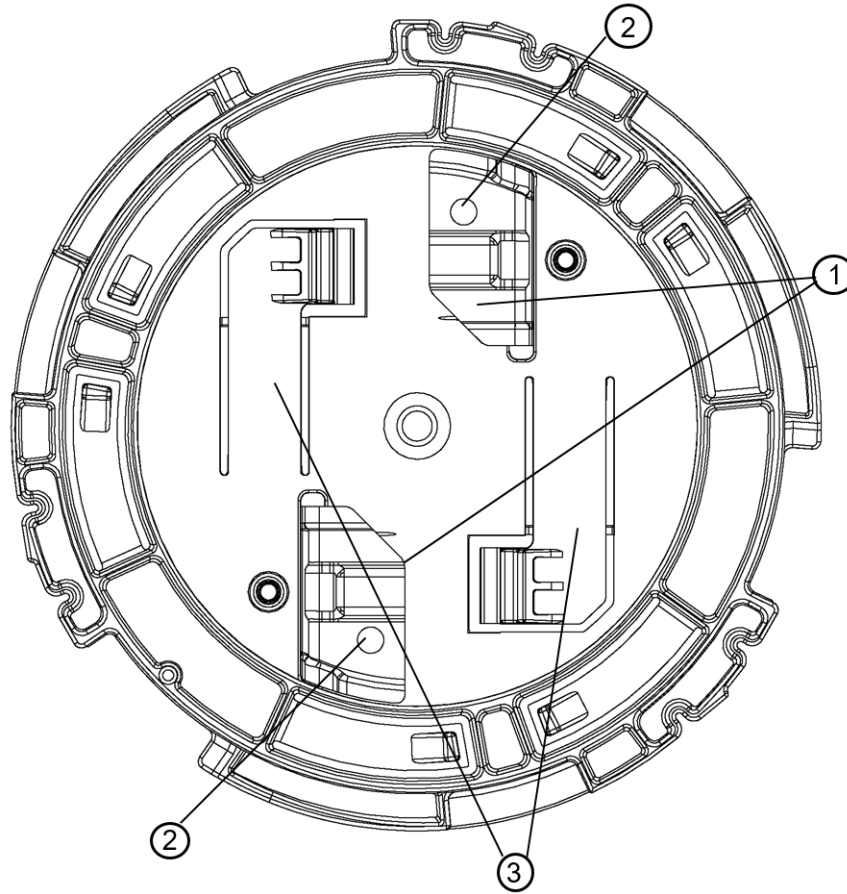
**Figure 6: Bracket halves attachment procedure**

- c. When the locking tabs click into place, the bracket ends will line up.



**Figure 7: AH-ACC-BKT-AC-KIT protruded ceiling tile bracket parts attached together**

3. Attach the AH-ACC-BKT-AX-TB accessory onto the -KIT adapter.  
Locate the center pin so that the pin is in the approximate center of the -KIT parts. Push up onto the -KIT parts and rotate the -TB accessory clockwise until the back metal hinges hook over the bottom halves of the -KIT adapter.



**Figure 8: AH-ACC-BKT-AX-TB accessory**

Callout	Description
1	Metal hinges on the AH-ACC-BKT-AX-TB accessory
2	Mounting holes for wall mounting
3	White tab on the AH-ACC-BKT-AX-TB accessory

4. Align the red dot on the back of the access point against the -TB accessory red dot.



**Note**

The accessory has a circular tip that fits into the circular depression on the back of the access point.

5. Press the access point into the bracket and while pressing the access point, rotate it 1/8<sup>th</sup> turn clockwise until it clicks into place on the accessory.
6. Attach the flat Cat5e RJ45 cable to the ETH0 port on AP305C/CX or the flat Cat6 RJ45 cable to the ETH0 or ETH1 port on all other indoor access points.
7. Place the cable cover over the Ethernet cable.
8. Replace the ceiling tiles.



## Install the AP305C/CX Access Point on a Flat 9/16 in. Wide Ceiling Rail Using AH-ACC-BKT-916-KIT Adapter

Learn how to install the AP305C/CX access point on a 9/16 in. wide ceiling using the -916-KIT bracket.

### Before You Begin

This procedure is applicable only for AP305C/CX access point. For other indoor access point installations using the AH-ACC-BKT-916-KIT, see [Install the Access Point on a 9/16 in. Wide Ceiling Rail Using AH-ACC-BKT-AX-TB Accessory and AH-ACC-BKT-916-KIT Adapter](#) on page 28.

There are two types of 9/16 in. wide T-bars:

- T-bars where the 9/16 in. width is flat, and
- T-bars where the 9/16 in. width is not flat



### Note

A non-flat 9/16 in. wide T-bar is also referred to as an Interlude ceiling rail. For Interlude (9/16 in. wide T-bar) ceiling rail installation instructions, refer to [Install the Access Point on a 9/16 in. Wide Ceiling Using AH-ACC-BKT-AX-IL Accessory](#) on page 25.

The following hardware is required for installing the -916-KIT accessory on a flat 9/16 in. wide ceiling rail with an AP305C/CX access point:

- One AP305C/CX access point
- One AH-ACC-BKT-916-KIT accessory

### About This Task

The AP305C/CX access point comes with in-built clips on the back of the access point. These clips are used to attach to the -916-KIT. To install an AP305C/CX access point on a 9/16 in. wide ceiling:

### Procedure

1. Remove the ceiling tiles.
2. Select the two flush or protruded metal parts.  
The protruded parts are the taller ones and they are used with ceiling tile that protrudes below the T-bar.
3. Using the adapter guide on the top half of the -916-KIT accessory, align and attach the -916-KIT on to the ceiling rail.
4. Slide the other part of the -916-KIT adapter onto the half attached to the ceiling rail and press the two pieces together.
5. Align the built-in clips on the AP305C/CX access point against the -916-KIT adapter end.
6. Rotate the access point clockwise and attach it to the -916-KIT adapter until it clicks into place.
7. Plug the RJ45 connector plug into ETH or ETH0, RJ45 connector receptacle on the access point.

8. Attach the Ethernet port cap to the access point Ethernet port.  
For more information about Ethernet cap, refer to [Ethernet Cap Accessory Information](#) on page 23.
9. Place the cable cover over the Ethernet cable.
10. Replace the ceiling tiles.

## Install the Access Point on a Ceiling Grid With a Bottom Opening Using AH-ACC-BKT-AX-SL Accessory

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Learn how to install an indoor access point on a 1/8 in. or 1/4 in. Silhouette (ceiling grid with a bottom opening) using the AH-ACC-BKT-AX-SL accessory.

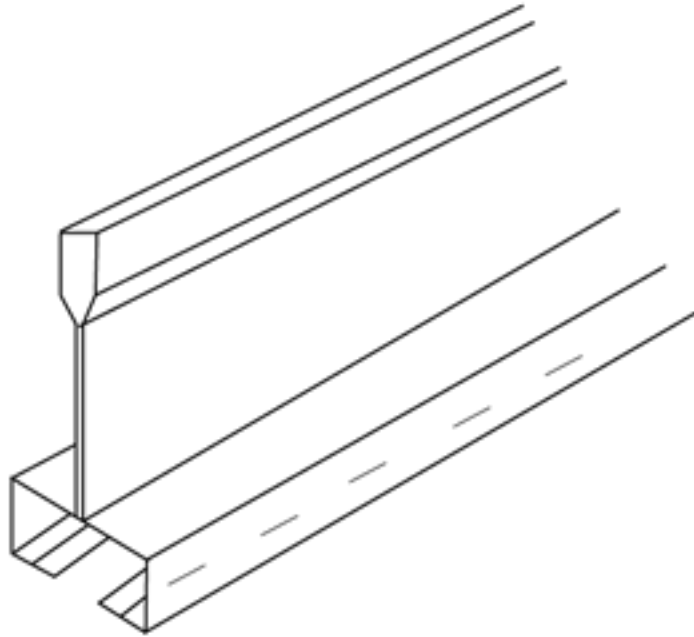
### Before You Begin

The following hardware is required to install the access point on a 1/8 in. or 1/4 in. Silhouette (ceiling grid with a bottom opening) ceiling:

- An indoor access point
- One AH-ACC-BKT-AX-SL accessory

### About This Task

The AH-ACC-BKT-AX-SL accessory is used on a silhouette ceiling with a 1/8 in. or a 1/4 in. main beam reveal. The Silhouette (ceiling grid with bottom openings) ceiling drawing is printed in the back of the accessory for your reference.



**Figure 9: Ceiling grid with 1/8 in. or 1/4 in. bottom openings**

#### Procedure

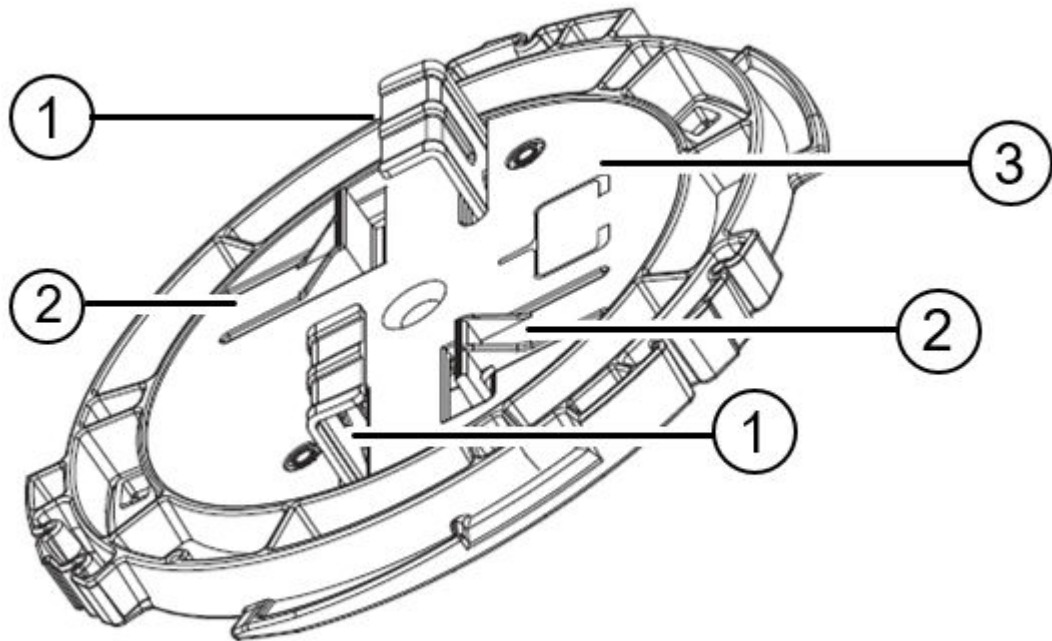
1. Remove the ceiling tiles.
2. Place the bracket on the ceiling rail in such a way that the accessory metal hinges are almost perpendicular to the sides of the ceiling rail with the ceiling rail over the center hole.
3. Lightly push onto to the ceiling rail and rotate the accessory clockwise until the hinges hook over the edge of the rail and the white tabs click in place.



#### Note

There are two white tabs in the back of the bracket that holds on to the ceiling rail in place. Use your finger to pull and unhook one side of the white tab if you want to remove the accessory from the ceiling rail.

Gently rotate the bracket counterclockwise and if there is resistance, the other white tab in the back of the accessory must also be released.



**Figure 10: AH-ACC-BKT-AX-SL accessory bracket**

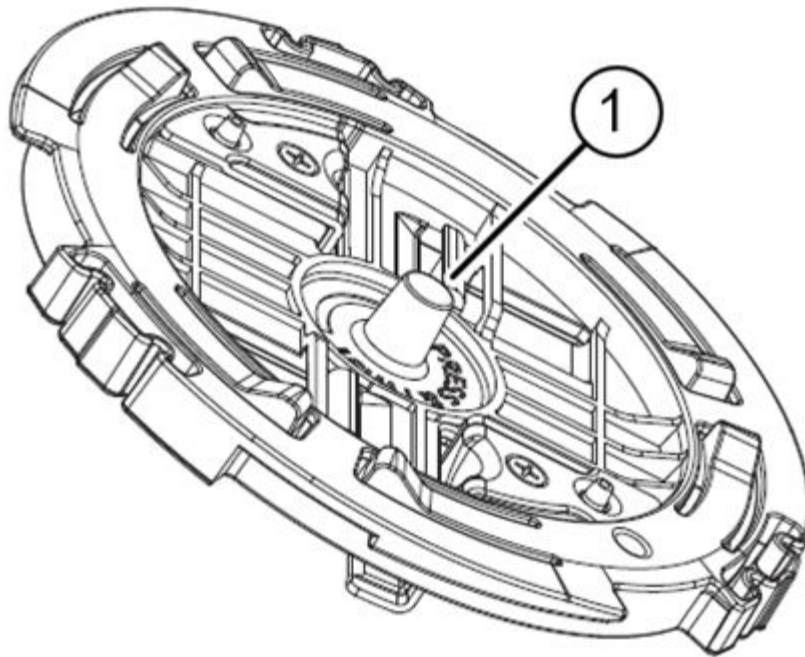
Call out	Description
1	Metal hinges on the AH-ACC-BKT-AX-SL bracket.
2	White tabs on the AH-ACC-BKT-AX-SL bracket.
3	Drawing of 1/8 in. or 1/4 in. ceiling grid, for your reference.

4. Align the red dot on the back of the access point against the accessory bracket red dot.



**Note**

The accessory has a circular tip that fits into the circular depression on the back of the access point.



**Figure 11: AH-ACC-BKT-AX-SL accessory bracket circular tip**

Call out	Description
1	AH-ACC-BKT-AX-SL bracket circular tip

5. Press and rotate the access point clockwise until it locks into place on the accessory.
6. Plug the RJ45 connector plug into ETH or ETH0, RJ45 connector receptacle on the access point.
7. When using a AP305C/CX or AP410C access point, attach the Ethernet port cap to the access point Ethernet port.  
  
For more information about Ethernet cap, refer to [Ethernet Cap Accessory Information](#) on page 23.
8. Place the cable cover over the Ethernet cable.
9. Replace the ceiling tiles.

## Install the Access Point on a 15/16 in. Wide Ceiling Rail Using AH-ACC-BKT-AX-TB Accessory and ACC-BKT-TB-NF Adapter

### Before You Begin



#### Note

This procedure is not applicable for the AP305C/CX access points, if you choose to use the integral bottom clips on the back of the access point. For mounting the AP305C/CX access points on a 15/16 in. wide T-bar, see [Install the AP305C/CX Access Point on a 15/16 in. Wide Ceiling Rail Using ACC-BKT-TB-NF Adapter](#) on page 42.

The following hardware is required for installing the AH-ACC-BKT-AX-TB accessory on a 15/16 in. wide ceiling rail:

- An indoor access point
- One AH-ACC-BKT-AX-TB accessory bracket
- ACC-BKT-TB-NF adapter

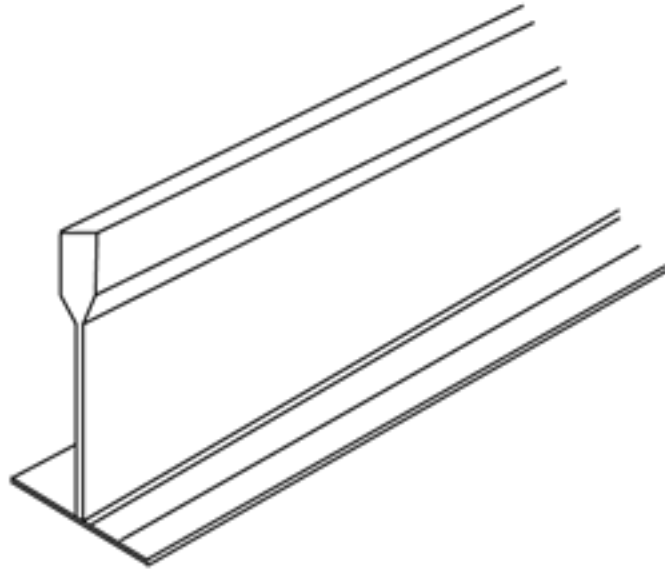
### About This Task

The AH-ACC-BKT-AX-TB accessory is shipped with most indoor model access points, and is used for standard drop ceiling and wall installations. The AH-ACC-BKT-AX-TB accessory is used with a ceiling that is 15/16 in. (24 mm) wide with flush or protruded ceiling tile with the metal T-bar.



