

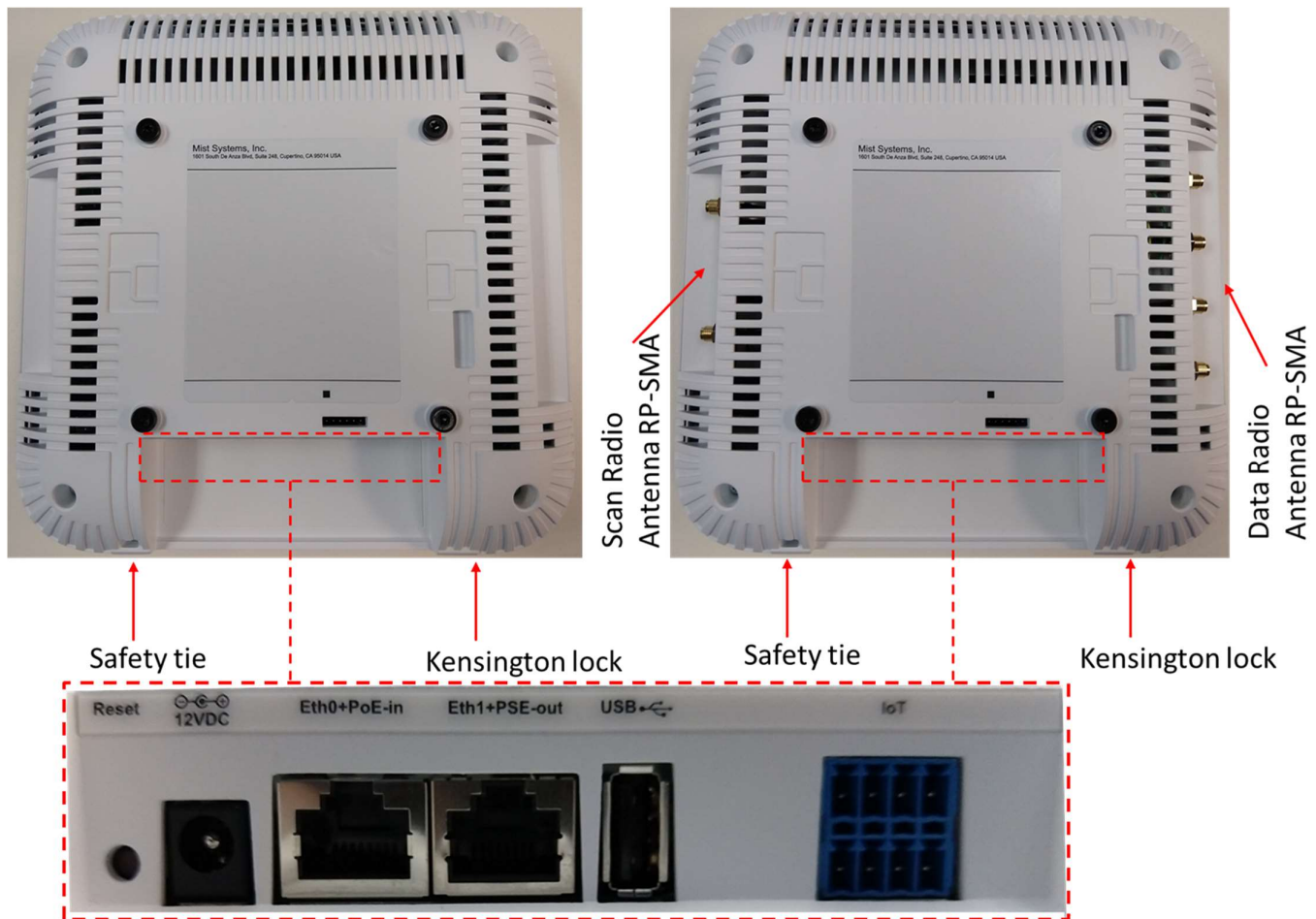


## AP43 Hardware Installation Guide

### Overview

The Mist AP43 contains three IEEE 802.11ax radios that deliver 4x4 MIMO with four spatial streams when operating in multi-user (MU) or single-user (SU) mode.

