

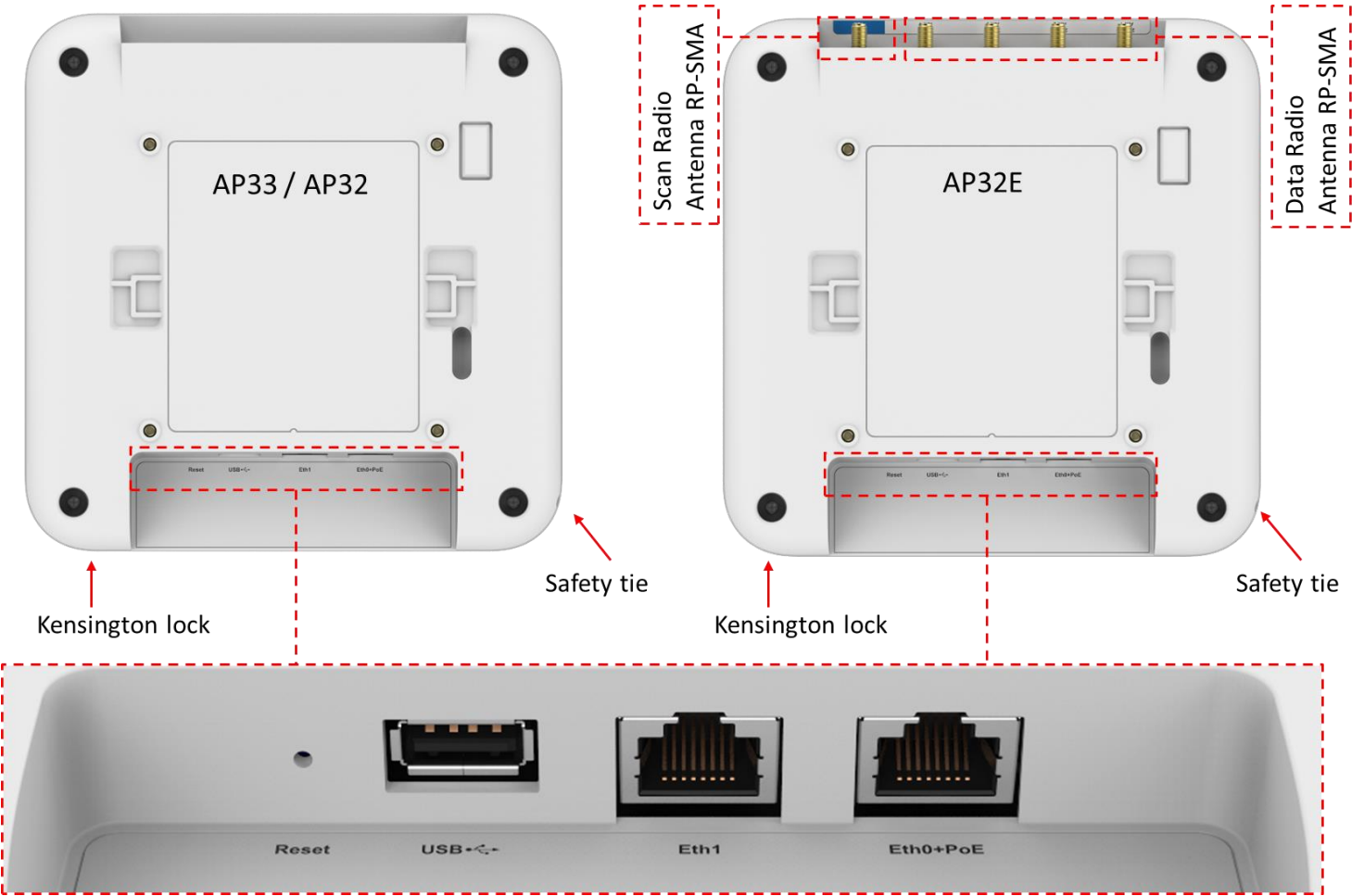


AP33 and AP32 Hardware Installation Guide

Overview

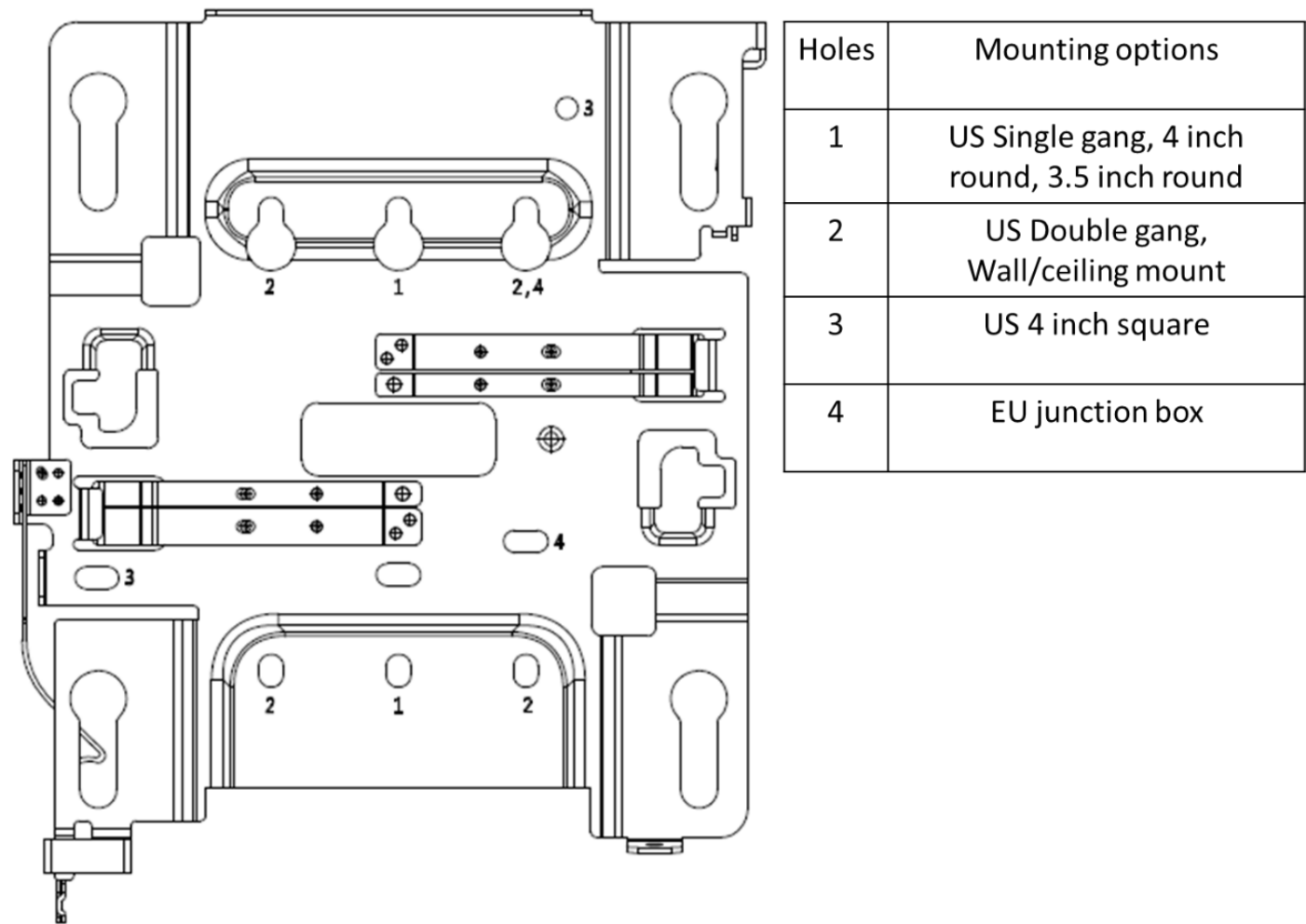
The Mist AP33 and AP32 contains three IEEE 802.11ax radios that deliver up to 4x4 MIMO with four spatial streams when operating in multi-user (MU) or single-user (SU) mode.

