

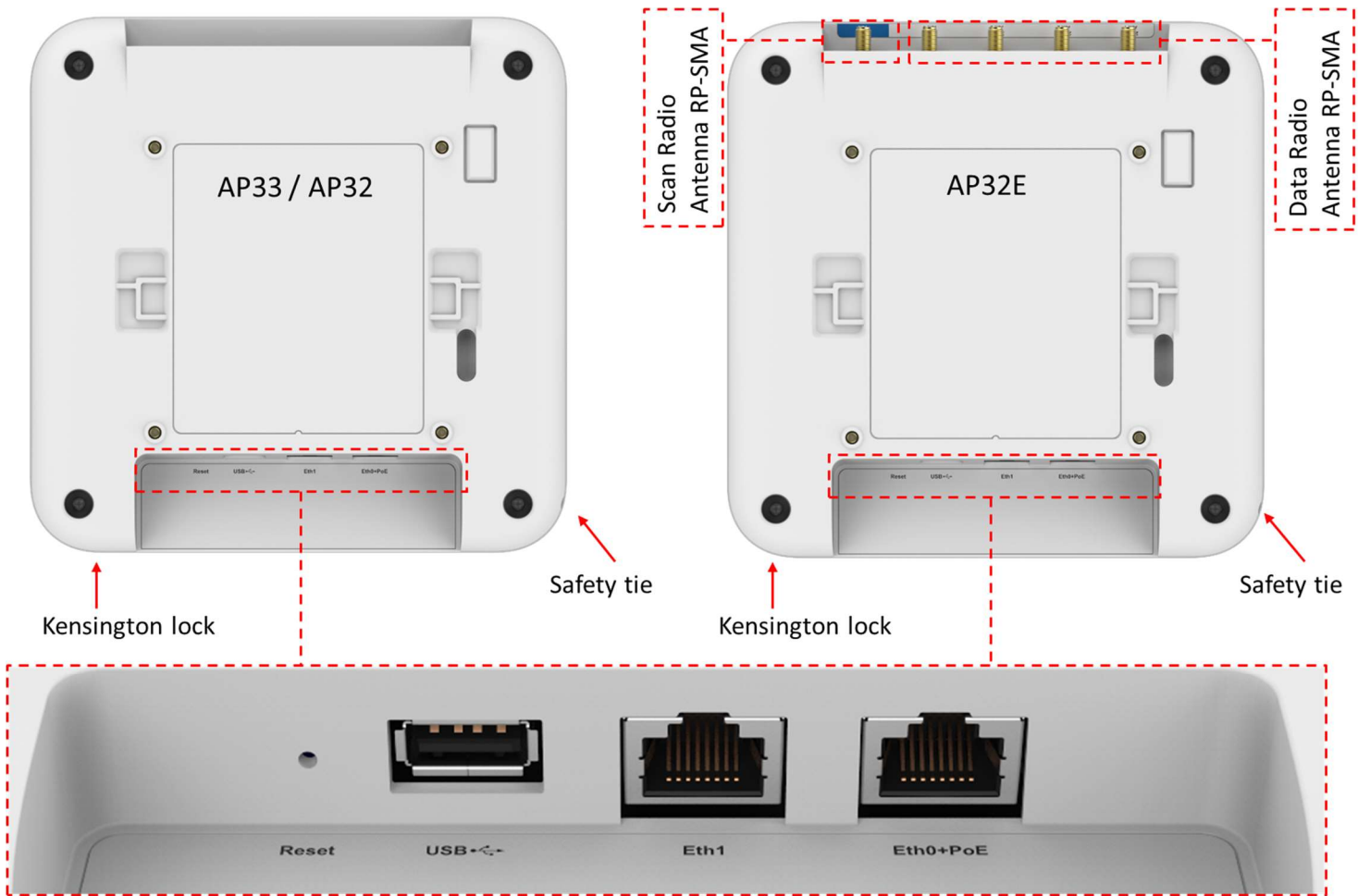


AP33 and AP32 Hardware Installation Guide

Overview

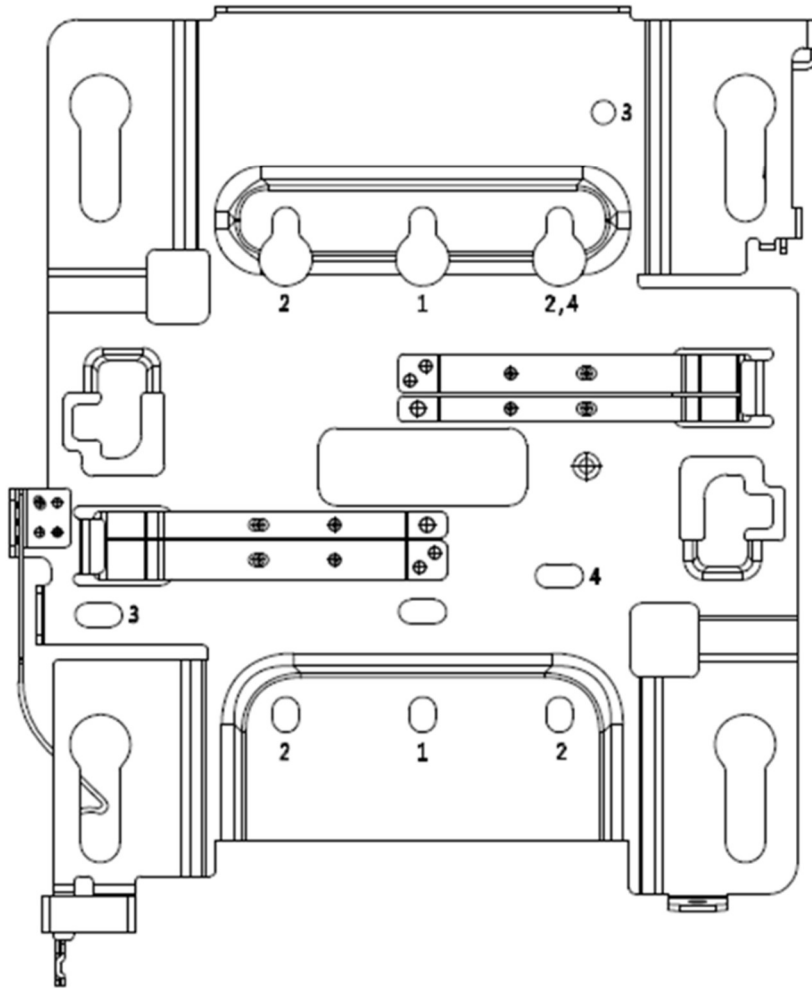
The Mist AP33 and AP32 contains three IEEE 802.11ax radios that deliver up to 4x4 MIMO with four spatial streams when operating in multi-user (MU) or single-user (SU) mode.

I/O ports



Reset	Reset to the factory default settings
USB	USB2.0 support interface
Eth1	10/100/1000BASE-T RJ45 interface
Eth0+PoE	100/1000/2500BASE-T RJ45 interface that supports 802.3at PoE PD