#### Note

If you use the AH-ACC-BKT-AX-TB accessory with a ceiling grid that is 15/16 in. wide and has a protruded ceiling tile, you must use the ACC-BKT-TB-NF adapter with the -TB accessory during installation.



**Figure 12: 15/16 in. wide ceiling rail**

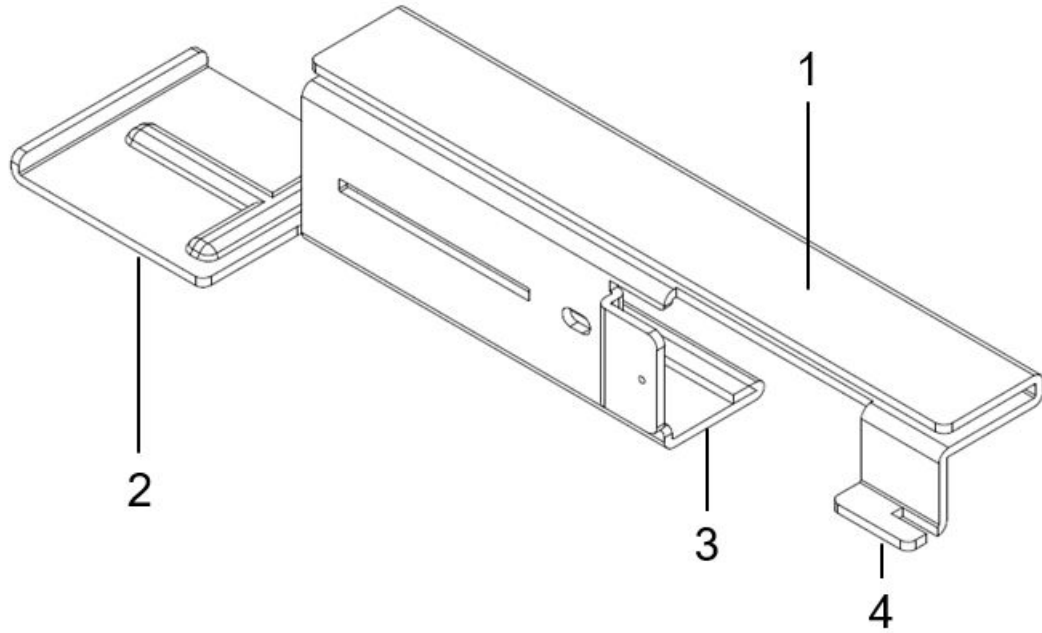
The ACC-BKT-TB-NF adapter comes with two interlocking pieces.

To install an indoor access point on a 15/16 in. wide ceiling tile using the AH-ACC-BKT-AX-TB accessory and the ACC-BKT-TB-NF adapter:

**Procedure**

1. Remove the ceiling tiles.

- Using the adapter guide on the top half of the ACC-BKT-TB-NF adapter, align and attach the -NF on to the ceiling rail.



**Figure 13: ACC-BKT-TB-NF adapter**

Callout	Description
1	Adapter guide for ceiling rail attachment
2	Adapter end
3	Indent for - NF second part attachment
4	Adapter tabs

- Slide the other part of the -NF adapter onto the half attached to the ceiling rail.

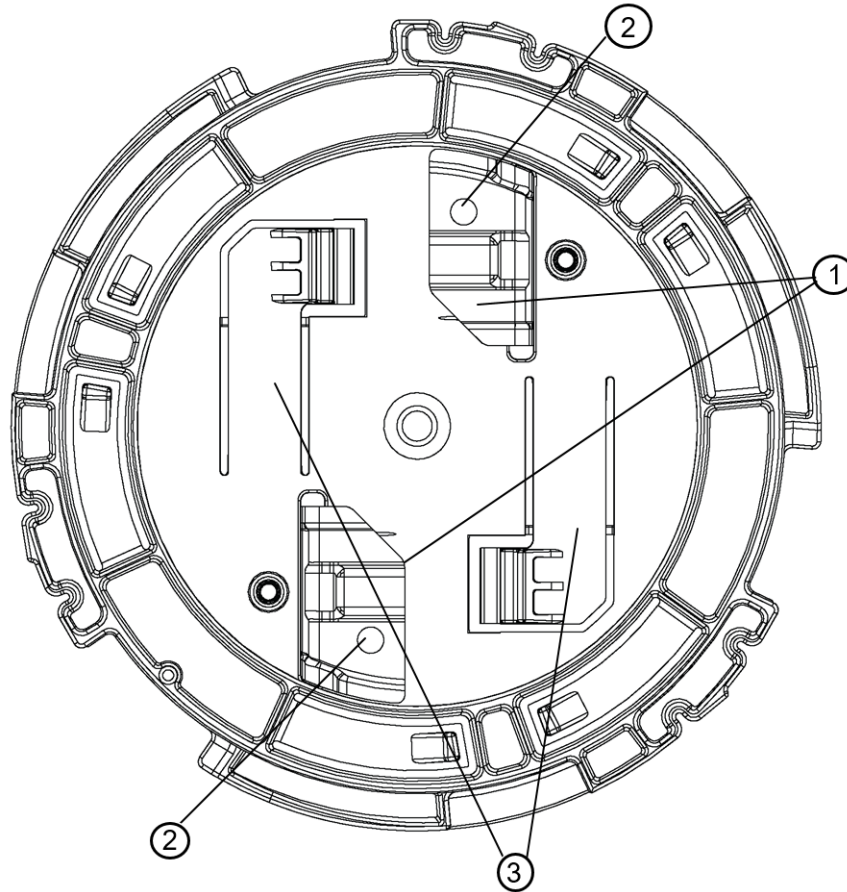


**Note**

When the adapter parts are attached properly, the adapter ends will line up after the two halves have snapped together.

- Attach the AH-ACC-BKT-AX-TB accessory onto the -NF adapter.
  - Center the -TB accessory on the attached -NF parts.
  - Push up and rotate the -TB accessory clockwise until the metal hinges hook over the bottom halves of the -NF adapter ends and the plastic tabs on the -TB accessory click into place.





**Figure 14: AH-ACC-BKT-AX-TB accessory bracket**

Callout	Description
1	Metal hinges on the AH-ACC-BKT-AX-TB bracket
2	Mounting holes for wall mounting
3	White plastic tab on the AH-ACC-BKT-AX-TB bracket

5. Align the red dot on the back of the access point against the -TB bracket red dot.



**Note**

The bracket has a circular tip that fits into the circular depression on the back of the access point.

6. Press and rotate the access point one-eighth of a turn clockwise until it clicks into place on the accessory.
7. Attach the Cat5e RJ45 cable to the ETH0 port on AP305C/CX or the Cat6 RJ45 cable to the ETH0 or ETH1 port on all other indoor access points.
8. Place the cable cover over the Ethernet cable.
9. Replace the ceiling tiles.

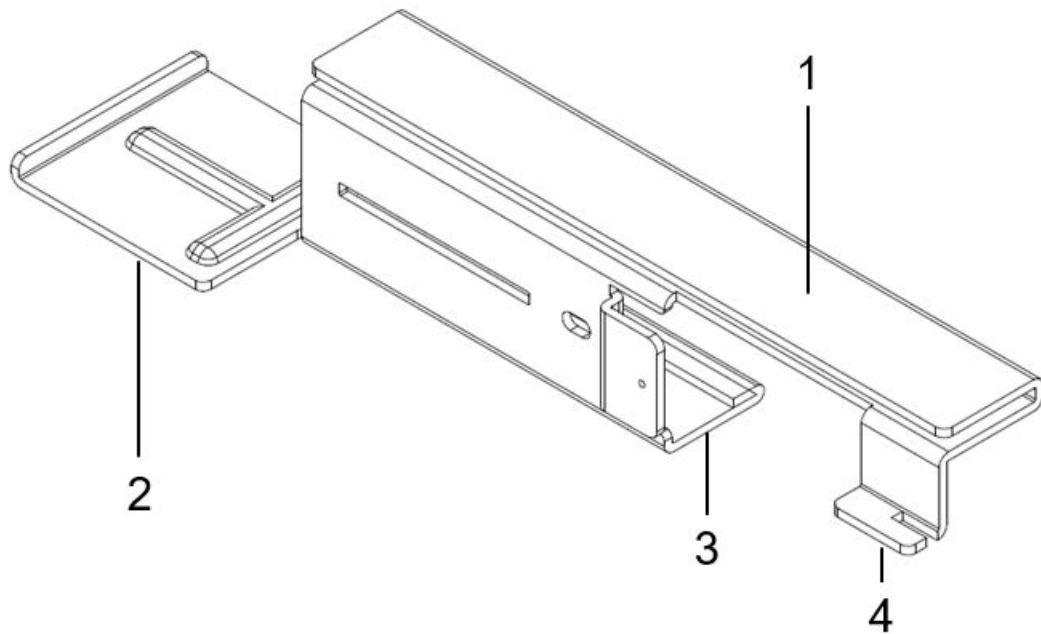
## Install the AP305C/CX Access Point on a 15/16 in. Wide Ceiling Rail Using ACC-BKT-TB-NF Adapter

### About This Task

The AP305C/CX access point can be mounted on a 15/16 in. wide ceiling rail using the ACC-BKT-TB-NF adapter, when the ceiling tile protrudes below the T-bar. The AP305C/CX access point comes with in-built clips in the back of the access point that attach directly on to the -NF adapter, eliminating the need for the -TB accessory.

### Procedure

1. Remove the ceiling tiles.
2. Using the adapter guide on the top half of the ACC-BKT-TB-NF adapter, align and attach the -NF on to the ceiling rail.



**Figure 15: ACC-BKT-TB-NF adapter**

Callout	Description
1	Adapter guide for ceiling rail attachment
2	Adapter end
3	Indent for -NF second part attachment
4	Adapter tabs

3. Slide the other part of the -NF adapter onto the half attached to the ceiling rail.



### Note

When the adapter parts are attached properly, the adapter ends will line up after the two halves have snapped together.

4. Align the built-in clips on the AP305C/CX access point against the -NF adapter end.
5. Rotate the access point clockwise and attach it to the -NF adapter until it clicks into place.
6. Plug the RJ45 connector plug into ETH or ETH0, RJ45 connector receptacle on the access point.
7. Attach the Ethernet port cap to the access point Ethernet port.  
For more information about Ethernet cap, refer to [Ethernet Cap Accessory Information](#) on page 23.
8. Place the cable cover over the Ethernet cable.
9. Replace the ceiling tiles.

## Install the Access Point on a Wall or a Solid Ceiling Using AH-ACC-BKT-AX-TB Accessory

### Before You Begin

The following hardware is required for installing the AH-ACC-BKT-AX-TB accessory on a wall or a solid ceiling:

- An indoor access point
- One AH-ACC-BKT-AX-TB Accessory
- Two M3.5 pan head wood screws
- Two screw-in anchors



#### Note

The wood screws and screw-in anchors come in a separate plastic bag.

### About This Task

You can use the AH-ACC-BKT-AX-TB accessory for flat surface wall or solid ceiling installation.

### Procedure

1. Using the AH-ACC-BKT-AX-TB accessory as a template, mark and drill two mounting holes.
2. Attach the accessory to the wall using the M3.5 pan head wood screws.  
Use push-in anchors or screw-in anchors for drywall or plastic board installations on vertical walls.



#### Note

Screw-in anchors must be used for ceiling installations.

3. Attach the access point to the accessory by aligning the red dot on the accessory and the access point.
4. Press and rotate the access point 1/8<sup>th</sup> turn clockwise until it clicks into place on the accessory.
5. Attach the Cat5e RJ45 cable to the ETH0 port on AP305C/CX or the Cat6 RJ45 cable to the ETH0 or ETH1 port on all other indoor access points.

6. Place the cable cover over the Ethernet cable.

## Install the Access Point on a T-Bar Using ACC-BKT-AX-TBW Accessory

### Before You Begin

The following hardware is required for installing the ACC-BKT-AX-TBW accessory on a T-bar:

- An indoor access point
- One ACC-BKT-AX-TBW Accessory
- Two M3.5 screws (included in the -TBW accessory)



#### Note

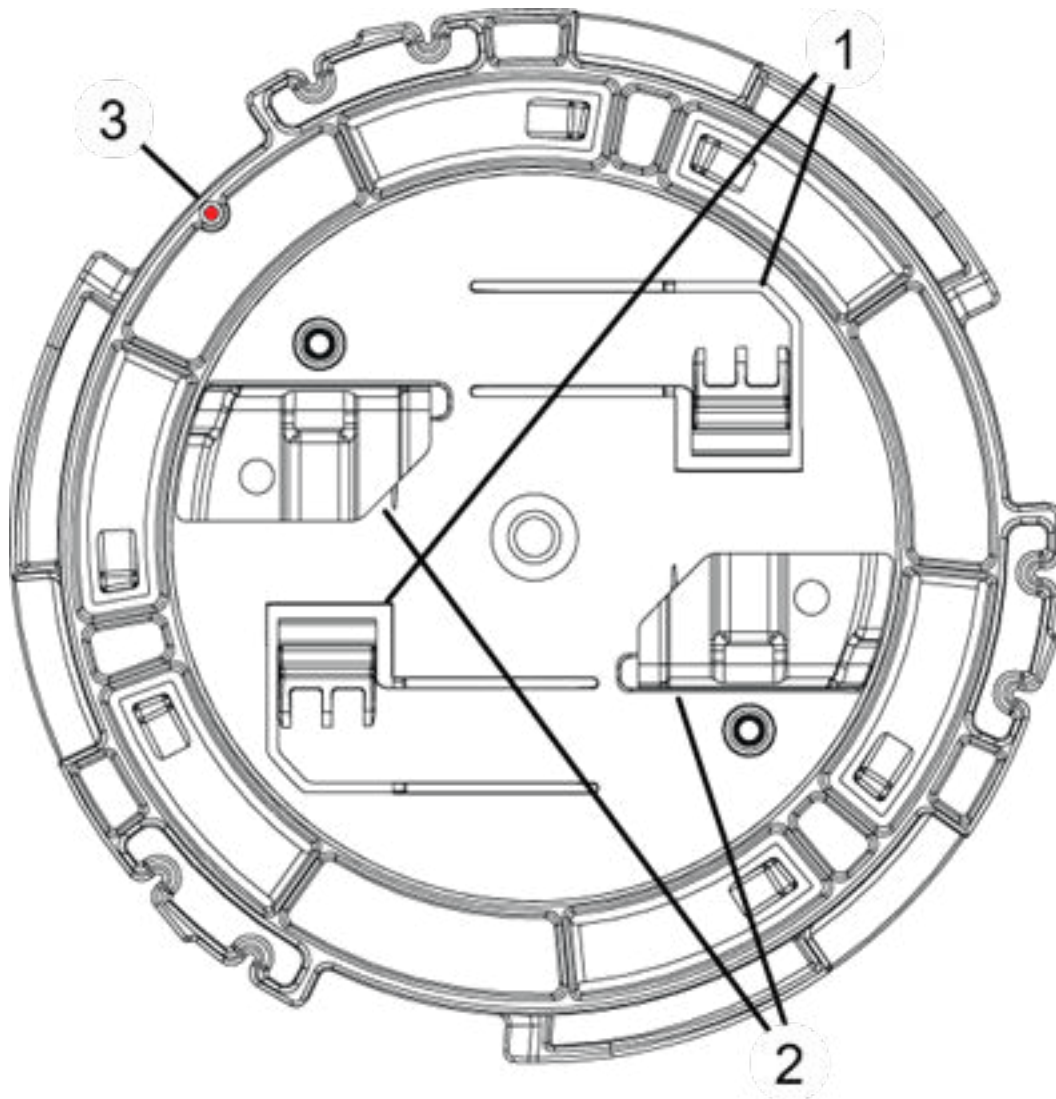
The screws come with the accessory and are partially attached in place.