I/O ports



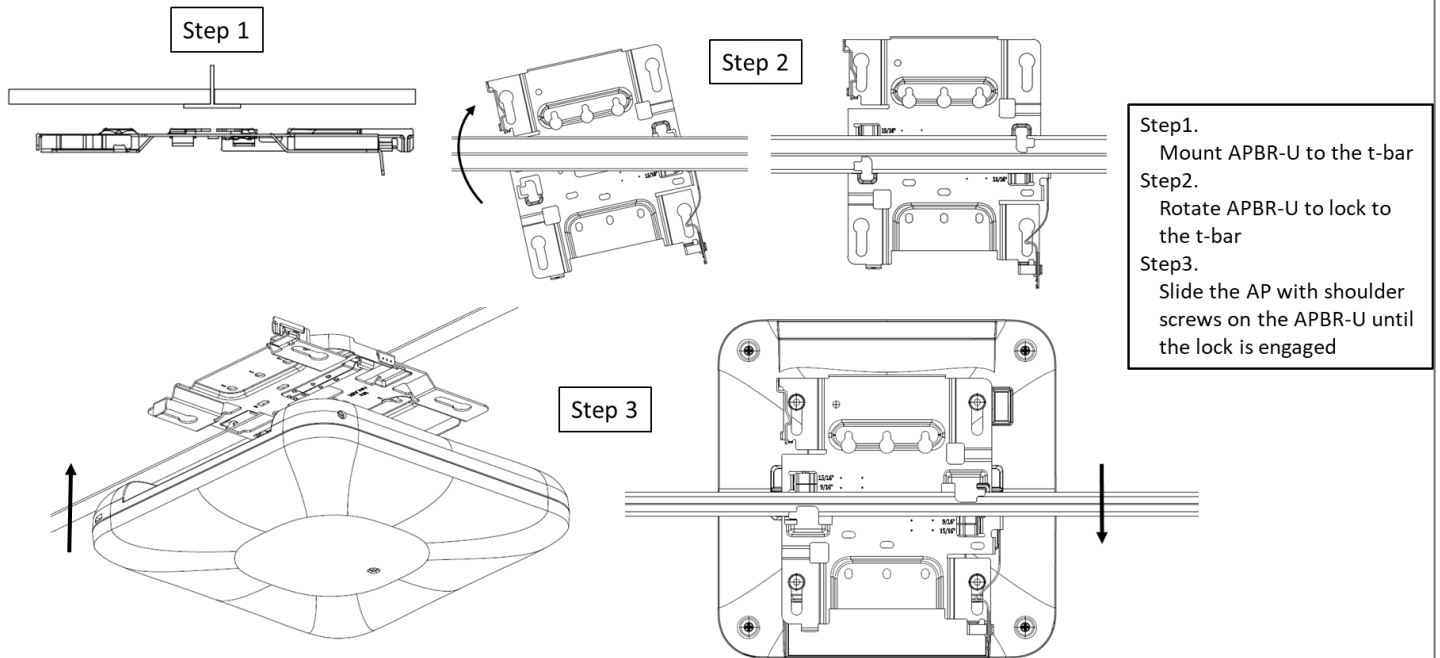
Reset	Reset to the factory default settings
USB	USB2.0 support interface
Eth1	10/100/1000BASE-T RJ45 interface
Eth0+PoE	100/1000/2500BASE-T RJ45 interface that supports 802.3at PoE PD

APBR-U Mounting box options

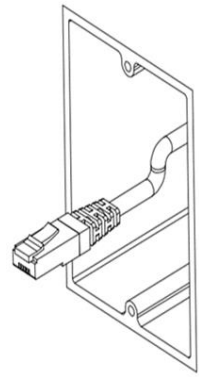


In a wall mount installation, please use screws that have a 1/4in. (6.3mm) diameter head with a length at least 2 in. (50.8mm).

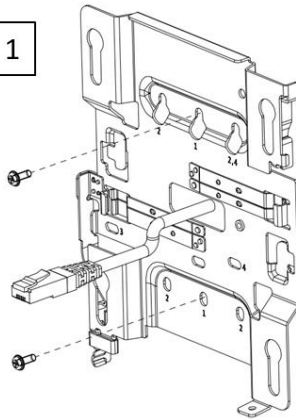
Mounting to a 9/16 inch or 15/16 inch T-bar