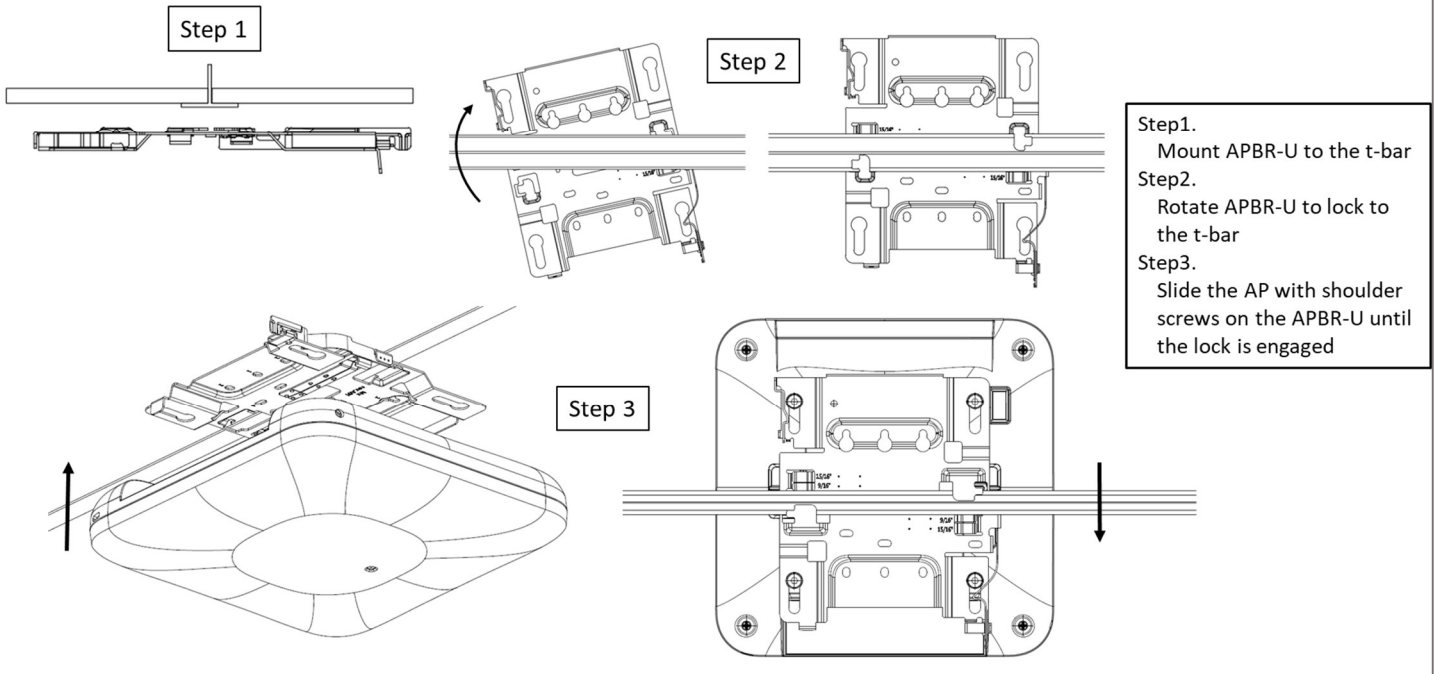
APBR-U Mounting box options



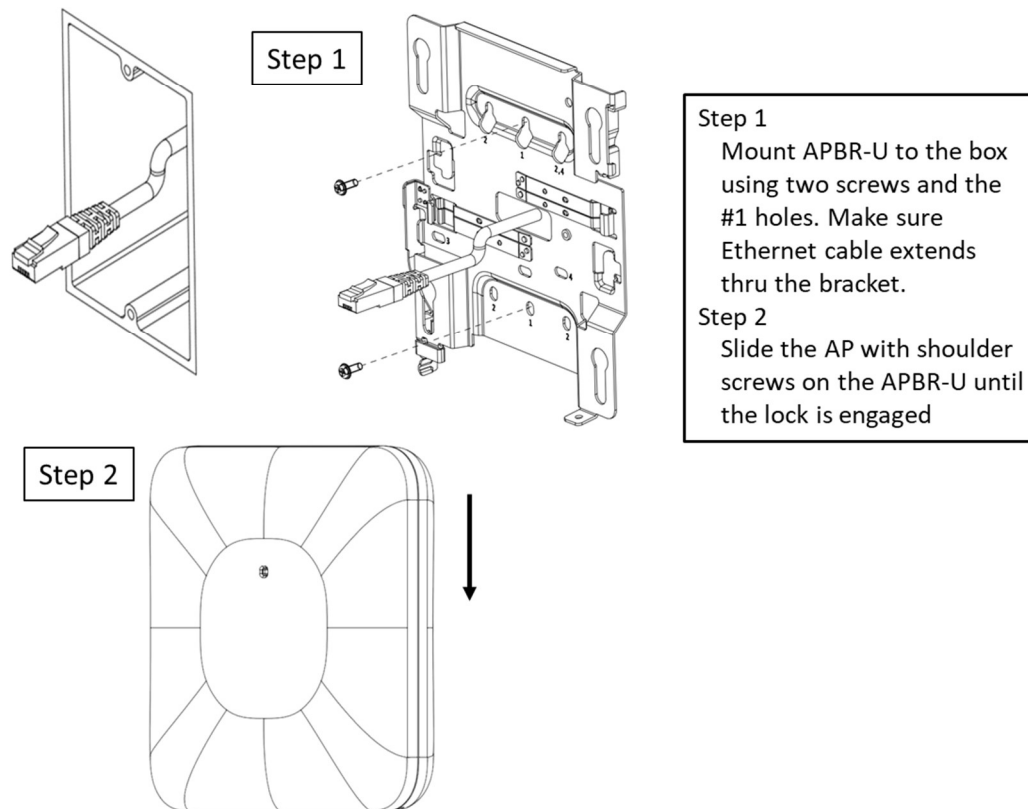
Holes	Mounting options
1	US Single gang, 4 inch round, 3.5 inch round
2	US Double gang, Wall/ceiling mount
3	US 4 inch square
4	EU junction box

In a wall mount installation, please use screws that have a 1/4in. (6.3mm) diameter head with a length at least 2 in. (50.8mm).