### About This Task

You can use the ACC-BKT-AX-TBW accessory for T-bar installation. The -TBW bracket is used for 1.5 inch wide T-bars with varying thickness from 3.175 mm to 6.350 mm, with flush ceiling tiles.

The following ceiling tile protrusions are accommodated by the -TBW mounting bracket:

- If the T-bar is 0.25 inches thick, the -TBW bracket will only accommodate flush ceiling tiles
- If the T-bar is 0.1875 inches thick, the -TBW bracket will accommodate flush ceiling tiles as well as ceiling tiles with 0.062 inches protrusion
- If the T-bar is 0.125 inches thick, the -TBW bracket will accommodate flush ceiling tiles as well as ceiling tiles up to 0.125 inches protrusion



**Figure 16: ACC-BKT-AX-TBW bracket T-bar side**

Callout	Description
1	-TBW bracket plastic parts
2	-TBW bracket metal parts
3	Red on the bracket to align against the access point

#### Procedure

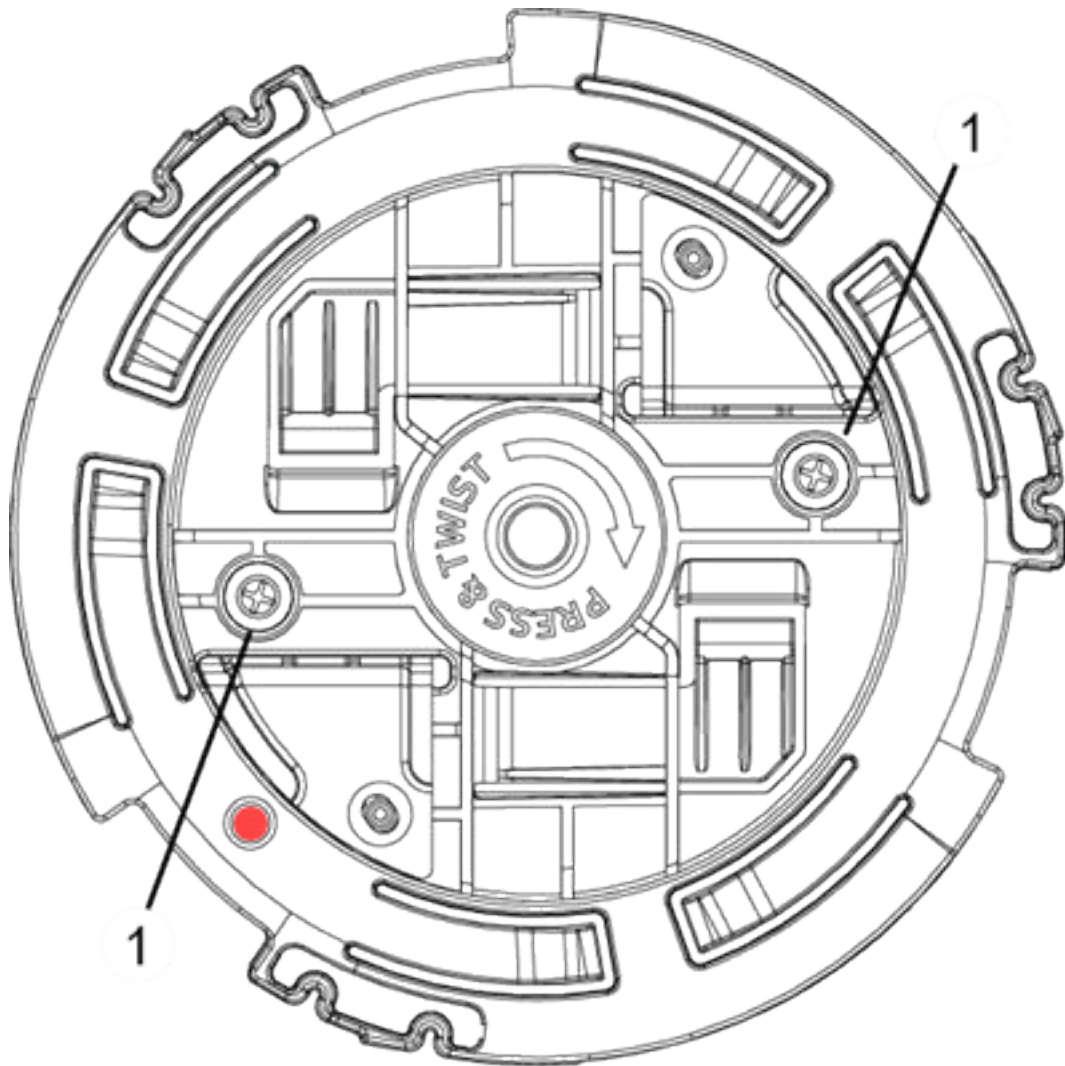
1. Turn the -TBW accessory screws in such a way that they do not extend past the plastic on the T-bar side.
2. Align the -TBW accessory metal clips on a T-bar and rotate the metal clip about 1/6<sup>th</sup> turn clockwise to attach the bracket to the T-bar.

3. Tighten the screws until either resistance is noticed or the screw head bottoms on the -TBW accessory plastic part.



**Note**

Torque the screws to 1.0 in-lbs, and turn each screw 1 more complete turn clockwise.



**Figure 17: ACC-BKT-AX-TBW bracket access point side**

Callout	Description
1	Screws for tightening to T-bar

4. Attach the access point to the -TBW bracket by aligning the red dot on the bracket and the access point.



**Note**

The bracket has a circular tip that fits into the circular depression on the back of the access point.

5. Press and rotate the access point 1/6<sup>th</sup> turn clockwise until it clicks into place on the bracket.
6. Attach the Cat5e RJ45 cable to the ETH0 port on AP305C/CX or the Cat6 RJ45 cable to the ETH0 or ETH1 port on all other indoor access points.
7. If desired for aesthetics, place the cable cover over the Ethernet cable.

## Install the Access Point Directly on a Wall Using AH-ACC-BKT-AX-WL Bracket

---

Details about how to use the AH-ACC-BKT-AX-WL bracket for direct-to-wall installations.

### Before You Begin

The following hardware is required for direct-to-wall installations:

- An indoor access point
- One AH-ACC-BKT-AX-WL bracket
- Three M3.5 screws and three screw-in anchors, shipped with the -WL bracket

### About This Task

The AH-ACC-BKT-AX-WL bracket is for users who already have the -WL bracket. For new wall installations, order either the -TB or -JB bracket.

### Procedure

1. Using the -WL bracket as a template, mark and drill mounting holes on the wall.
2. Bring the LAN cable from the wall through the bracket hole.

Align the cable before attaching the bracket to the wall.

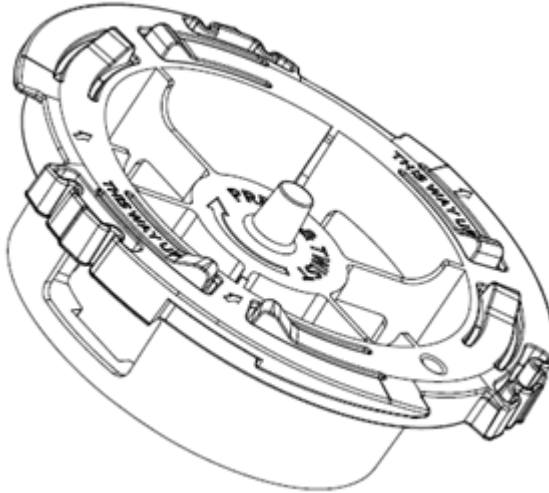


#### Note

A standard Ethernet cable can be used if you do not mind the cable being visible. To hide the Ethernet cable, a flat cable and a cable cap is required.

3. Attach the wall bracket to the wall using three M3.5 screws and three screw-in anchors.

4. Align the access point red dot against the three red dots on the -WL bracket.



**Figure 18: AH-ACC-BKT-AX-WL bracket**

5. Press and rotate the access point clockwise about one-sixth turn until it locks into place on the bracket.
6. Attach the Cat5e RJ45 cable to the ETH0 port on AP305C/CX or the Cat6 RJ45 cable to the ETH0 or ETH1 port on all other indoor access points.
7. Place the cable cover over the Ethernet cable.



**Note**

The cable cover will work only if you use a flat cable adapter.

Related Topics

[AH-ACC-BKT-AX-WL Bracket Template](#) on page 48

## AH-ACC-BKT-AX-WL Bracket Template

Details about print templates for the AH-ACC-BKT-AX-WL bracket.

For easy installation, you can print and use the AH-ACC-BKT-AX-WL bracket template. Download your printable template from the links provided in this topic and select your print settings based on your location.

*AH-ACC-BKT-AX-WL bracket template for USA model printers*

The following steps explain how to download and print the template using a USA model printer.

- [AH-ACC-BKT-AX-WL bracket template](#) (11×17 paper template)

### Print instructions

1. Download and save the template as a PDF.



2. Print it on a 11×17 size paper.

- Select **File > Print**.
- Select the printer.
- In the **Page Sizing & Handling** section, select **Actual Size**.
- Keep the orientation **Auto**.
- Select **Page Setup**.
- Select **Ledger** for paper size and select the paper source as per your printer settings.
- Select **OK**.

The print preview is available in the print window. Verify that the page setup is as per the specifications.

- Select **Print**.



**Note**

When you print the template on an office printer, the access point edges will be cut, but it will not modify the scale of the template.



**Note**

If you are using an industrial printer, cut the bleed area for the right template size.



**Note**

If you are unsure about the printed template size, use a ruler to measure the scale provided in the template or place the access point over the template to measure the size.

*AH-ACC-BKT-AX-WL bracket template for rest of the world model printers*

The following steps explain how to download and print the template using a non-USA model printer.

- [AH-ACC-BKT-AX-WL bracket template](#) (A3 paper template)

1. Download and save the template as a PDF.

2. Print it on an A3 size paper.

- Select **File > Print**.
- Select the printer.
- In the **Page Sizing & Handling** section, select **Actual Size**.
- Keep the orientation **Auto**.
- Select **Page Setup**.
- Select **A3** for paper size and select the paper source as per your printer settings.
- Select **OK**.

The print preview is available in the print window. Verify that the page setup is as per the specifications.

- Select **Print**.



**Note**

Use a ruler to measure the scale provided in the template or place the access point over the template to measure the size.

*AH-ACC-BKT-AX-WL bracket template for AP305C access point*

The following steps explain how to download and print the template for AP305C access point.

- [AH-ACC-BKT-AX-WL bracket template](#) (A4 paper template)
1. Download and save the template as a PDF.
  2. Print it on an A4 size paper.
    - Select **File > Print**.
    - Select the printer.
    - In the **Page Sizing & Handling** section, select **Actual Size**.
    - Keep the orientation **Auto**.
    - Select **Page Setup**.
    - Select **A4** for paper size and select the paper source as per your printer settings.
    - Select **OK**.

The print preview is available in the print window. Verify that the page setup is as per the specifications.

- Select **Print**.



**Note**

Use a ruler to measure the scale provided in the template or place the access point over the template to measure the size.

## Install the Access Point on a Junction Box Using ACC-BKT-AX-JB Accessory

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Install the access point on a junction box using the ACC-BKT-AX-JB accessory.

### Before You Begin

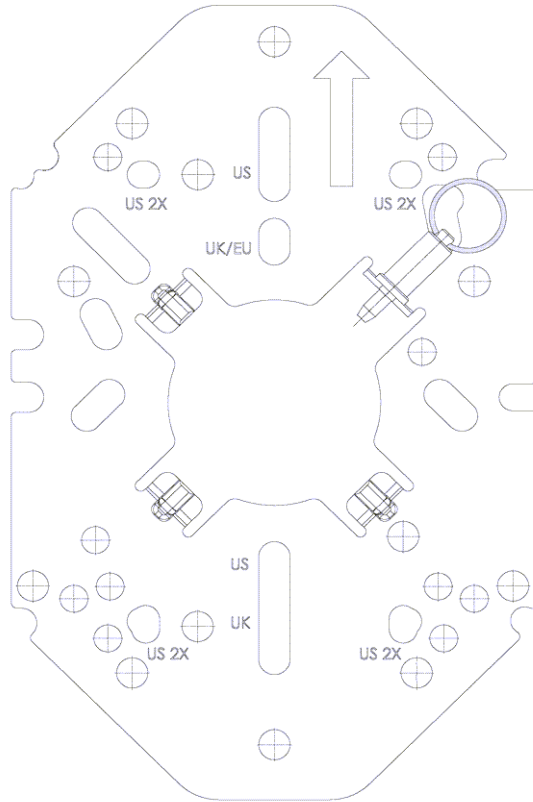
The following hardware is required to install an indoor access point on a junction box (box):

- An indoor access point
- ACC-BKT-AX-JB accessory

### About This Task

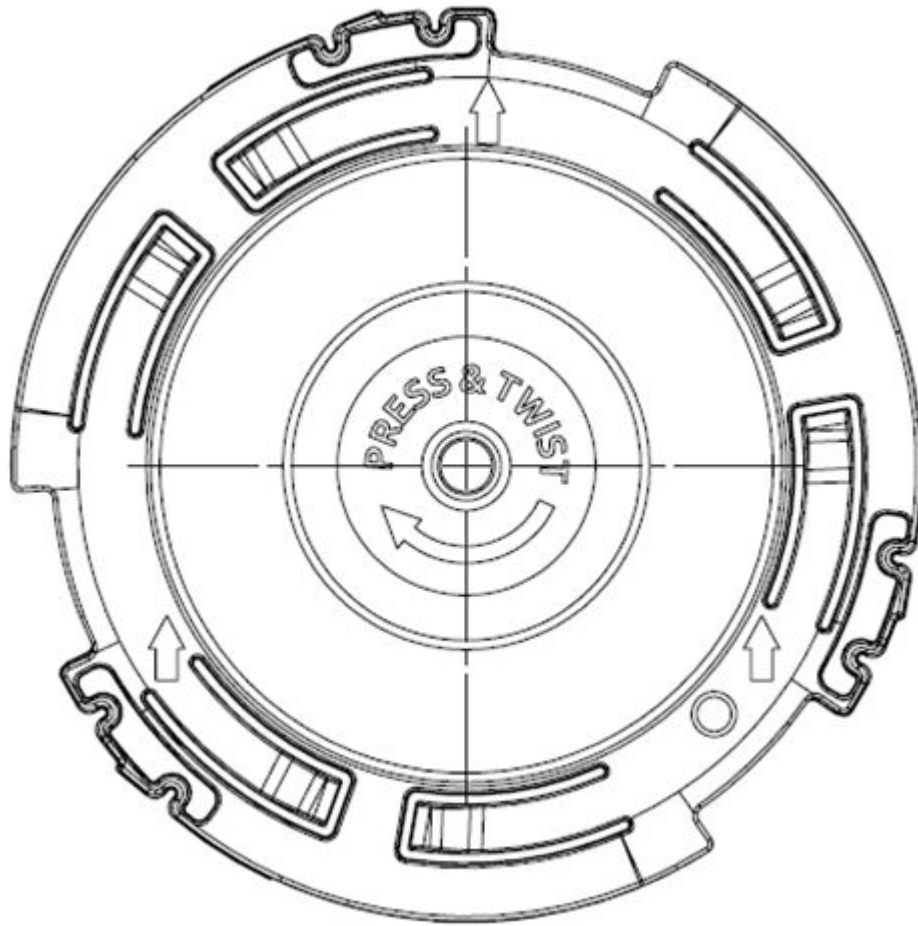
The ACC-BKT-AX-JB accessory is used when you need to install the access point on an indoor junction box. The ACC-BKT-AX-JB access has two parts:

- A metal part that attaches to the junction box (also called the sheet-metal junction box hole plate)



**Figure 19: ACC-BKT-AX-JB accessory bracket metal part**

- A plastic part that attaches to the metal part and the access point (also called the plastic twist plate)



**Figure 20: ACC-BKT-AX-JB accessory bracket plastic part**

**Procedure**

1. Remove the screws holding the junction box cover plate.
2. Remove the LAN cable from the cover plate.
3. Bring the LAN cable through the center hole of the metal bracket part.  
The LAN wire must be in-between the metal part and the plastic part during installation.
4. Place the ACC-BKT-AX-JB accessory metal part, with the bracket holes against the cover plate of the box.
5. Using the screws removed from the cover plate, find the bracket holes that align with the junction box screw holes.