US single gang, 3.5 or 4 inch round junction box



Step 1



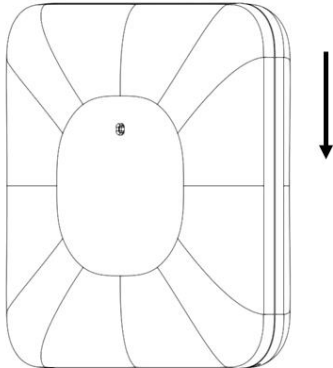
Step 1

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

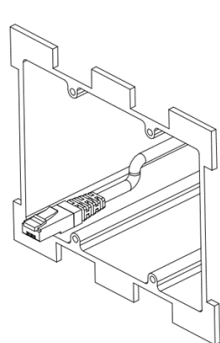
Step 2

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

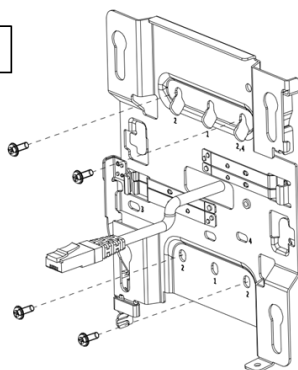
Step 2



US double gang junction box



Step 1



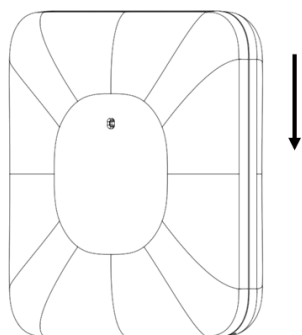
Step 1

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

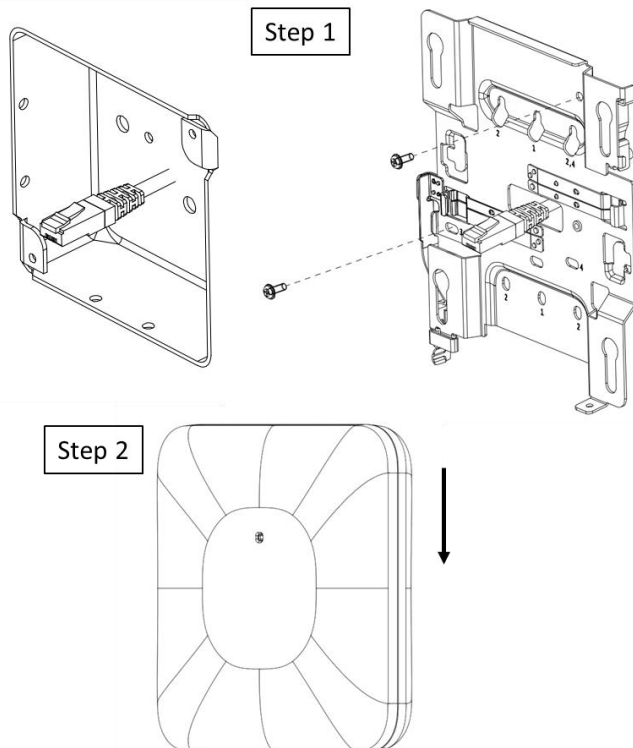
Step 2

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