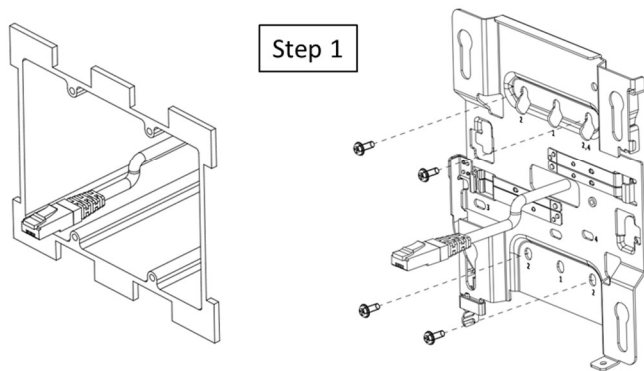
Mounting to a 9/16 inch or 15/16 inch T-bar



US single gang, 3.5 or 4 inch round junction box

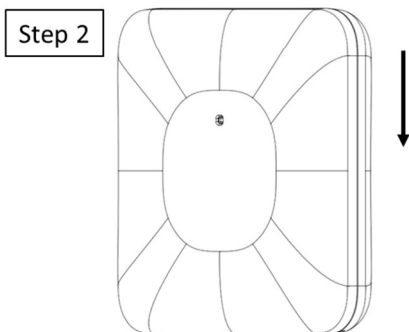


US double gang junction box

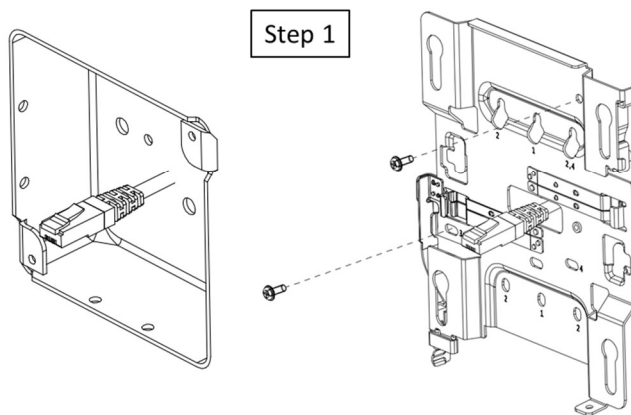


Step 1
Mount APBR-U to the box using four screws and the #2 holes. Make sure Ethernet cable extends thru the bracket.