**Important**

The text for the holes must be normally readable.

6. Using the cover plate screws, attach the metal bracket part to the junction box.

7. Place the plastic part on the metal part, rotate it  $\frac{1}{4}^{\text{th}}$  to  $\frac{1}{3}^{\text{rd}}$  turn clockwise until you hear it click in place as the lock is set.



#### Important

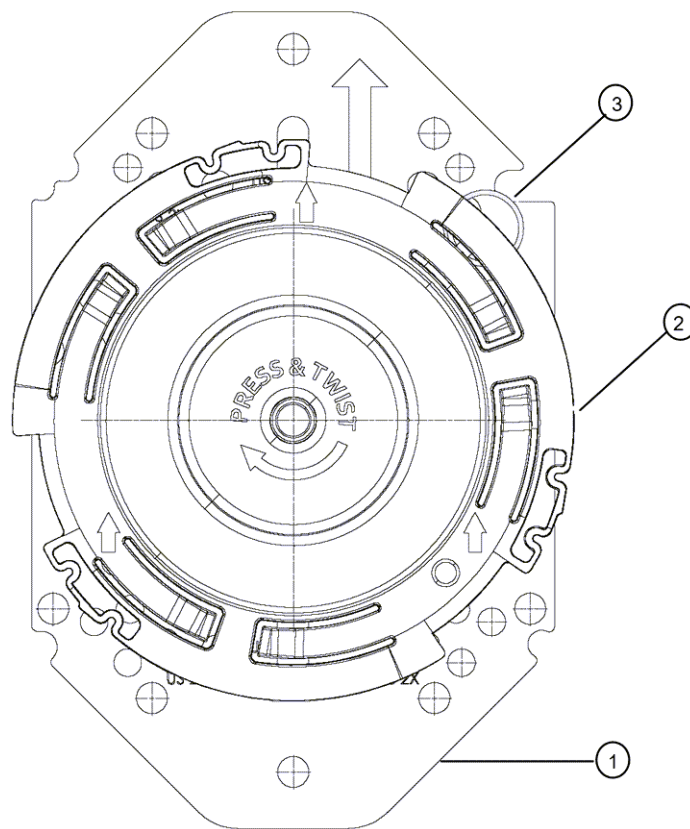
When installed correctly on a wall, the side arrows on the plastic part must be pointing up.



#### Note

There is a metal pull ring in the metal part that is used to unlock and remove the plastic part.

To unlock the plastic part, pull out the pin's ring and turn the plastic part  $\frac{1}{3}^{\text{rd}}$  turn counter-clockwise and lift it apart.



**Figure 21: Junction box accessory bracket assembly**

Callout	Description
1	Sheet-metal junction box hole metal part
2	Plastic twist plate part
3	Pull ring with 10 mm diameter ring for unlocking the plastic part

8. Align the red dot on the back of the access point against the red dot on the plastic part.

9. Push the access point onto the plastic part and turn it clockwise until you hear it lock in place.
10. Insert the RJ45 cable connector to the Ethernet connector on the access point.
11. All indoor access point can use a flat Ethernet cable and cap, if desired.

For more information about Ethernet cap, refer to [Ethernet Cap Accessory Information](#) on page 23.

## Install the Access Point on a Beam Using ACC-BKT-AX-BEAM Accessory

Install the access point on a indoor beam using the ACC-BKT-AX-BEAM accessory parts.

### Before You Begin

The following hardware is required to install the access point on a beam:

- An indoor model access point
- ACC-BKT-AX-BEAM accessory

Beam properties checklist:

- The beam must be able to support the access point in all environmental conditions.
- The beam must be flat.
- Beam attachment area is at least 0.5 in. (12.7mm) wide and as long as the access point's largest dimension.
- Beam mounting surface is at least 0.040 in. (1.0 mm) thick, but less than 0.650 in. (16.5mm) thick.

### About This Task

The ACC-BKT-AX-BEAM accessory is used for beam installation. The beam clip comes attached to the plastic accessory part.

For more information about Ethernet cap, refer to [Ethernet Cap Accessory Information](#) on page 23.

### Procedure

1. Align the red dot on the access point with the red dot on the accessory bracket.
2. Insert the plastic part posts into the access point back recess.
3. Push the access point onto the plastic part, and rotate the access point about one-sixth turn clockwise to make it lock in place.



#### Note

If you can turn or twist the access point, it was not locked in place properly. Remove the access point and attach it again until it locks in place.

4. Plug the RJ45 connector plug into ETH or ETH0, RJ45 connector receptacle on the access point.

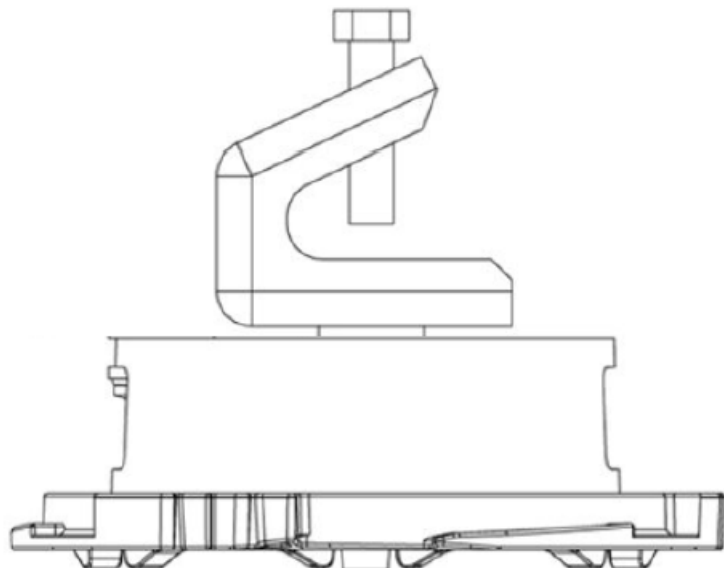
If desired, flat Ethernet cables and caps may be used with all indoor access points.

5. Open the top screw as necessary and place the beam clip onto a beam.



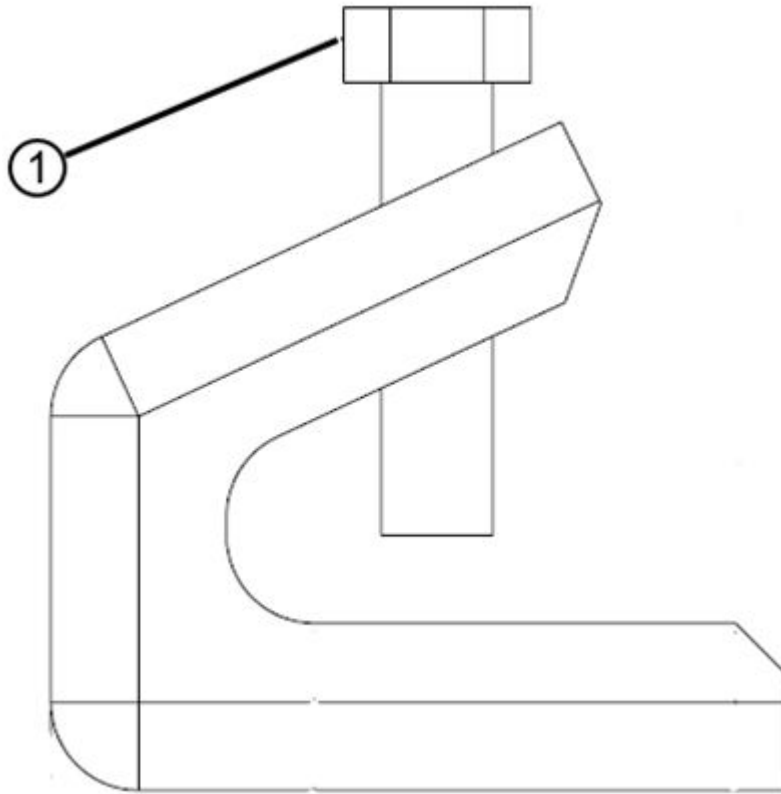
**Note**

You must hold the access point when attaching the beam clip.



**Figure 22: ACC-BKT-AX-BEAM accessory bracket**

6. Tighten the beam clip top screw to a torque of 50 in-lbs.



**Figure 23: Beam clip top screw**

Call out	Description
1	Beam clip top screw that is used to attach the beam accessory bracket to a beam

## Install an Indoor Access Point on a Concrete Wall Using WNGADAPT Bracket on an Existing 37201 Metal Bracket

Details about ACC-BKT-AX-WNGADAPT adapter bracket for cloud access points to use with WiNG access point mounting bracket (37201).

### About This Task

For any indoor concrete wall installations, use the ACC-BKT-AX-WNGADAPT adapter bracket parts with an existing 37201 metal bracket.



### Warning

Do not use the AH-ACC-BKT-AX-TB bracket for indoor concrete wall installations.





**Note**

The 37201 metal mounting bracket ships with indoor WiNG access points. If you do not have the 37201 metal bracket, order it separately.

Attach the 37201 bracket to the wall before installing the WNGADAPT adapter. The 37201 main mounting bracket ships with the following items:

- One 37201 main mounting bracket
- Two Philips pan-head screws
- Two screw-in anchors



**Note**

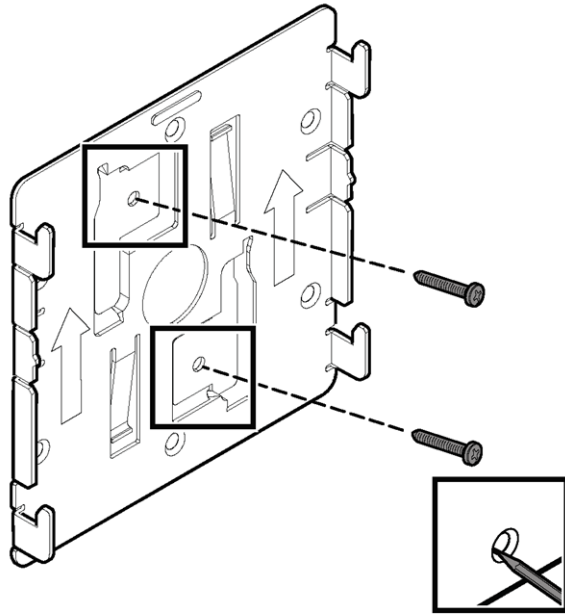
For concrete wall installations, you must provide screws and screw-in anchors.

1. Use the metal mounting bracket as a template and mark and drill two mounting holes.



**Note**

The four bracket feet and the engraved bracket arrows must be pointing up.



**Figure 24: 37201 main mounting metal bracket**

2. Attach the screw-in anchors to the mounting holes.



**Note**

Plastic screws and screw-in anchors are for drywall and metal screws and screw-in anchors are for drywall or wood wall installations. For concrete wall installations, use a masonry anchor which slips into a drilled hole and expands as the bolt is tightened. Masonry anchors are not provided with the #37201 bracket.

3. Place the metal bracket over the mounting holes and run the LAN cable through the large center hole on the metal mounting bracket.
4. Attach the bracket using two pan-head screws for drywall, wood wall, or metal installations.

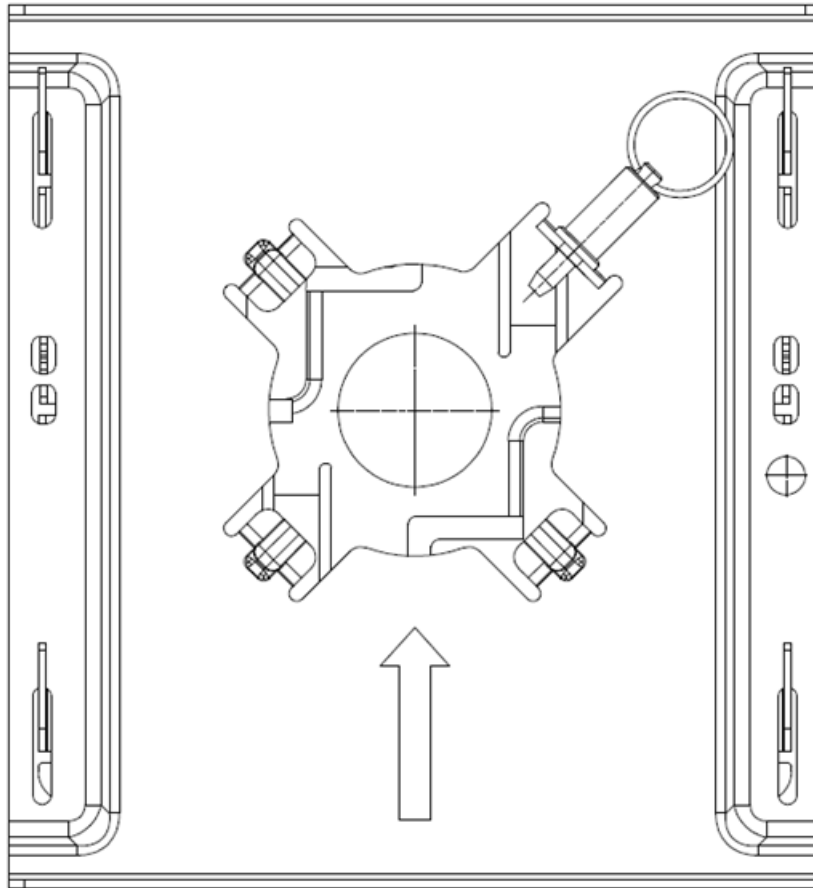
Masonry anchors have integral threaded studs. If you are attaching the 37201 bracket to a concrete wall, then the anchor studs must protrude through the holes where a hex nut is tightened.