Step 2



US 4 inch square junction box



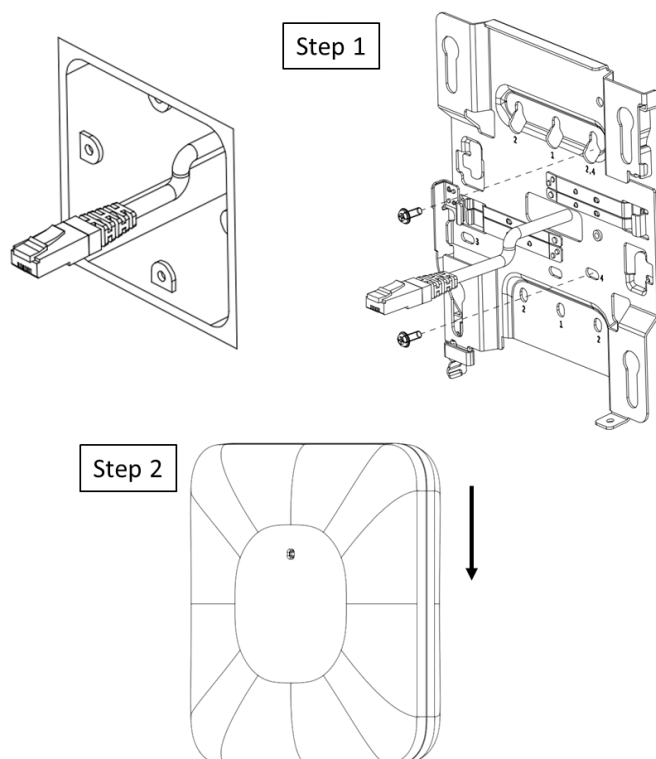
Step 1

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

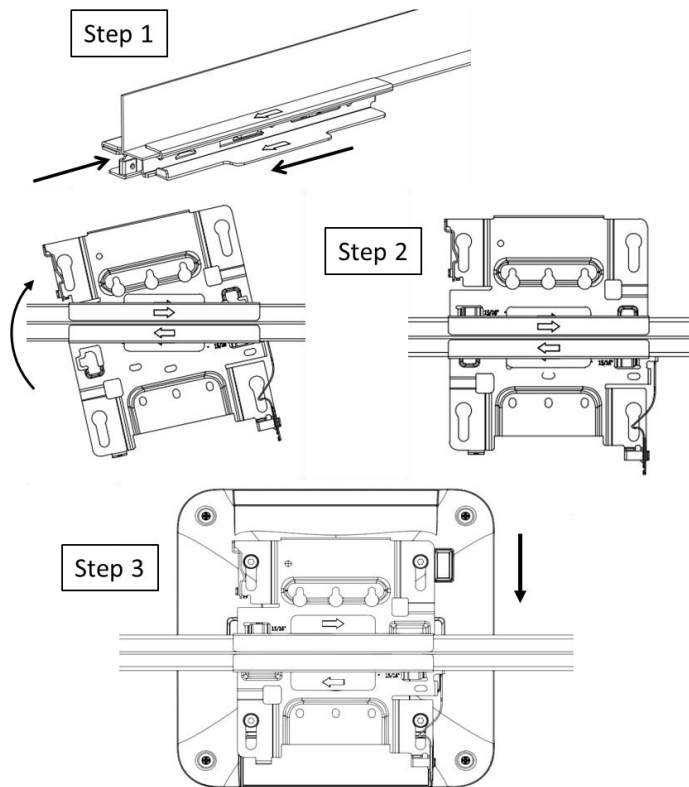
Step 1

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

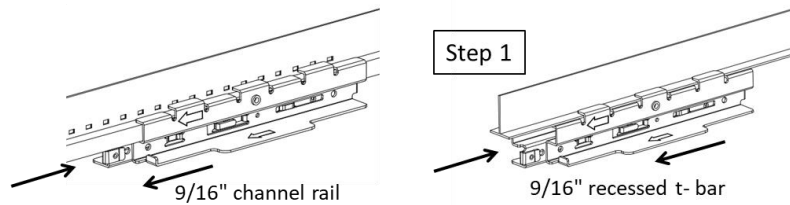
Step 2

Mount the APBR-U to the APBR-ADP-RT15. Rotate the APBR-U to lock to the APBR-ADP-RT15

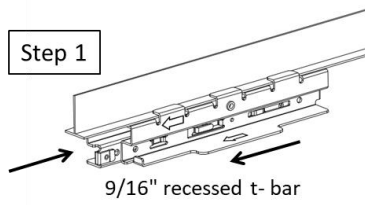
Step 3

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

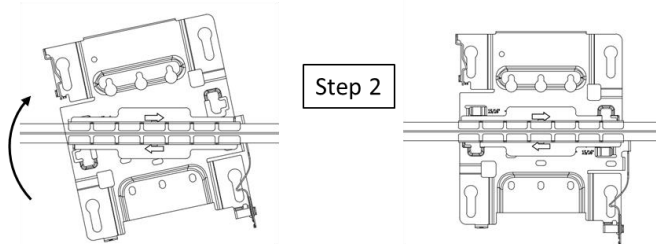
Recessed 9/16 inch T-bar or channel rail