Step 2
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

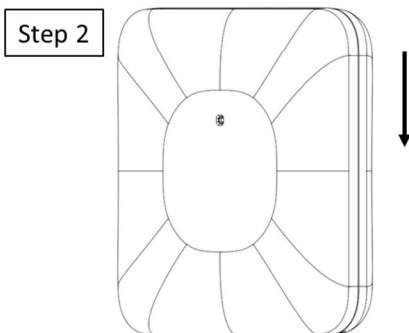


US 4 inch square junction box

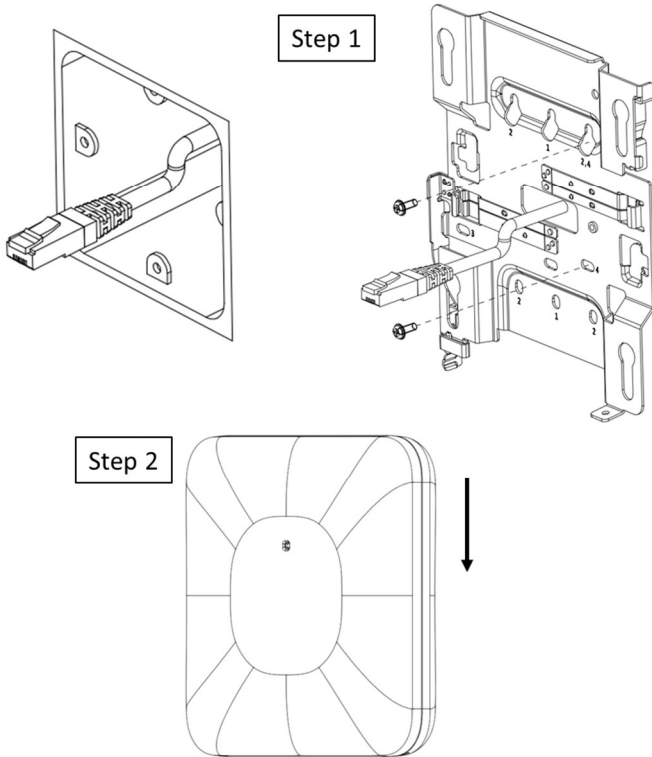


Step 1
Mount APBR-U to the box using two screws and the #3 holes. Make sure Ethernet cable extends thru the bracket.