The WNGADAPT plate ships with two parts:

- One WNGADAPT circular plastic twist part
- One WNGADAPT metal plate

## Procedure

1. With the WNGADAPT metal plate engraved arrows pointing up, place the WNGADAPT metal plate over the 37201 metal mounting bracket.



**Figure 25: AX-BKT-WNGADAPT bracket**

2. Run the LAN cable through the large center opening on the WNGADAPT plate.
3. Push the WNGADAPT metal plate down on to the 37201 bracket until the metal plate clicks in place.
4. Line the plastic twist part embossed dot against the red dot on the WNGADAPT metal plate.



### Note

Bring the LAN cable up between the WNGADAPT metal plate and the plastic twist part.

5. Rotate the twist part clockwise  $\frac{1}{4}$ <sup>th</sup> of a turn until the locking pin on the WNGADAPT metal plate clicks into place.
6. Line up the red dot on the rear of the access point against the red dot on the plastic twist part.
7. Ensure that the access point center recess area aligns onto the plastic twist center post.

8. Rotate the access point 1/6 of a turn clockwise until it clicks into place.
9. Insert the LAN cable into the RJ45 connector on top of the access point.

If there is a LAN cable PoE, the access point starts a boot cycle.

**Note**

If desired, use an in-line coupler, flat cable, and a cosmetic cap to attach the RJ45 cable onto the indoor access points.

## Lock the Indoor Access Point after Installation

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Learn how to lock the indoor access point using a Kensington lock.

If you are using an indoor access point, you can secure it by using the Kensington lock on the side of the access point. The security feature is used to prevent the access point from being removed from the mounting accessory.



# Outdoor Mounting Accessory Installation Instructions

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[Install the Access Point on a Pole Using AH-ACC-STRP-MRN Accessory](#) on page 62

[Install the Access Point on a Flat Surface Using AH-ACC-BKT-ASM Accessory](#) on page 64

[Install the Access Point on a Unistrut Structure Using the MBO-ART03 Bracket](#) on page 67

[Outdoor Wall Installation Using ACC-MBO-KT-AX Adapter](#) on page 71

[Outdoor Pole Installation Using ACC-MBO-KT-AX Adapter](#) on page 81  
[Ground Connection](#) on page 87

Learn about various outdoor mounting accessories that can be used to install the access point.

The outdoor mounting accessories can only be used with outdoor access points. The outdoor mounting accessories must be purchased separately.



## Warning

When installing the access point on an outdoor wall or a pole, the glands must face down.



## Note

When you install the MBO-ART02 or MBO-ART03 bracket, set the bracket maximum downward tilt to less than 20 degrees to prevent water ingress.

Refer to the following procedures for information on various outdoor installation procedures:

- [Install the Access Point on a Pole Using AH-ACC-STRP-MRN Accessory](#) on page 62
- [Install the Access Point on a Flat Surface Using AH-ACC-BKT-ASM Accessory](#) on page 64
- [Outdoor Wall Installation Using ACC-MBO-KT-AX Adapter](#) on page 71
- [Outdoor Pole Installation Using ACC-MBO-KT-AX Adapter](#) on page 81

- [Install the Access Point on a Pole Using the WS-MBO-POLE01 and MBO-ART02 Accessories](#) on page 86
- [Install the Access Point on a Pole with the MBO-ART03 and KT-147407-02 Brackets](#) on page 85

## Install the Access Point on a Pole Using AH-ACC-STRP-MRN Accessory

Install the access point on a vertical pole that is 3 in. to 7 in. diameter using the AH-ACC-STRP-MRN accessory.

### Before You Begin

The following hardware is required for installing the access point on a vertical pole or a horizontal pole:

- An access point (AP460C, or AP460S6C, or AP460S12C)
- Two AH-ACC-STRP-MRN accessory, which is an outdoor access point stainless steel hose strap for 3 in. to 7 in. diameter poles



#### Tip

The best practice is to mount the access point to a pole with a minimum circumference of 3 in.



#### Important

You must provide your own cable clamps if you are mounting the access point to a pole that is less than 3 in. or more than 7 in. in diameter.



#### Tip

The best practice is to use a stainless-steel cable clamp that is 0.5 in. (12.7 mm) wide.

- A flat-head slotted screwdriver to tighten the clamp screws

### About This Task

Install the access point on a vertical pole at outdoor environments. If you are resting the access point under a horizontal pole, use this installation method only during indoor warehouse or distribution center installations.

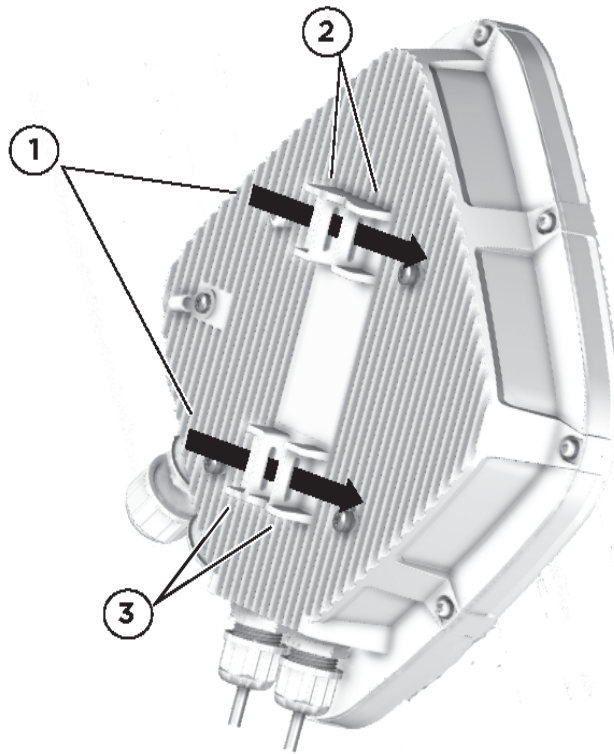
### Procedure

1. Thread the cable clamp straps through the access point rear slots.
2. Position and insert the cable clamp straps around the pole.



#### Note

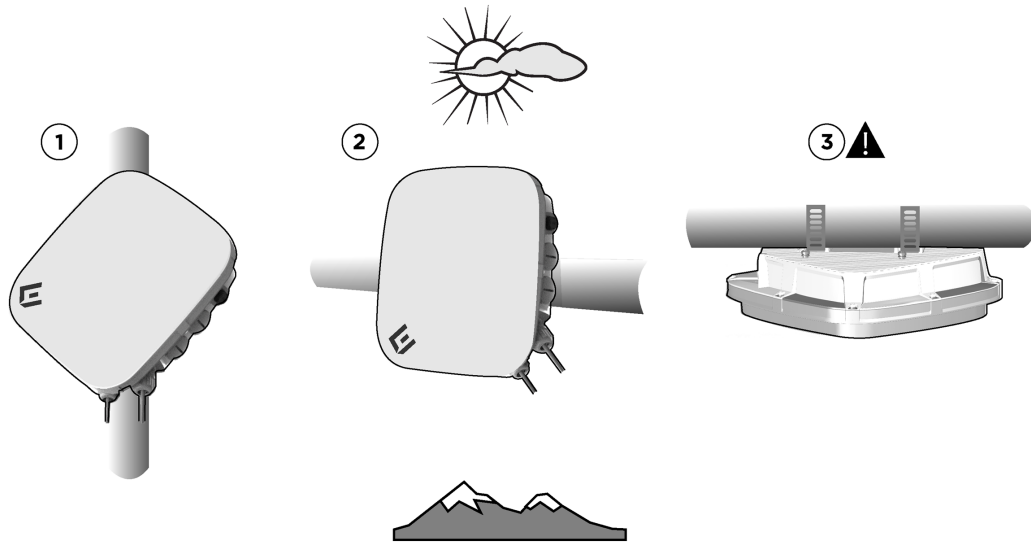
Ensure that the access point top slots are nearest to the sky and the bottom slots are nearest to the ground.



**Figure 26: Pole mount strap slots on the back of the access point**

Callout	Description
1	Pole mount cable clamp strap insert holes in the back of the access point
2	Top slots on the rear of the access point facing the sky
3	Bottom slots on the rear of the access point facing the ground

- Using a slotted screwdriver, tighten the clamp screws to a minimum torque of 14 in-lbs. until the access point is securely mounted onto the pole.



**Figure 27: Access point pole mount positions**

Callout	Description
1	Vertically oriented access point mounted onto a pole
2	Horizontally oriented access point mounted onto a pole
3	Access point mounted onto a horizontal pole (indoor warehouse installation)

As an added security measure, you can thread a safety strap through one of the cable clamp slots in addition to the cable clamps. Connect the other end of the strap to a secure object.



**Important**

The access point LAN glands must face down to eliminate water from entering the chassis.

## Install the Access Point on a Flat Surface Using AH-ACC-BKT-ASM Accessory

Install the access point on a vertical or horizontal outdoor flat surface using the AH-ACC-BKT-ASM accessory.

### Before You Begin

The following hardware is required to install the access point to a flat surface:

- An access point (AP460C, or AP460S6C, or AP460S12C)
- AH-ACC-BKT-ASM wall accessory (must be purchased separately)



- Four shoulder M5 bolts
- Four M5 mount screws and screw-in anchors (must be provided by the installer)

Callout	Description
1	M5 bolt attachment holes



**Note**

If you are mounting the access point horizontally, ensure that the ports are facing down to reduce the chance of water entering the chassis.

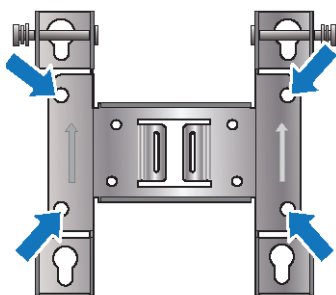
**Procedure**

1. Using the ASM wall accessory as a template, mark and drill four mounting holes on a flat surface.



**Note**

The printed arrows on the accessory must be pointing up.



**Figure 28: ASM accessory wall mounting hole markings**

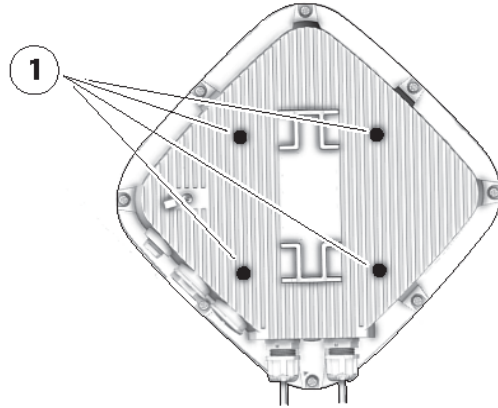
2. Attach the ASM accessory to the wall by using four M5 shoulder mounting screws.



**Tip**

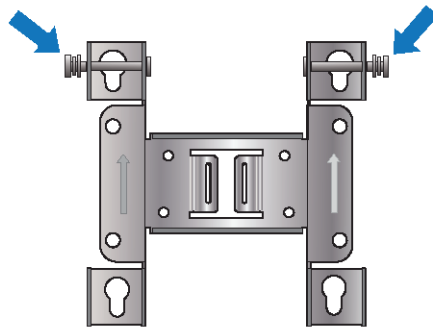
The best practice is to use screw-in anchors with the mounting screws on a wood surface, and concrete anchors on a concrete surface.

3. Insert the M5 shoulder mounting screws into the access point mounting holes.



**Figure 29: Wall mounting accessory M5 bolt holes**

4. Torque the M5 shoulder mounting screws to 25 in-lbs.
5. Remove the two locking screws on the accessory.



**Figure 30: ASM accessory locking screws**



**Note**

The access point will not go onto the accessory if the locking screws are not removed.

6. Insert the M5 bolt heads on the access point into the large end of the accessory keyholes and slide the access point down until the bolts rest in the narrow end of the keyholes.
7. Tighten the locking screws on the ASM accessory to secure the access point.
8. [Ground the access point.](#)

## Install the Access Point on a Unistrut Structure Using the MBO-ART03 Bracket

### Before You Begin

The following hardware is required to install the MBO-ART03 bracket on a Unistrut structure:

- One MBO-ART03 bracket

The MBO-ART03 bracket ships with the following hardware:

- Two long screws
- Four short screws
- Four nuts



#### Note

For Unistrut installations, discard two of the short screws and nuts. Provide two M12 stainless steel bolts, hex nuts, and split washers.

### About This Task

The MBO-ART03 bracket has +/- 80-degree (in 10-degree increments) 2-axis tilt and variable 7 inches to 10 inches extension. The bracket comes installed with M6 pivot screws.

It can be used on a wall, unistrut bracket or pole.

On the MBO-ART03 bracket's flat surface, there are three large holes for interfacing with the Unistrut metal frame. There are two smaller holes for M6 bolts for mounting to the KT brackets or a wall also. Each metal bracket on either end of the ART03 bracket has two bent sections with two pivot holes and serrated lock positions.

The length on the bent sections can be adjusted, if desired. Move the pivot points to increase the MBO-ART03 bracket's extension lengths to 7.5 in. to 9.0 in., or 10.5 in.

#### To adjust the MBO-ART03 bracket's extension:

1. Remove the pivot screw and nut.
2. Move the MBO-ART03 bracket arm's center hole to the other pivot hole on the bracket.
3. Insert the pivot screw through the bracket and the arm.
4. Attach the pivot nut to the screw.

Use a crescent wrench or a 13 mm tool to tighten the pivot screws and nuts.

5. Torque the screws and nuts to finger tightness.

#### Adjust the MBO-ART03 bracket's angular position

1. The horizontal and vertical adjustments can be made in 10 degree increments.

The increments are marked on the MBO-ART03 bracket.



**Note**

The access point glands should point downward to prevent water entry.

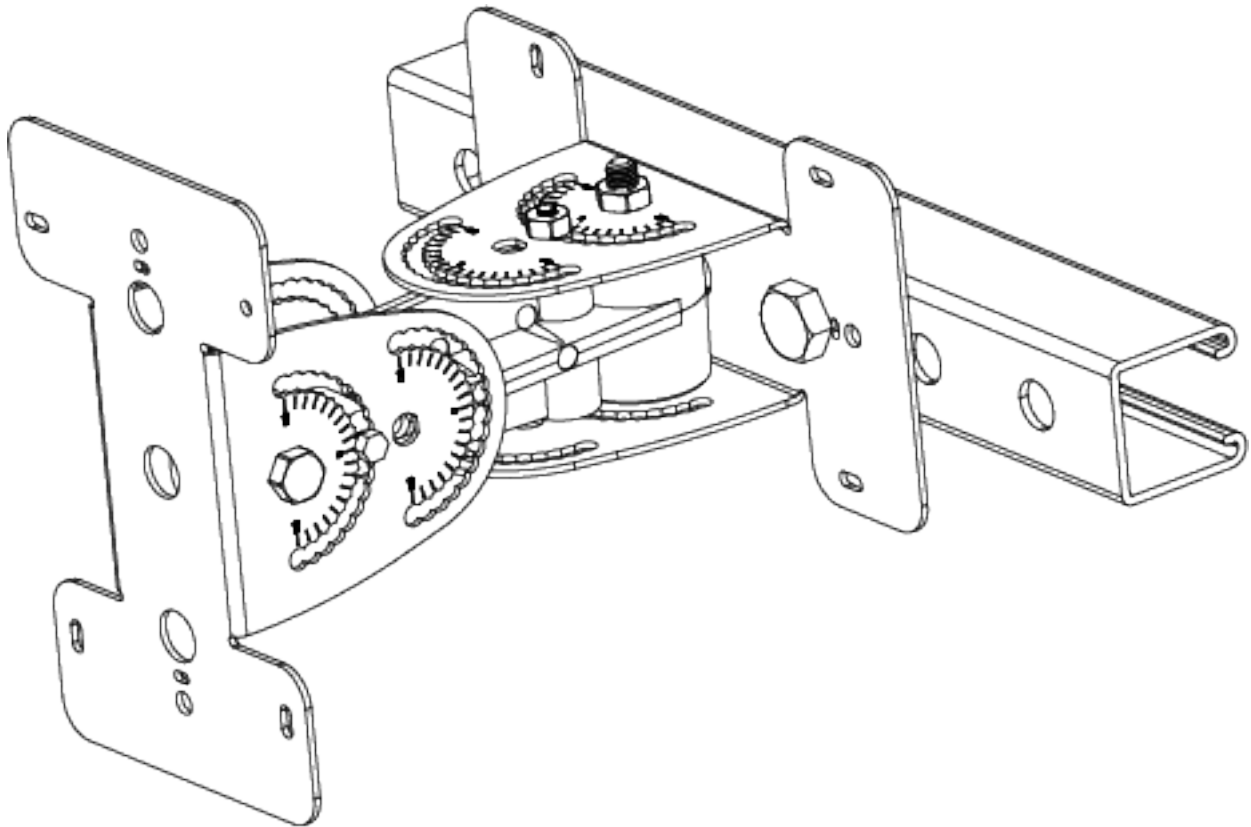
2. Rotate the arm to the desired position.
3. When the lock screw hole lines up with the appropriate serrated screw hole, insert the long M6 screw and fasten with a hex nut.
4. Torque the lock screws and nuts to 45 inch-lbs.
5. Torque the pivot screws and nuts to 60 inch-lbs.