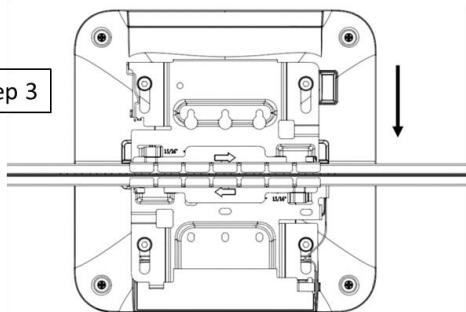
Step 1



Step 2



Step 3



Step 1

Mount the APBR-ADP-CR9 to the t-bar

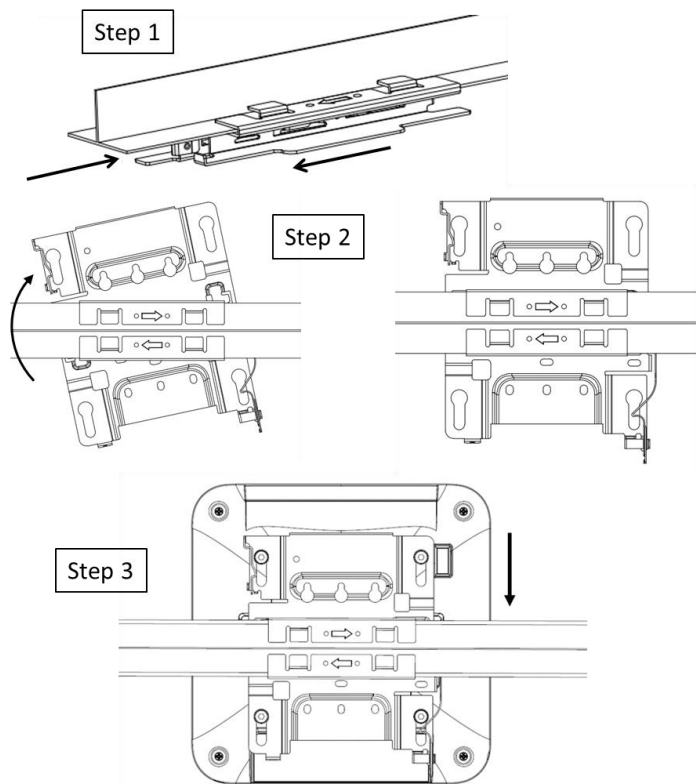
Step 2

Mount the APBR-U to the APBR-ADP-CR9. Rotate the APBR-U to lock to the APBR-ADP-CR9

Step 3

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

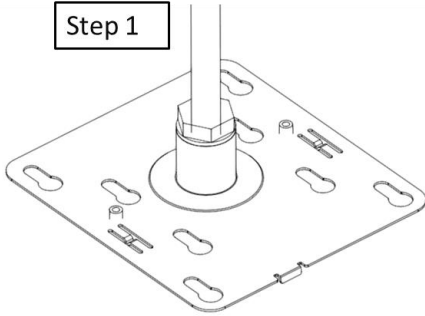
1.5 inch T-bar



- Step 1**
Mount the APBR-ADP-WS15 to the t-bar
- Step 2**
Mount the APBR-U to the APBR-ADP-WS15. Rotate the APBR-U to lock to the APBR-ADP-WS15
- Step 3**
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

Mounting to a 5/8 inch threaded rod

Step 1



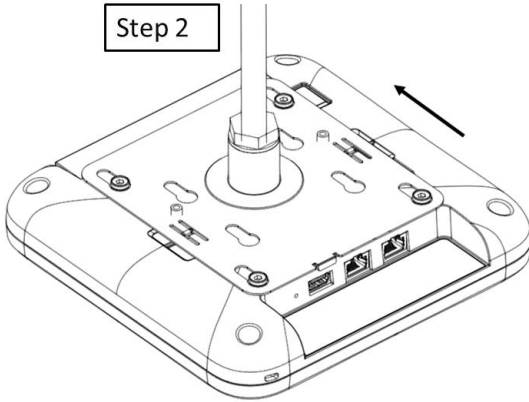
Step1

Install the APBR-T58 bracket to the 5/8 inch threaded rod, securing it with the provided lock washer and nut.

Step2

Slide the AP onto the APBR-T58 bracket to lock.