Step 2
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

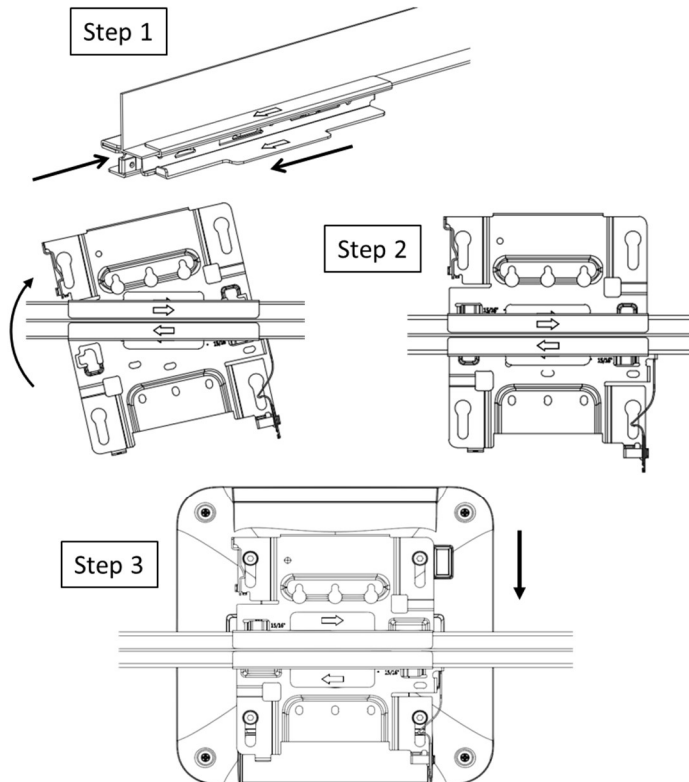


EU junction box



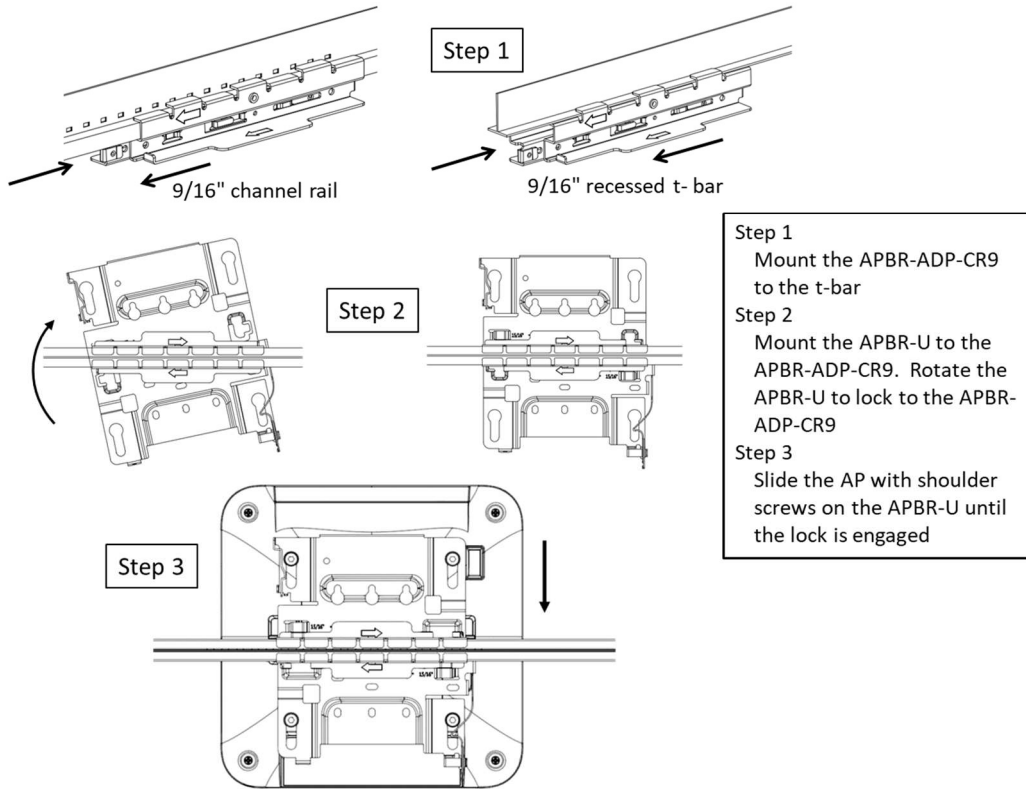
- Step 1**
Mount APBR-U to the box using two screws and the #4 holes. Make sure Ethernet cable extends thru the bracket.
- Step 2**
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

Recessed 15/16 inch T-bar

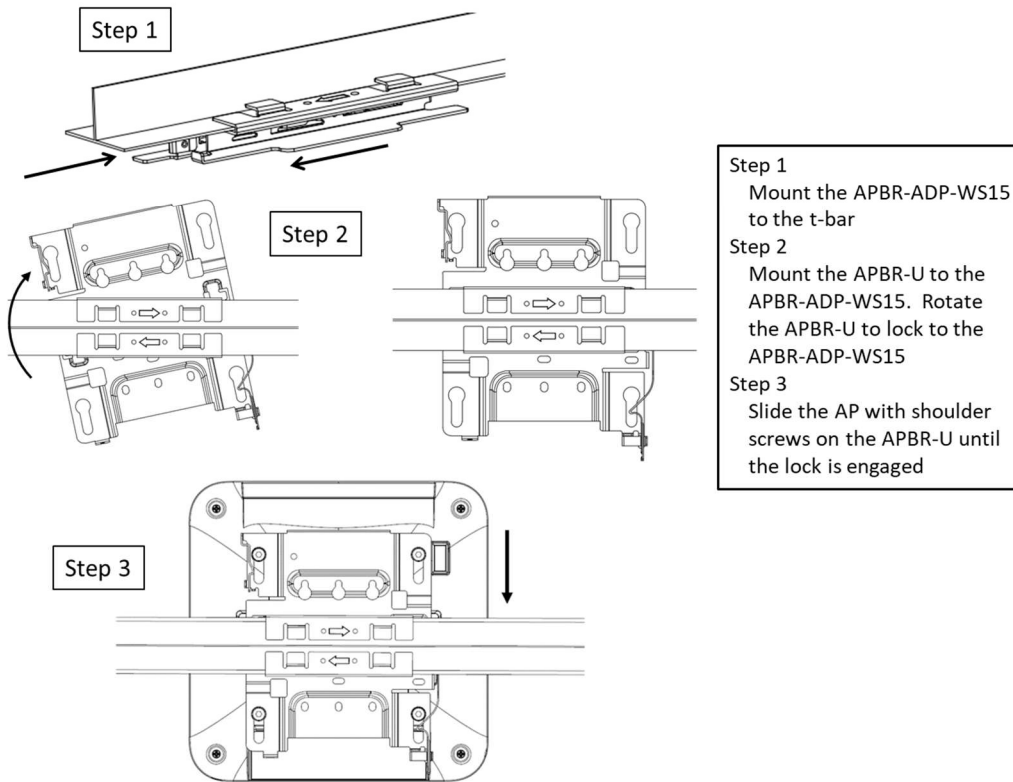


- Step 1**
Mount the APBR-ADP-RT15 to the t-bar
- Step 2**
Mount the APBR-U to the APBR-ADP-RT15. Rotate the APBR-U to lock to the APBR-ADP-RT15
- Step 3**
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