The left to right adjustment can be made to any angle, with the access point having at least 1 in. clearance from another object.



**Tip**

The best practice is to make the vertical adjustment before attaching the access point to the MBO-ART03 bracket.

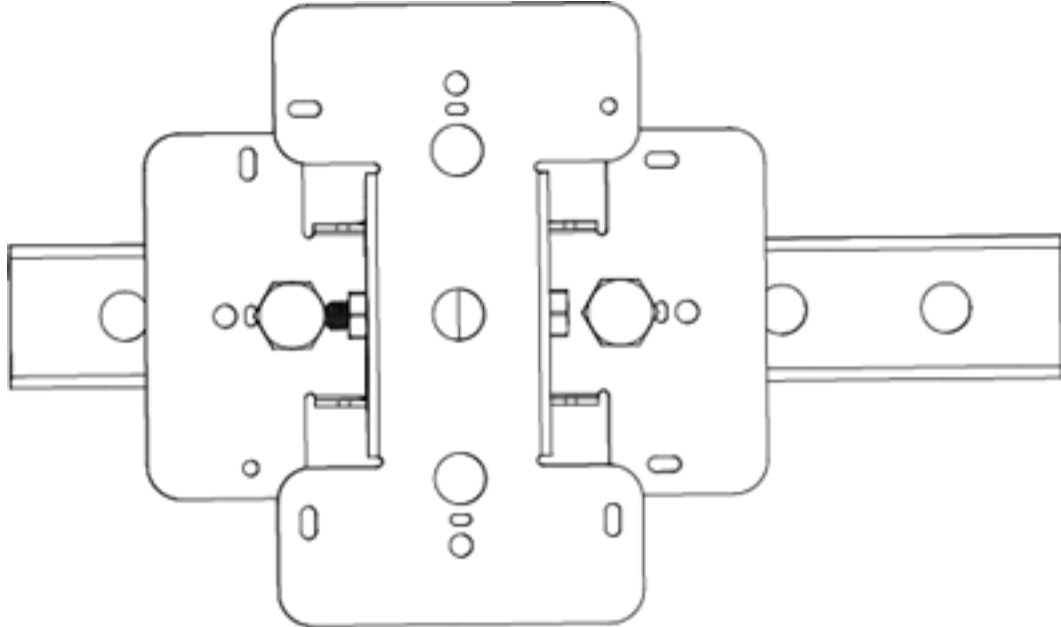


**Figure 31: MBO-ART03 bracket angular adjustments**

**Procedure**

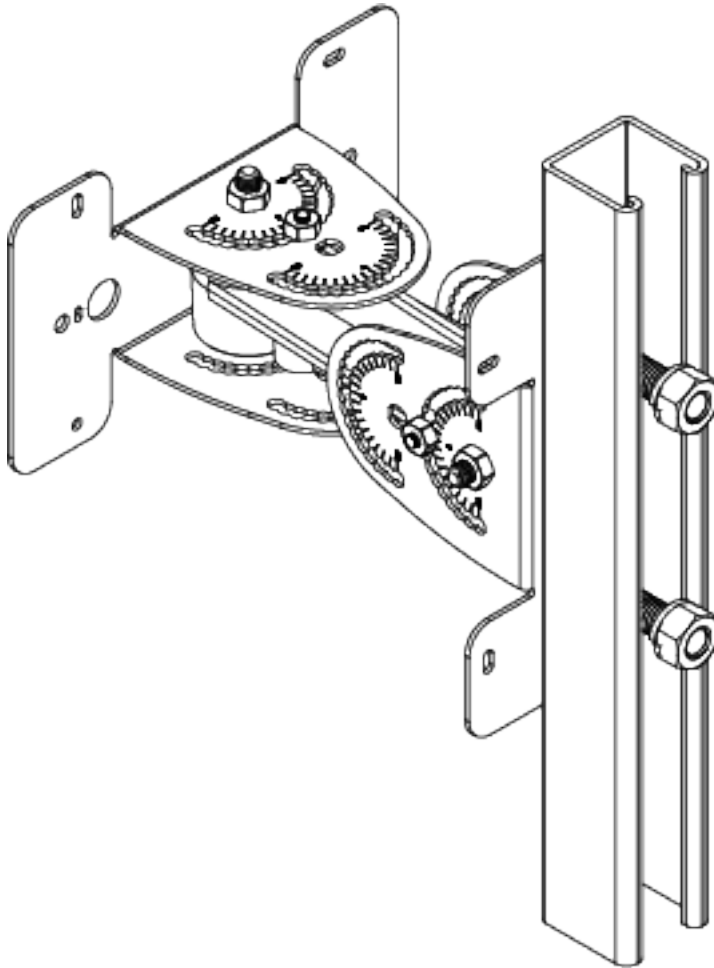
1. Using the M12 bolts, split washers, and hex nuts, attach the MBO-ART03 bracket to the Unistrut structure.

The MBO-ART03 bracket's metal plate can be in a vertical or horizontal position.



**Figure 32: MBO-ART03 bracket attached to the Unistrut structure**

2. Torque the bolts and nuts to 312 in-lbs.



**Figure 33: MBO-ART03 torque position on the Unistrut structure**

3. Using the two short M6 screws, attach the access point with the glands facing the ground.  
There are four holes on the access point and only two holes are used for attaching to the MBO-ART03 bracket.
4. Tighten the M6 screws to 45 in-lbs.
5. Attach the LAN cables to the access point.
6. To adjust the MBO-ART03 bracket's angular position, remove the long M6 degree locking screw and adjust the bracket axis to the desired angle.
7. Insert the degree adjustment locking screw and attach the locking nut until hand tight.  
Repeat the angular position adjustment process on the other axis, if desired.
8. Tighten the long bolts to the following values:
  - M6 degree locking bolts at 50 in-lbs.
  - M8 pivot bolts at 90 in-lbs.

## Outdoor Wall Installation Using ACC-MBO-KT-AX Adapter

Details about ACC-MBO-KT-AX adapter and wall brackets that can be used with the adapter for wall installation.

You can install the AP460C, AP460S6C, or AP460S12C outdoor access points to an outdoor wall or a flat surface using the ACC-MBO-KT-AX adapter. The adapter is used in combination with the KT-147407-02 bracket parts and the KT-150173-01 extension arm.



### Note

The KT-147407-02 bracket parts and the KT-1501730-01 extension arm must be purchased separately.

For detailed installation instructions, refer to the following procedures:

- [Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and KT-147407-02 Bracket Parts](#) on page 71
- [Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter, KT-147407-02 Bracket Wall Parts, and KT-150173-01 Extension Arm](#) on page 76
- [Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and MBO-ART02 Articulating Mounting Bracket](#) on page 78
- [Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and MBO-ART03 Articulating Mounting Bracket](#) on page 80

### Related Topics

[Outdoor Pole Installation Using ACC-MBO-KT-AX Adapter](#) on page 81

## Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and KT-147407-02 Bracket Parts

Learn how to install an outdoor access point using the ACC-MBO-KT-AX adapter with the KT-147407-02 bracket wall parts.

### Before You Begin

The following hardware is required for outdoor access point wall installation using the -MBO adapter and the KT-147407-02 bracket parts:

- One outdoor access point
- One ACC-MBO-KT-AX adapter
- Four M5 hex bolts
- Flat part of the KT-147407-02 bracket
- 1-axis tilt part of the KT-147407-02 bracket
- Four M6 hex screws with split washer and hex nut
- Four M6 headsized screws
- Four M6 screws



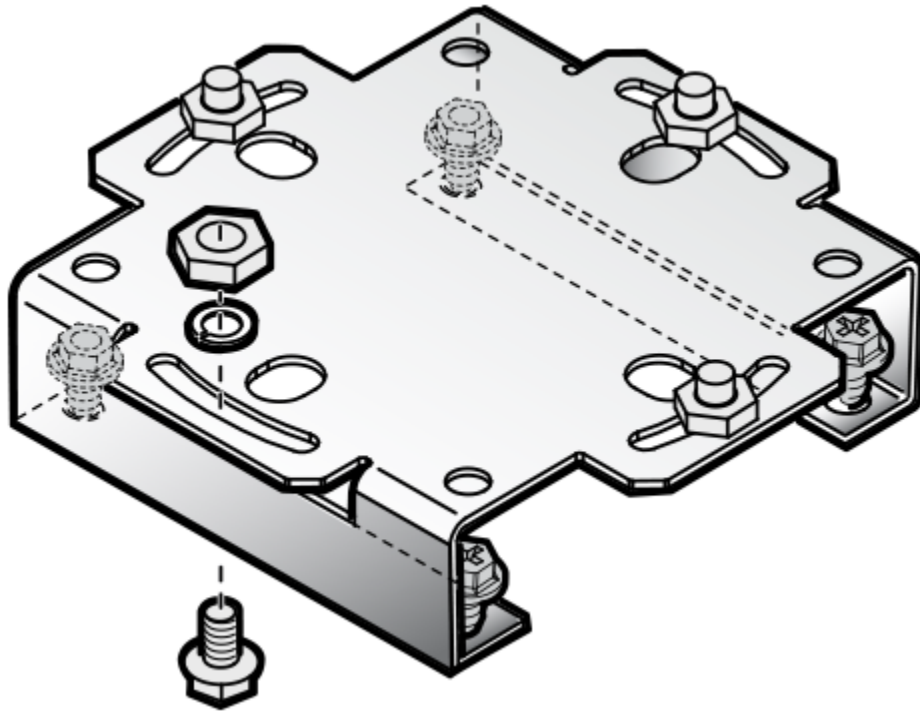
### Note

All accessories must be purchased separately.

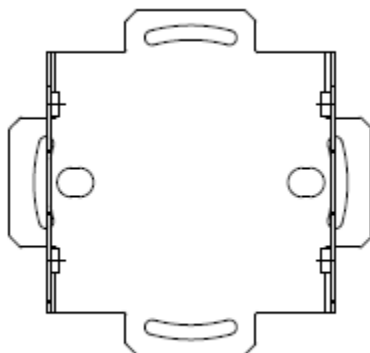
### About This Task

The ACC-MBO-KT-AX adapter is used with outdoor access points to add a tilt to the access point after installation. For wall installations, the -MBO adapter is used in combination with the KT-147407-02 bracket wall parts. The KT-147407-02 has three bracket parts, two parts for wall installation and one part for pole installation.

For pole installations, the ACC-MBO-KT-AX adapter is used in combination with the KT-147407-02 bracket wall and pole parts.

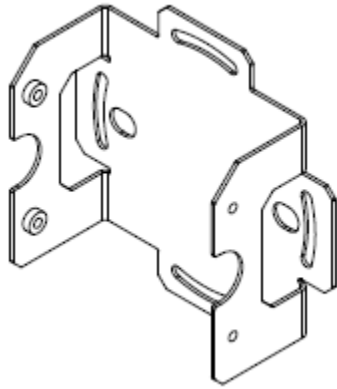


**Figure 34: ACC-MBO-KT-AX adapter bracket for outdoor access point tilt**

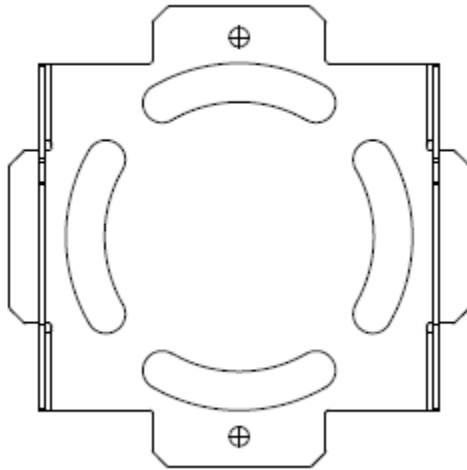


**Figure 35: KT-147407-02 bracket flat part front view**

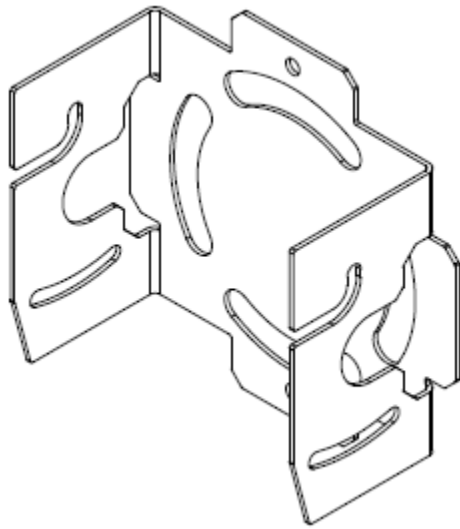




**Figure 36: KT-147407-02 bracket flat part side view**



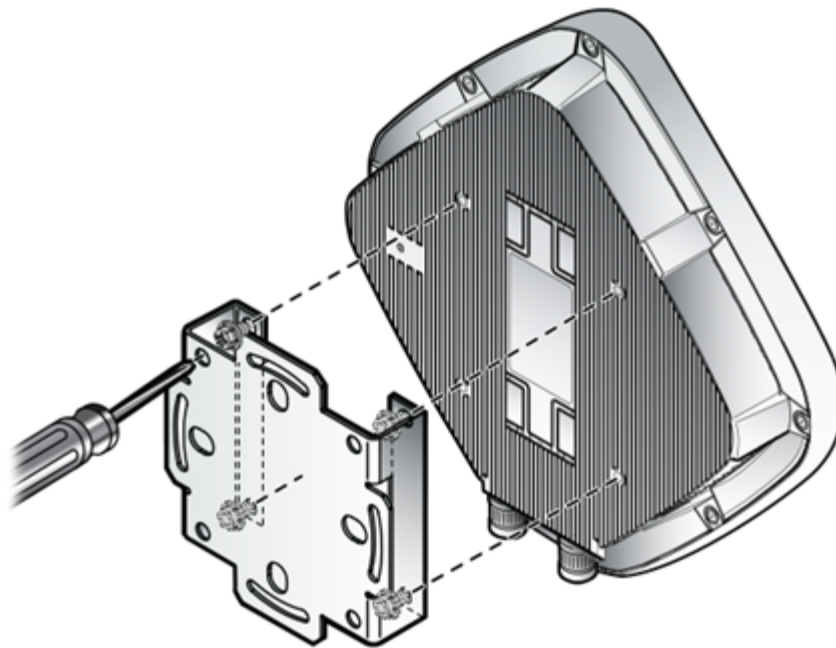
**Figure 37: KT-147407-02 bracket 1-axis tilt part front view**