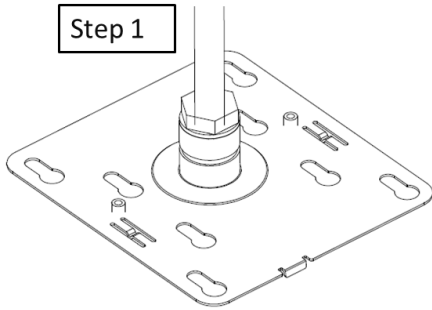
Step 2



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

Mounting to a 16mm threaded rod

Step 1



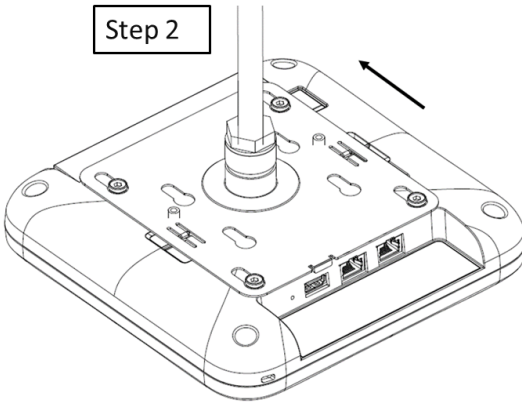
Step1

Install the APBR-M16 bracket to the 16mm threaded rod, securing it with the provided lock washer and nut.

Step2

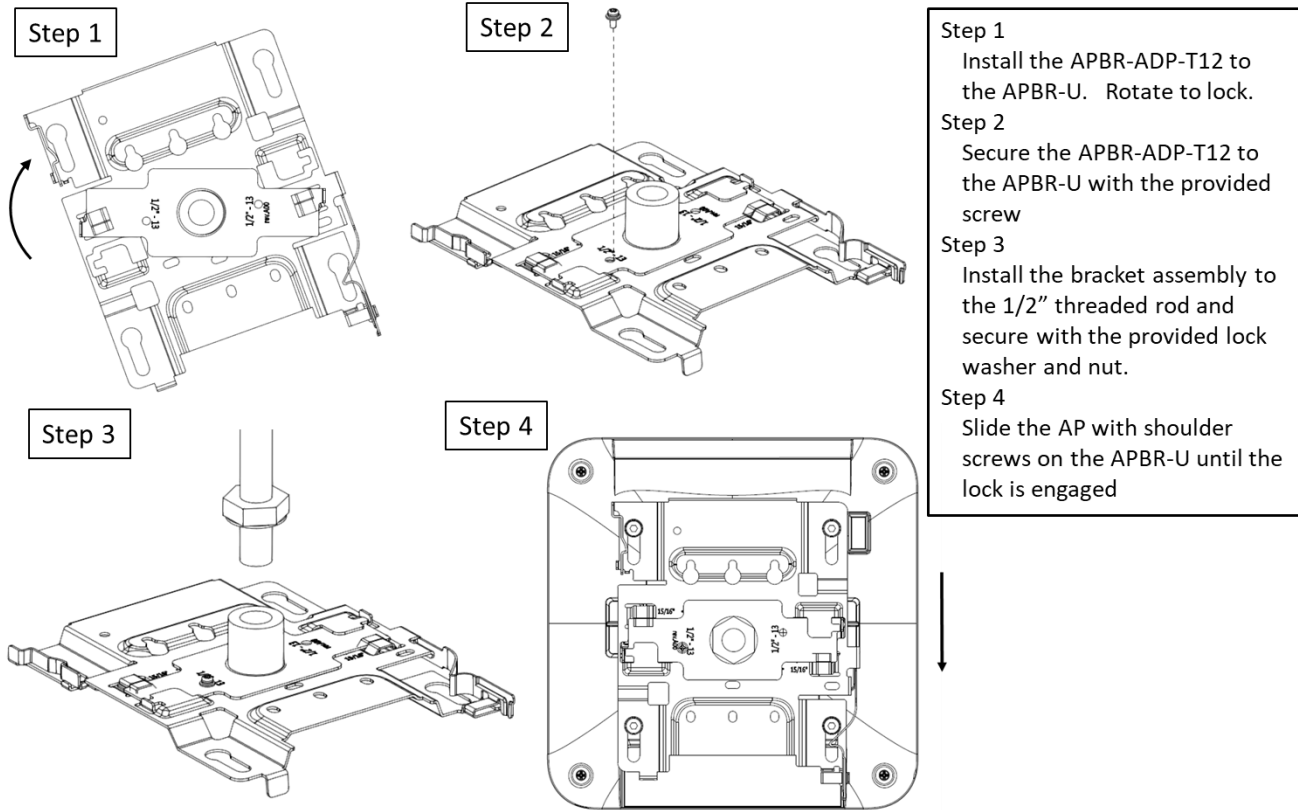
Slide the AP on to the APBR-M16 bracket to lock.