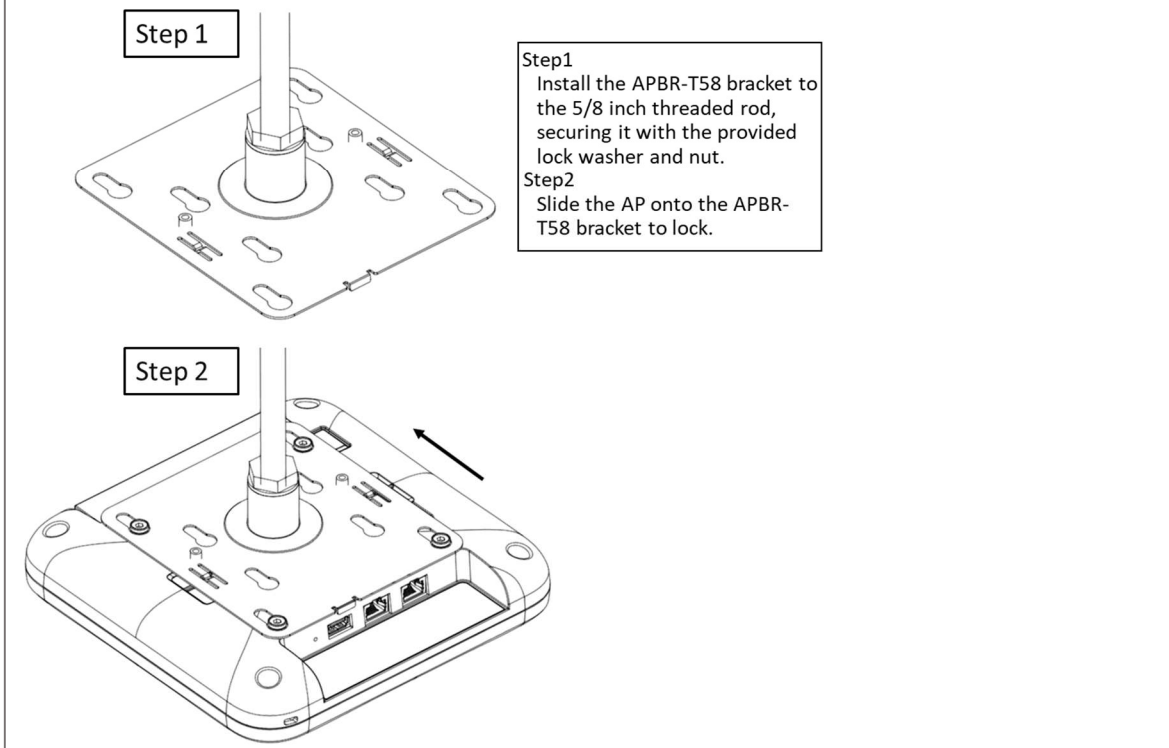
Recessed 9/16 inch T-bar or channel rail