**Figure 38: KT-147407-02 bracket 1-axis tilt part side view**

**Procedure**

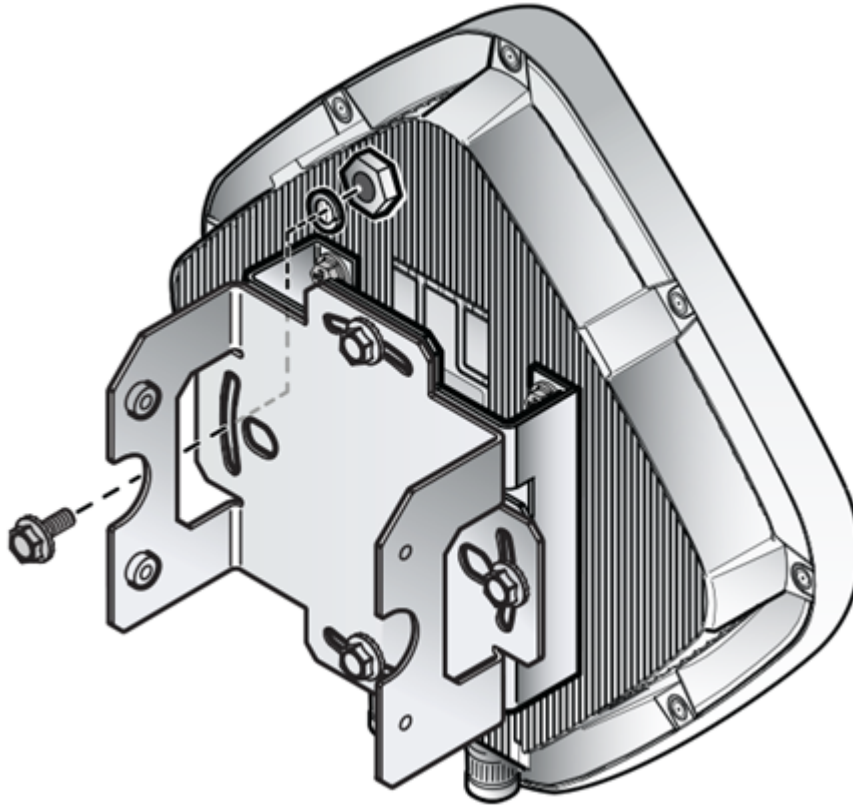
1. Attach the ACC-MBO-KT-AX adapter to the access point using four M5 bolts.



**Figure 39: ACC-MBO-KT-AX adapter bracket attachment to an outdoor access point**

2. Torque the M5 bolts to 25 in-lbs.

3. Attach the flat part of the KT-147402-02 bracket to the ACC-MBO-KT-AX adapter using four M6 screws, split washers, and hex nuts.



**Figure 40: KT-147407-02 flat part attachment to -AX adapter bracket**

4. Torque the bolts to 45 in-lbs.
5. Using the 1-axis tilt bracket as a template, mark and drill four holes on a wall or on a flat surface.
6. Attach the 1-axis tilt bracket to a wall or a flat surface using four M6 headsized screws.
7. Align the 1-axis tilt bracket part inside the flat part of the KT-147407-02 bracket, and attach the flat bracket to the 1-axis tilt bracket using four M6 screws.
8. Tilt the access point to a desired angle and tighten the four M6 screws to a torque of 45 in-lbs.

The tilt bracket has +15 degrees to -15 degrees of tilt.

## Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter, KT-147407-02 Bracket Wall Parts, and KT-150173-01 Extension Arm

Learn how to install an outdoor access point on a wall using ACC-MBO-KT-AX adapter, KT-147407-02 bracket wall parts, and KT-150173-01 extension arm.

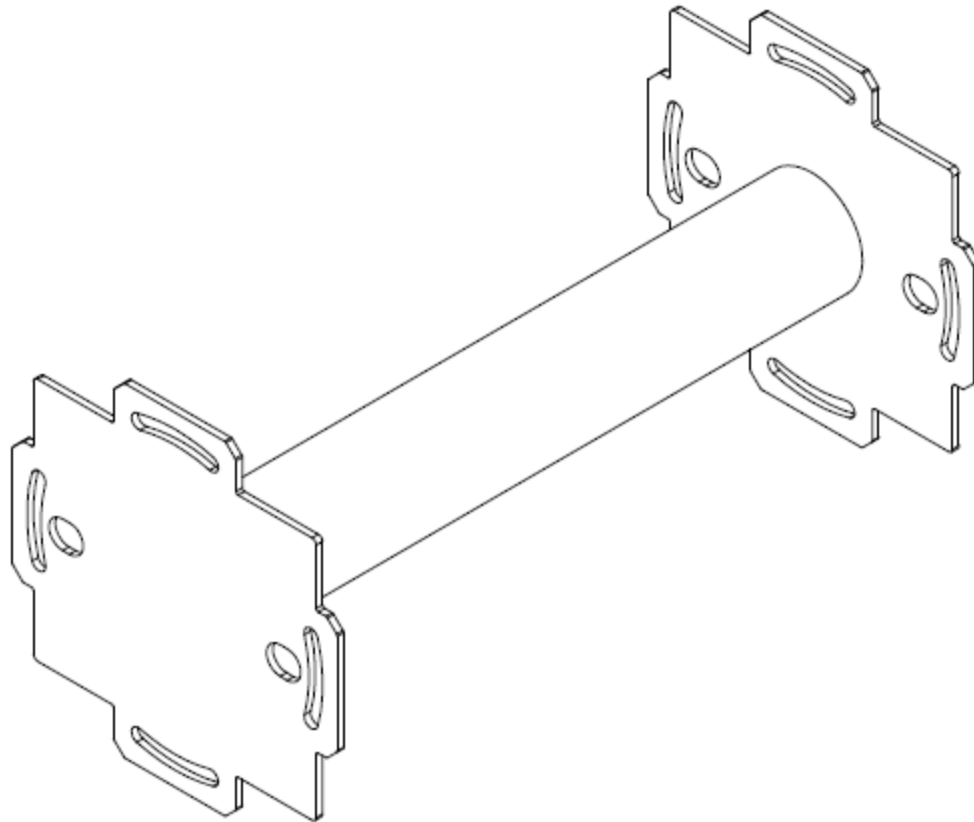
### Before You Begin

The following hardware is required for outdoor access point wall installation using the -MBO adapter, KT-147407-02 bracket parts, and the KT-150173-01 extension arm:

- One outdoor access point
- One ACC-MBO-KT-AX adapter
- Four M5 hex bolts
- Flat part of the KT-147407-02 bracket
- 1-axis tilt part of the KT-147407-02 bracket
- Four M6 hex screws with split washer and hex nut
- Four M6 head size screws
- Four M6 screws
- One KT-150173-01 extension arm
- Two hex-head M12 stainless-steel screws and nuts
- Four M6 hex-head screws and optional screw-in anchors

### About This Task

The ACC-MBO-KT-AX adapter is used with outdoor access points to add a tilt to the access point after installation. For wall installations, the -MBO adapter is used in combination with the KT-147407-02 bracket wall parts. To add extension to your wall installations, use the KT-150173-01 extension arm in combination with the KT-147407-02 bracket parts.



**Figure 41: KT-150173-01 extension arm**

**Procedure**

1. Attach the ACC-MBO-KT-AX adapter to the access point using four M5 bolts.
2. Torque the M5 bolts to 25 in-lbs.
3. Attach the flat part of the KT-147402-02 bracket to the ACC-MBO-KT-AX adapter using four M6 hex screws, split washers, and hex nuts.
4. Torque the M6 screws and nuts to 45 in-lbs.
5. Align the 1-axis tilt bracket part inside the flat part of the KT-147407-02 bracket, and attach the flat bracket to the 1-axis tilt bracket using four M6 screws.
6. Set the desired angle on the tilt bracket and tighten the screws to a torque of 45 in-lbs.
7. Using the KT-150173-01 extension arm as a template, mark and drill four hole centers on a flat surface.  
The holes must be within the circular cuts in the end of the flange.
8. Attach one end of the KT-150173-01 extension arm to the 1-axis tilt bracket using two hex-head M12 stainless-steel screws and two hex-head M12 stainless-steel nuts through the two large circular holes on the KT-150173- 01 extension arm.
9. Torque the M12 bolts and nuts to 22 ft-lbs.
10. Attach the KT-150173-01 extension arm, that now has the access point mounted on the other end, to a flat surface using four M6 size hex-head screws.  
Use screw-in anchors with the four M6 hex-head screws when you mount the bracket on a wood surface and use concrete anchors for concrete surface.

## Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and MBO-ART02 Articulating Mounting Bracket

Learn how to install an outdoor access point using the -MBO adapter and the MBO-ART02 articulating mounting bracket.

### Before You Begin



#### Note

The MBO-ART02 wall mount bracket is End of Sale (EOS) as of January, 2023. It is replaced by the MBO-ART03 bracket.

For more information, see [End of Sale and End Service Life](#).

The following hardware is required for outdoor access point wall installation using the -MBO adapter and MBO-ART02 articulating mounting bracket:

- One outdoor access point
- One ACC-MBO-KT-AX adapter
- Four M5 hex bolts
- One MBO-ART02 articulating mounting bracket
- Six M6 hex-head screws

### About This Task

Attach the access point to a wall using the -MBO adapter with the MBO-ART02 articulating mounting bracket.



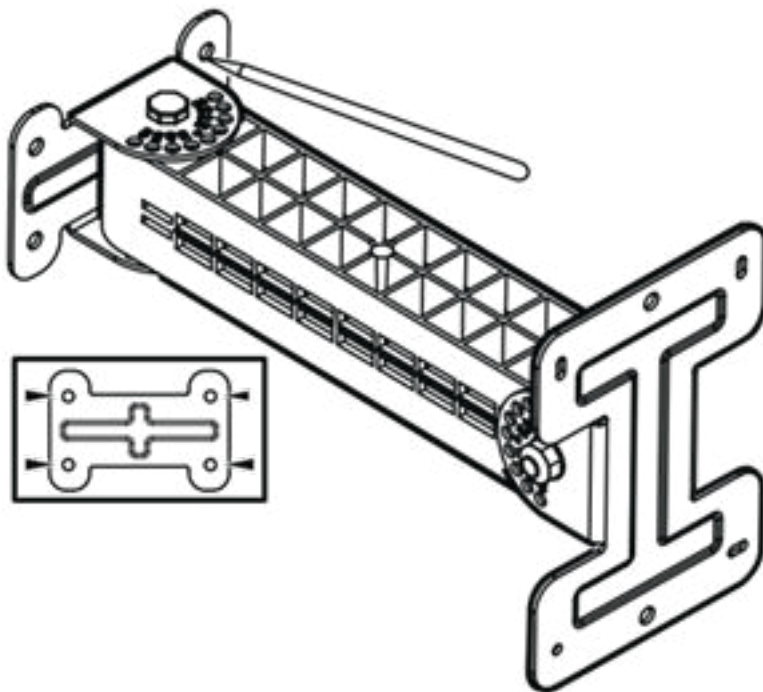
#### Note

When using the MBO-ART02 articulating mounting bracket, set the maximum downward tilt to less than 20 degrees to prevent water ingress.

### Procedure

1. Attach the ACC-MBO-KT-AX adapter to the access point using four M5 bolts.
2. Torque the M5 bolts to 25 in-lbs.

3. Use the MBO-ART02 articulating mounting bracket as a template, mark and drill four holes on the wall.



**Figure 42: MBO-ART02 articulating mounting bracket wall holes template**

4. Attach the larger face plate end of the MBO-ART02 mounting bracket to the ACC-MBO-KT-AX adapter using two M6 hex-head screws.
5. Align the mounting holes on the ART02 bracket against the holes on the wall.
6. Attach the ART02 bracket to the wall using four M6 hex-head screws.

### Install the Access Point on a Wall With the MBO-ART03 Bracket

#### Before You Begin

Obtain the items in the following table.

**Table 19: Hardware requirements for MBO-ART03 articulating mounting bracket wall installation**

Quantity	Item
1	Access point
1	MBO-ART03 articulating mounting bracket
6	M6 hex-head screws Two M6 hex-head screws for attaching the bracket and the access point. Four M6 hex-head screws for attaching the bracket to the wall.
2	Long M6 hex screws and nuts to lock each axis.

You also need a torque wrench and tool that matches the nuts for the M6 hex screws.

### About This Task

Install the access point to a wall so it is secure and your customers can easily access your wireless network.

### Procedure

1. Mark and drill four holes on the wall.  
It is recommended that you use one of the bracket ends as a template. You can remove the end from the bracket.
2. Adjust the arm length.  
The arm is set to a 7.5-inch extension. To increase it to a 9-inch extension, you move 1 pivot and lock screw to the outside holes on 1 bracket. To increase the extension to 10.5-inches, move both pivot and lock screw pairs to the outside holes on each bracket
3. Attach the bracket to the access point with the M6 hex-head screws.
4. Align the bracket mounting holes with the holes on the wall.
5. Attach the bracket to the wall with the M6 hex-head screws.
6. Insert the locking bolts into the bracket and arm locking hole.
7. Attach the nuts and torque to 45 inch-pounds.
8. Tighten the pivot screws and nuts to 60 inch-pounds.

## Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter and MBO-ART03 Articulating Mounting Bracket

Use the MBO-ART03 articulating mounting bracket with the ACC-MBO-KT-AX Adapter for wall installations.

### Before You Begin

### About This Task



#### Note

This task only applies to the AP460C, AP460C, AP460S6C and AP460S12C.

The following hardware is required for outdoor access point wall installation using the -MBO adapter and MBO-ART03 articulating mounting bracket:

- One outdoor access point
- One ACC-MBO-KT-AX adapter
- Two M5 hex bolts
- One MBO-ART03 articulating mounting bracket
- Four M6 hex-head screws

In addition, you need a torque wrench, a drill and a carpenter's pencil or a pen.



Attach the access point to a wall using the -MBO adapter with the MBO-ART03 articulating mounting bracket.

**Note**

When using the MBO-ART03 articulating mounting bracket, set the maximum downward tilt to less than 20 degrees to prevent water ingress.

**Procedure**

1. Attach the ACC-MBO-KT-AX adapter to the access point using the two M5 bolts.
2. Torque the M5 bolts to 25 in-lbs.
3. Use the MBO-ART03 articulating mounting bracket as a template, mark and drill two holes on the wall.
4. Attach the larger face plate end of the MBO-ART03 mounting bracket to the ACC-MBO-KT-AX adapter using two M6 hex-head screws.
5. Align the mounting holes on the ART03 bracket against the holes on the wall.
6. Attach the ART03 bracket to the wall using two M6 hex-head screws.

## Outdoor Pole Installation Using ACC-MBO-KT-AX Adapter

Details about ACC-MBO-KT-AX adapter and pole brackets that can be used with the adapter for outdoor pole installation.