Step 2



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: 0.88 kg (1.94 lbs) AP32: 0.79 kg (1.74 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 6	2.4 – 2.484 5.15 – 5.85	Omnidirectional	RPSMA Plug
Ext WiFi Dual Ant	Acceltex	ATS-OP-245-810-4RPSP-36	8 10	2.4 – 2.484 5.15 – 5.85	Directional	RPSMA Plug
Int WiFi Dual Ant			5 6	2.4 – 2.484 5.15 – 5.85	Omnidirectional	N/A

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 5 725 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.



This device complies with the Radio Equipment Directive, 2014/53/EU, issued by the Commission of the European Community.

Hereby, Juniper Networks, Inc. declares that the radio equipment type (AP33, AP32, and AP32E) are in compliance with Directive 2014/53/EU, Radio Equipment Regulations 2017. The full text of the EU declaration of conformity is available at the following:
<https://www.mist.com/support/>

The frequency and maximum EIRP Power in EU:

Bluetooth:

Frequency range (MHz)	Maximum EIRP in EU (dBm)
2400 – 2483.5	9.98

WLAN:

Frequency range (MHz)	Maximum EIRP in EU (dBm)
2400 – 2483.5	19.99
5150 – 5250	22.93
5250 – 5350	22.90
5500 – 5700	29.99
5745 – 5825	13.96

The minimum distance between the user or bystander and the radiating structure of the transmitter is 20cm.

The product is for use by authorized professionals and in environments where the product has been assessed for safe and compliant operation. The installer is responsible for ensuring that the equipment meets all local safety requirements for the installed location. For products not certified for use in Hazardous Locations, the equipment is not suitable for use in explosive environments, in the presence of flammable liquids, near explosives, or in areas where blasting is occurring.

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

	AT	BE	BG	CZ	DK	EE	FR	DE	IS
	IE	IT	EL	ES	CY	LV	LI	LT	LU
	HU	MT	NL	NO	PL	PT	RO	SI	SK
	TR	FI	SE	CH	HR	UK(NI)			

Taiwan

警語內容

低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Morocco

AGREE PAR L'ANRT MAROC

AP33 -

Numéro d'agrément: MR 26153 ANRT 2020

Date d'agrément: 28/10/2020

AP32 -

Numéro d'agrément: MR 26151 ANRT 2020

Date d'agrément: 28/10/2020

AP32E -

Numéro d'agrément: MR 26152 ANRT 2020

Date d'agrément: 28/10/2020

South Korea

해당 무선설비는 운용 중 전파혼신 가능성이 있음

Belarus



Oman

OMAN - TRA
TRA / TA-R / 10397 / 20
D172249

Thailand

- เครื่องโทรคมนาคมและอุปกรณ์นี้มีความสอดคล้องตามมาตรฐานหรือข้อกำหนดทางเทคนิคของ กสทช.



Mexico

- La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada
- Este equipo ha sido diseñado para operar con las antenas que enseguida se enlistan y para una ganancia máxima de antena de [8dBi por 2.4GHz y 10dBi por 5GHz]. El uso con este equipo de antenas no incluidas en esta lista o que tengan una ganancia mayor que [8dBi por 2.4GHz y 10dBi por 5GHz] quedan prohibidas. La impedancia requerida de la antena es de [50] ohms

Ukraine



Для експлуатації в Україні необхідно отримати дозвіл на експлуатацію у порядку, затвердженому рішенням НКРЗІ від 01.11.2012 № 559, зареєстрованому в Міністерстві юстиції України 03.01.2013 за № 57/22589

Brazil

- Este equipamento não tem direito a proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.
- Este produto não é apropriado para uso em ambientes domésticos, pois poderá causar interferências eletromagnéticas que obrigam o usuário a tomar medidas necessárias para minimizar estas interferências