1.5 inch T-bar

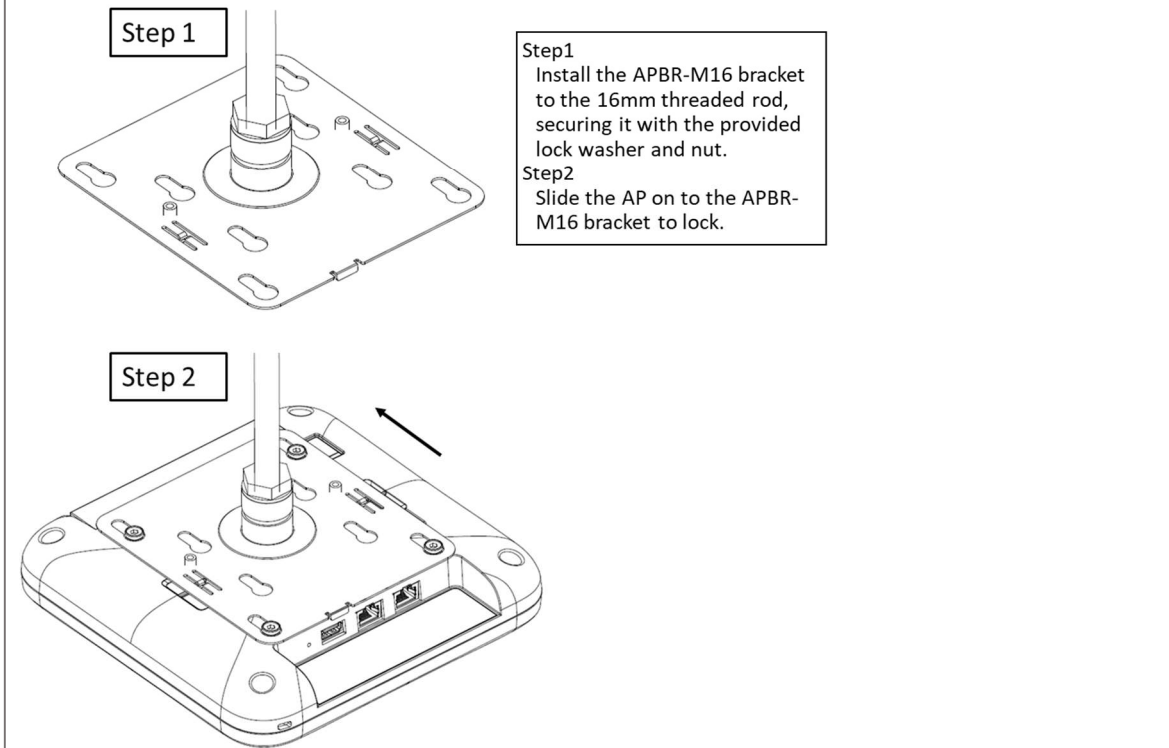


Mounting to a 5/8 inch threaded rod



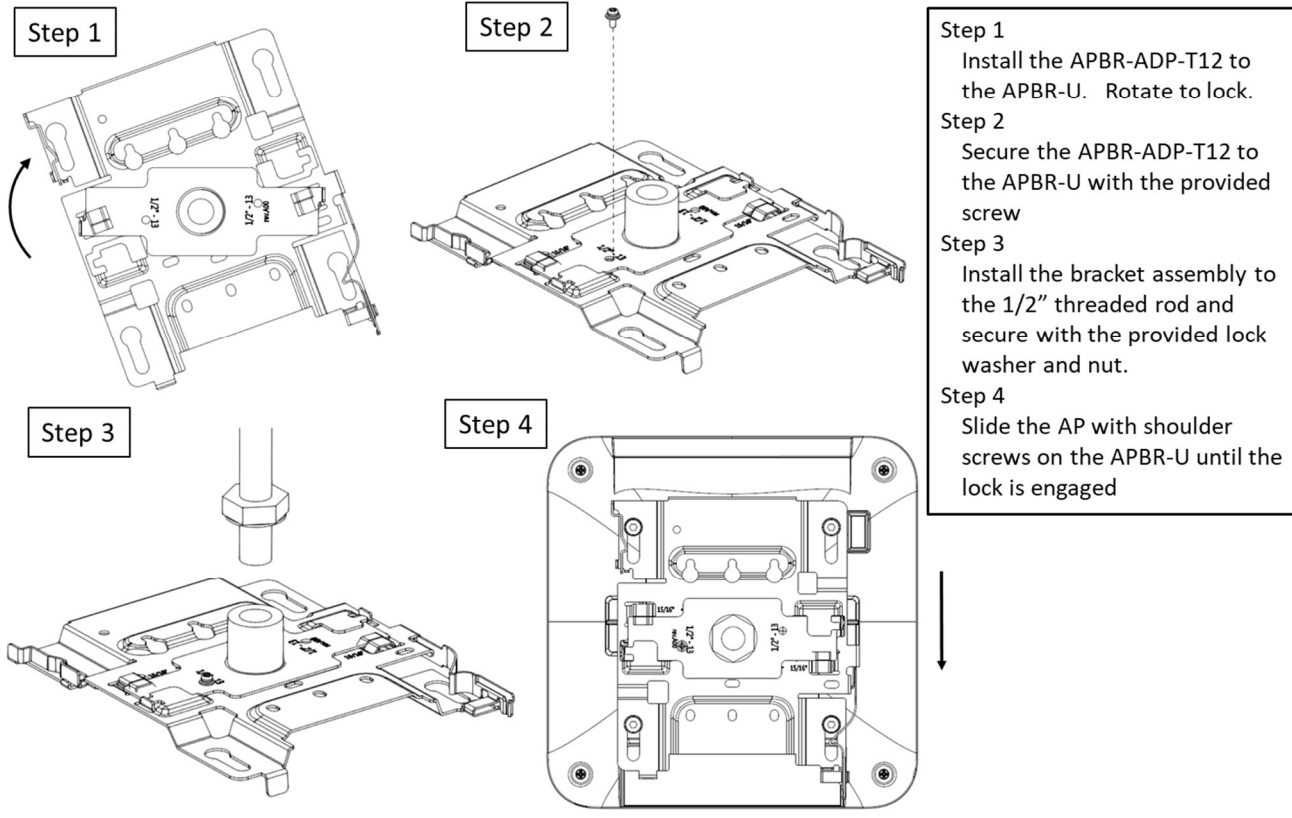
The bracket attaches to a rod that is 5/8"-11.

Mounting to a 16mm threaded rod



The bracket attaches to a rod that is M16-2.

1/2" threaded rod adapter



Technical Specifications:

Feature	Description
Power options	802.3at/802.3af PoE
Dimensions	202mm x 202mm x 44mm (7.95in x 7.95in x 1.73in)
Weight	AP33: 0.98 kg (2.16 lbs) AP32: 0.83 kg (1.83 lbs) AP32E: 0.81 kg (1.78 lbs)
Operating temperature	AP33: -5° to 40° C AP32: -5° to 40° C AP32E: -5° to 40° C
Operating humidity	10% to 90% maximum relative humidity, non-condensing
Operating altitude	3,048m (10,000 ft)
I/O	1 - 100/1000/2500BASE-T auto-sensing RJ-45 with PoE 1 - 10/100/1000BASE-T auto-sensing RJ-45 1 - USB2.0
RF	5GHz - 4x4:4SS 802.11ax MU-MIMO & SU-MIMO 2.4GHz - 2x2:2SS 802.11ax MU-MIMO & SU-MIMO 2.4GHz / 5GHz scanning radio AP33 - 2.4GHz BLE with Dynamic Antenna Array AP32/AP32E - 2.4GHz BLE with Omni Antenna
Maximum PHY rate	Total maximum PHY rate - 2974 Mbps 5GHz - 2400 Mbps 2.4GHz - 574Mbps
Indicators	Multi-color status LED
Compliance standards	CAN/CSA-C22.2 No. 62368-1-14 UL 2043 FCC Part 15.247, 15.407, 15.107, and 15.109 RSS-247 ICES-003 (Canada)

Suitable for use in environmental air space in accordance with Section 300-22(C) of the National Electrical Code, and Sections 2-128, 12-010(3), and 12-100 of the Canadian Electrical Code, Part 1, CSA C22.1.

Warning: The AP must be mounted only horizontally if you mount it into a plenum space.