You can install the AP460C, AP460S6C, or AP460S12C outdoor access points to an outdoor pole using the ACC-MBO-KT-AX adapter. The adapter is used in combination with the KT-147407-02 bracket parts and the KT-150173-01 extension arm.

**Note**

The KT-147407-02 and the KT-150173-01 extension arm must be purchased separately.

For detailed installation instructions, refer to the following procedures:

- [Install the Access Point on a Pole Using ACC-MBO-KT-AX Adapter and KT-147407-02 Bracket Parts](#) on page 82
- [Install the Access Point on a Pole Using ACC-MBO-KT-AX Adapter, KT-147407-02 Bracket Parts, and KT-150173-01 Extension Arm](#) on page 84

**Related Topics**

[Outdoor Wall Installation Using ACC-MBO-KT-AX Adapter](#) on page 71

## Install the Access Point on a Pole Using ACC-MBO-KT-AX Adapter and KT-147407-02 Bracket Parts

Learn how to install an outdoor access point on a pole using the -MBO adapter with the KT-147407-02 bracket parts.

### Before You Begin

The following hardware is required for outdoor access point pole installation using the -MBO adapter and KT-147407-02 bracket parts:

- One outdoor access point
- One ACC-MBO-KT-AX adapter
- Four M5 hex bolts
- Flat part of the KT-147407-02 bracket
- 1-axis tilt part of the KT-147407-02 bracket
- Pole part of the KT-147407-02 bracket
- Four M6 screws with split washers and nuts
- Four M6 screws
- Two hex-head M12 stainless-steel bolts
- Two hex-head M12 stainless-steel nuts
- Two 0.5 in. wide stainless-steel cable clamps for pole mounting

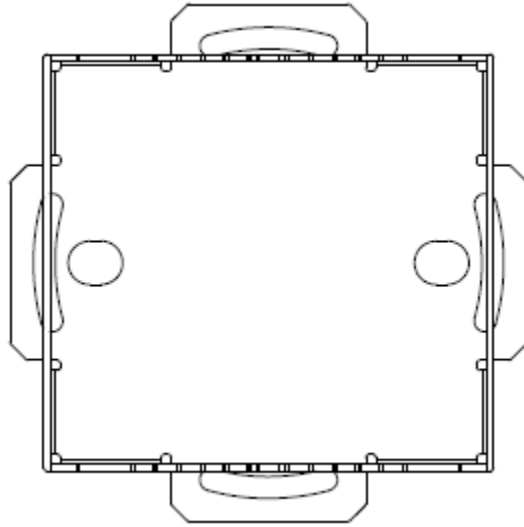
### About This Task

The ACC-MBO-KT-AX adapter is used with outdoor access points to add a tilt to the access point after installation. For pole installations, the -MBO adapter is used in combination with all three KT-147407-02 bracket parts.

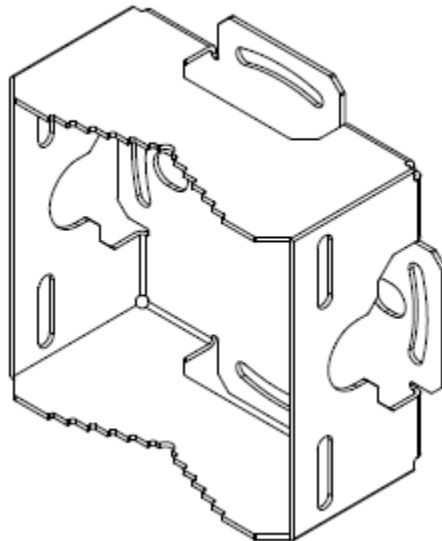


#### Note

The cable glands must face down when you install the access point on a pole.



**Figure 43: KT-147407-02 bracket pole part front view**



**Figure 44: KT-147407-02 bracket pole part side view**

#### Procedure

1. Attach the ACC-MBO-KT-AX adapter to the access point using four M5 bolts.
2. Torque the M5 bolts to 25 in-lbs.
3. Attach the flat part of the KT-147402-02 bracket to the ACC-MBO-KT-AX adapter using four M6 screws, split washers, and hex nuts.
4. Torque the bolts and nuts to 32 in-lbs.
5. Align the 1-axis tilt bracket part inside the flat part of the KT-147407-02 bracket, and attach the flat bracket to the 1-axis tilt bracket using four M6 screws.

6. Adjust the tilt and tighten the screws to a torque of 32 in-lbs.
7. Attach the KT-147407-02 pole part to the 1-axis tilt part using two M12 bolts through the large bracket holes on 1-axis tilt part and the pole part.
8. Fasten the bolts using two M12 hex nuts and torque it to 22 ft-lbs..
9. Insert the 0.5 in. stainless-steel cable clamp through the large slots on the pole bracket.
10. Position the cable clamps on the bracket around a pole.
11. Insert the ends of the cable clamps around the pole and tighten the clamp screws to a torque of 14 in-lbs.

## Install the Access Point on a Pole Using ACC-MBO-KT-AX Adapter, KT-147407-02 Bracket Parts, and KT-150173-01 Extension Arm

Learn how to install an outdoor access point on a pole using the -MBO adapter with KT-147407-02 bracket parts and the KT-150173-01 extension arm.

### Before You Begin

The following hardware is required for outdoor access point pole installation using the -MBO adapter, KT-147407-02 bracket parts, and KT-150173-01 extension arm:

- One outdoor access point
- One ACC-MBO-KT-AX adapter
- Four M5 hex bolts
- Flat part of the KT-147407-02 bracket
- 1-axis tilt part of the KT-147407-02 bracket
- Pole part of the KT-147407-02 bracket
- One KT-150173-01 extension arm
- Six M6 screws
- Four hex-head M12 stainless-steel bolts
- Four hex-head M12 stainless-steel nuts
- Two 0.5 in. wide stainless-steel cable clamps for pole mounting

### About This Task

Use the -MBO adapter in combination with the KT-147407-02 bracket parts and the KT-150173-01 extension arm for pole installations.



#### Note

The cable glands must face down when you install the access point on a pole.

### Procedure

1. Attach the ACC-MBO-KT-AX adapter to the access point using four M5 bolts.
2. Tighten the bolts to a torque of 25 in-lbs.

3. Attach the KT-147407-02 flat part and the 1-axis tilt part.  
For instructions on how to attach the bracket parts, see Steps 2 and 3 in the [Install the Access Point on a Wall Using ACC-MBO-KT-AX Adapter, KT-147407-02 Bracket Wall Parts, and KT-150173-01 Extension Arm](#) on page 76 procedure.
4. Tighten the screws and nuts to a torque of 32 in-lbs.
5. Align the circular holes on one end of the KT-150173-01 extension arm against the large holes on the 1-axis tilt bracket part.
6. Attach the KT-150173-01 extension arm to the 1-axis tilt bracket using two hex-head M12 stainless-steel screws and two hex-head M12 stainless-steel nuts.
7. Attach the KT-147407-02 pole part to the other end of the KT-150173-01 extension arm using two M12 screws and M12 hex-nuts.
8. Tighten the M12 bolts and nuts to a torque of 22 ft-lbs.
9. Insert 0.5 in. stainless-steel cable clamps through the KT-147407-02 pole part long slots.
10. Position the cable clamps around a pole.
11. Insert the ends of the cable clamps around the pole and tighten the clamp screws to a torque of 14 in-lbs.

## Install the Access Point on a Pole with the MBO-ART03 and KT-147407-02 Brackets

### Before You Begin

The following hardware is required to install your access point to a pole with the MBO-ART03 and KT-147407-02 brackets.

**Table 20: Hardware Requirements**

Quantity	item
1	Access point.
1	KT-147407-02 bracket.
1	MBO-ART03 articulating mounting bracket.
2	M6 hex-head screws to attach the MBO-ART03 to the access point.
2	M6 screws with nuts and washers to attach KT-147407-02 to the MBO-ART03.
2	Long M6 Hex hex screws and nuts for providing an angular lock for each axis.
2	Cable clamps with a band of 0.5 in. (12.7 mm). Cable clamps must be purchased seperately as they are not included.
1	Torque wrench with sockets.
1	Flat head screwdriver.

### About This Task

You can install your access point to a pole if you do not want to drill into a concret wall. With a pole, the access point coverage area can be greater because a pole is often higher than a wall.

### Procedure

1. Attach the KT-147407-02 to the MBO-ART03 with two M6 screws, nuts, and washers.
2. Attach both cable clamps to the KT-147407-02 bracket.  
You open the cable clamp by inserting the head of the flathead screwdriver into the retaining screw and turning the screw counterclockwise. Then insert the nonclamp end into the KT-147407-02 through the holes.
3. Attach the two brackets to the pole.
4. Tighten the cable clamp screw around the pole by turning the screws clockwise with a flathead screwdriver.
5. Attach the access point to the MBO-ART03 with two M6 hex-head screws.
6. Adjust the two pivot points until you are satisfied.
7. Insert the locking bolts into the bracket and arm locking hole.
8. Attach the nuts and torque to 45 inch-pounds.
9. Tighten the pivot screws and nuts to 60 inch-pounds.
10. Attach the safety hanger strap as per the local code.
11. Adjust the LAN cable so the access point glands have a drip loop in each cable.  
The LAN cable must be located on the lower side for AP460i/e, AP560i, AP560h, AP5050D and AP5050U

## Install the Access Point on a Pole Using the WS-MBO-POLE01 and MBO-ART02 Accessories

Use the MBO-ART02 articulating mounting bracket with the WS-MBO-POLE01 accessory for pole installations.

### Before You Begin



#### Note

The MBO-ART02 wall mount bracket is End of Sale (EOS) as of January, 2023. It is replaced by the MBO-ART03 bracket.

For more information, see [End of Sale and End Service Life](#).

The following hardware is required to install the MBO-ART02 accessory with the WS-MBO-POLE01 bracket:

- One WS-MBO-POLE01 bracket
- Four stainless steel (SS) M4 screws with M4 split washers, and M4 hex nuts
- One MBO-ART02 articulating mounting bracket
- Two stainless steel cable clamps
- Four M4 SEMS screws

### About This Task

The MBO-ART02 bracket is used with outdoor access points.

## Procedure

1. Line up the smaller end of MBO-ART02 on the attachment holes on the WS-MBO-POLE01 bracket.
2. Insert four M4 screws from the ART02 side and put on the split washers and hex nuts from the POLE01 side.
3. Tighten the screws and hex nuts to 13.5 inch-lbs.
4. Use two stainless steel cable clamps to attach the POLE01 bracket to a pole.
5. Torque the cable clamp screws to 13.5 inch-lbs.
6. To attach the access point to the larger end of the ART02 bracket, line up the bracket holes against the mounting holes on the back of the access point.
7. Provide two stainless-steel M6 x 13 mm screws or bolts and two stainless-steel split washers, and put the split washers on the screws.
8. Line up the two M6 holes in the AP360i/e, AP460i/e, AP560i, or AP560h access point with the two M6 holes in the large side of the MBO-ART02 bracket.
9. Insert an M6 screw or split-washer into the M6 hole and thread it until they are tight.
10. Torque the screws to 33 inch-lbs.
11. Adjust the black plastic bracket arm left to right as desired.
12. Insert the M4 locking bolt into the closest lock hole in the bracket that aligns with the closest lock holes in the black plastic arm.
13. Thread a hex nut onto the bolt.
14. Torque the nut to 13.5 inch-lbs.
15. Adjust the access point's downward tilt and insert the M4 locking bolt in the appropriate hole and attach the hex nut.



### Note

The downward tilt must not be more than +/- 25° vertical tilt to prevent water entry.

16. Torque the nut to 13.5 inch-lbs.
17. Attach the safety hanger strap as per the local code.

## Results

When the installation is complete, the access point glands must have a drip loop in each LAN cable and must be located on the lower side for AP560i and AP560h.

## Ground Connection

---

Learn how to safely ground the access point using the grounding hardware.

### Before You Begin

The following hardware is required for ground connection:

- An access point
- One M4 ground screw
- One star washer

- One ground terminal
- One ground wire



**Note**

The installer must provide the ground wire.

**About This Task**

When you install the access point on an outdoor environment, you must provide protective grounding to prevent the access point from damages and failures.

**Procedure**

1. Strip the insulation off one end of the ground wire and attach the stripped wire to the ring terminal.



**Note**

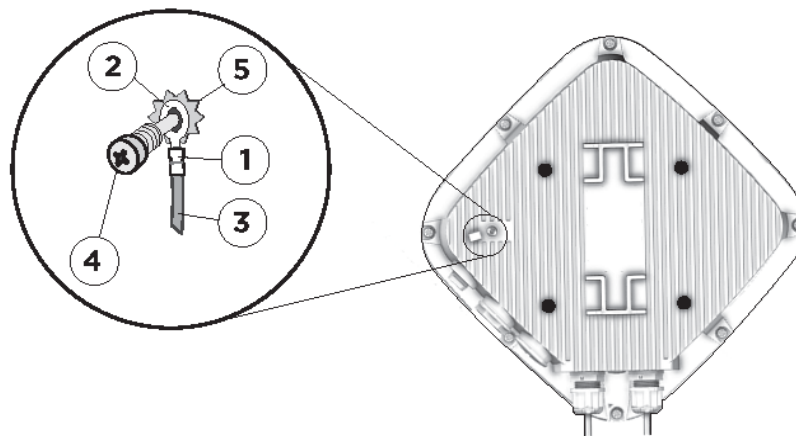
The best practice is to use a 10 AWG electrical wire.

2. Attach the ground wire ring terminal to the access point using the M4 ground screw assembly with the star washer.



**Note**

The star washer must be in contact with both the ring terminal and the access point.



**Figure 45: Ground connection on the access point**

Callout	Description
1	Ground terminal edge area
2	Ground terminal
3	10 AWG ground wire



Callout	Description
4	M4 screw
5	Star washer

3. Tighten the screw to a torque of 12 in-lbs.
4. Connect the other end of the ground wire to an appropriate earthing location.



# Additional Help and Support

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[Help and Support](#) on page 90

[Documentation and Training](#) on page 91

[Send Feedback](#) on page 91

Use the information in the following sections if you need additional help.

## Help and Support

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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: (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](http://www.extremenetworks.com/support/contact)

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

- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions 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

## Subscribe to Product Announcements

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

1. Go to [The Hub](#).
2. In the list of categories, expand the **Product Announcements** list.
3. Select a product for which you would like to receive notifications.
4. Select **Subscribe**.
5. To select additional products, return to the **Product Announcements** list and repeat steps 3 and 4.

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

## Documentation and Training

Find Extreme Networks product information at the following locations:

[Current Product Documentation](#)

[Release Notes](#)

[Hardware and software compatibility](#) for Extreme Networks products

[Extreme Optics Compatibility](#)

[Other resources](#) such as white papers, data sheets, and case studies

Extreme Networks offers product training courses, both online and in person, as well as specialized certifications. For details, visit [www.extremenetworks.com/education/](http://www.extremenetworks.com/education/).

## Send Feedback

The Information Development team at Extreme Networks has made every effort to ensure that this document is accurate, complete, and easy to use. We strive to improve our documentation to help you in your work, so we want to hear from you. We welcome all feedback, but we especially want to know about:

- Content errors, or confusing or conflicting information.
- Improvements that would help you find relevant information.
- Broken links or usability issues.

To send feedback, do either of the following:

- Access the feedback form at <https://www.extremenetworks.com/documentation-feedback/>.
- Email us at [documentation@extremenetworks.com](mailto:documentation@extremenetworks.com).

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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