Warranty Information

The AP33 or AP32 family of Access Points comes with a limited lifetime warranty.

Ordering Information:

Access Points

AP33-US	802.11ax WiFi and BLE Array AP - Internal Antenna for the US Regulatory domain
AP33-WW	802.11ax WiFi and BLE Array AP - Internal Antenna for the WW Regulatory domain
AP32-US	802.11ax WiFi and BLE AP - Internal Antenna for the US Regulatory domain
AP32-WW	802.11ax WiFi and BLE AP - Internal Antenna for the WW Regulatory domain
AP32E-US	802.11ax WiFi and BLE AP - External Antenna for the US Regulatory domain
AP32E-WW	802.11ax WiFi and BLE AP - External Antenna for the WW Regulatory domain

Mounting brackets

APBR-U	Universal AP Bracket for T-Rail and Drywall mounting for Indoor Access Points
APBR-T58	5/8-inch threaded rod bracket
APBR-M16	16mm threaded rod bracket
APBR-ADP-CR9	Adapter for channel rail and recessed 9/16" t-rail
APBR-ADP-RT15	Adapter for recessed 15/16" t-rail
APBR-ADP-WS15	Adapter for recessed 1.5" t-rail
APBR-ADP-T12	Adapter for 1/2-inch threaded rod

Regulatory Compliance Information:

This product and all interconnected equipment must be installed indoors within the same building, including the associated LAN connections as defined by the 802.3at Standard.

Professional installation instructions

- Installation personnel – This product is designed for a specific application and needs to be installed by qualified personnel who have RF and related rule knowledge. The general user shall not attempt to install or change the settings.
- Installation location – The product shall be installed at a location where the radiating antenna can be kept 44cm(FCC) or 48cm(IC) from nearby personnel in normal operating conditions to meet the regulatory RF exposure requirement.
- External antenna – Use only an antenna which has been approved by Juniper. The non-approved antenna(s) may produce unwanted spurious emissions or excessive RF transmitting power which could violate the FCC limits.
- Installation procedure – Please refer to top section of this installation guide for detailed instructions.
- Warning – Please carefully select the installation position and make sure that the final output power does not exceed the limit set in the relevant rules. The violation of the rule could lead to a federal penalty.

Instructions d'installation professionnelles

- Personnel d'installation - Ce produit est conçu pour une application spécifique et doit être installé par du personnel qualifié ayant des connaissances en RF et en règles associées. L'utilisateur général ne doit pas tenter d'installer ou de modifier les paramètres.
- Emplacement d'installation - Le produit doit être installé à un endroit où l'antenne rayonnante peut être maintenue à 44 cm (FCC) ou 48 cm (IC) du personnel à proximité dans des conditions de fonctionnement normales pour répondre aux exigences réglementaires d'exposition aux RF.
- Antenne externe - Utilisez uniquement une antenne approuvée par Juniper. Les antennes non approuvées peuvent produire des émissions parasites indésirables ou une puissance de transmission RF excessive qui pourraient enfreindre les limites de la FCC.
- Procédure d'installation - Veuillez vous référer à la section supérieure de ce guide d'installation pour des instructions détaillées.
- Avertissement - Veuillez sélectionner soigneusement la position d'installation et assurez-vous que la puissance de sortie finale ne dépasse pas la limite définie dans les règles pertinentes. La violation de la règle pourrait entraîner une sanction fédérale.

If you need further assistance with purchasing the power source, please contact Juniper Networks, Inc.

FCC Requirement for Operation in the United States of America:

FCC Guideline for Human Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 44 cm between the radiator & your body.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada

This device complies with RSS-247 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

This radio transmitter (IC: 22068-AP33 / Model: AP32E, AP32, AP33) has been approved by ISED to operate with the antenna type listed below with maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 22068-AP33 / Model: AP32E, AP32, AP33) a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Approved antenna(s) list:

Antenna No.	Brand	Model	Antenna Net Gain (dBi)	Frequency range (GHz)	Antenna Type	Connector Type
Ext WiFi Dual Ant	Acceltex	ATS-OO-245-46-6RPSP-36	4	2.4 – 2.484	Omnidirectional	RPSMA Plug
			6	5.15 – 5.85		
Ext WiFi Dual Ant	Acceltex	ATS-OP-245-810-4RPSP-36	8	2.4 – 2.484	PATCH	RPSMA Plug
			10	5.15 – 5.85		
Int WiFi Dual Ant			5	2.4 – 2.484	Omnidirectional	N/A
			6	5.15 – 5.85		

Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 48 cm between the radiator & your body.

Déclaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 48 cm de distance entre la source de rayonnement et votre corps.

IC Caution

- (i) The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- (ii) The maximum antenna gain permitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit;
- (iii) The maximum antenna gain permitted for devices in the band 5725-5850 MHz shall be such that the equipment still complies with the e.i.r.p. limits specified for point-to-point and non-point-to-point operation as appropriate; and
- (iv) Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

- (i) les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux;
- (ii) le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5250 à 5350 MHz et de 5470 à 5725 MHz doit être conforme à la limite de la p.i.r.e;
- (iii) le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5725 à 5850 MHz) doit être conforme à la limite de la p.i.r.e. spécifiée pour l'exploitation point à point et l'exploitation non point à point, selon le cas;
- (iv) De plus, les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.