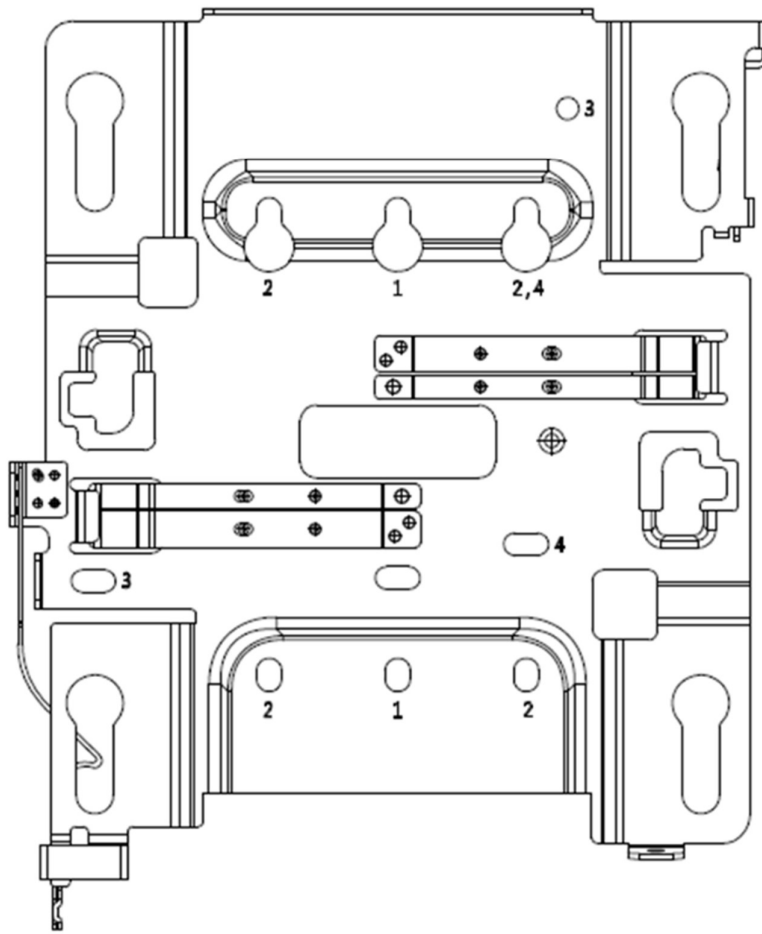
## I/O ports



|              |                                                                             |
|--------------|-----------------------------------------------------------------------------|
| Reset        | Reset to the factory default settings                                       |
| 12VDC        | Support for the 12VDC power supply recommended by Mist                      |
| Eth0+PoE-in  | 100/1000/2500BASE-T RJ45 interface that supports 802.3at/802.3bt PoE PD     |
| Eth1+PSE-out | 10/100/1000BASE-T RJ45 interface + 802.3af PSE (if PoE-in is 802.3bt)       |
| USB          | USB2.0 support interface                                                    |
| IoT          | 8-pin interface for digital input, digital output, analog input, and ground |

## AP43 Mounting

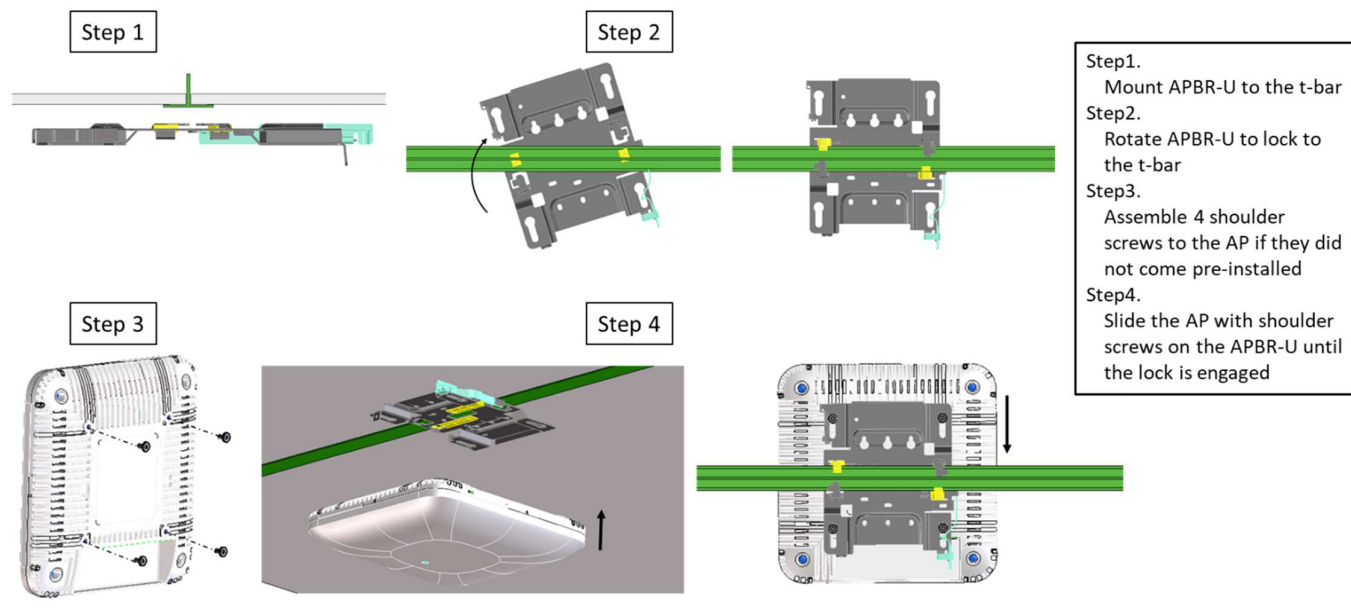
### APBR-U Mounting box options



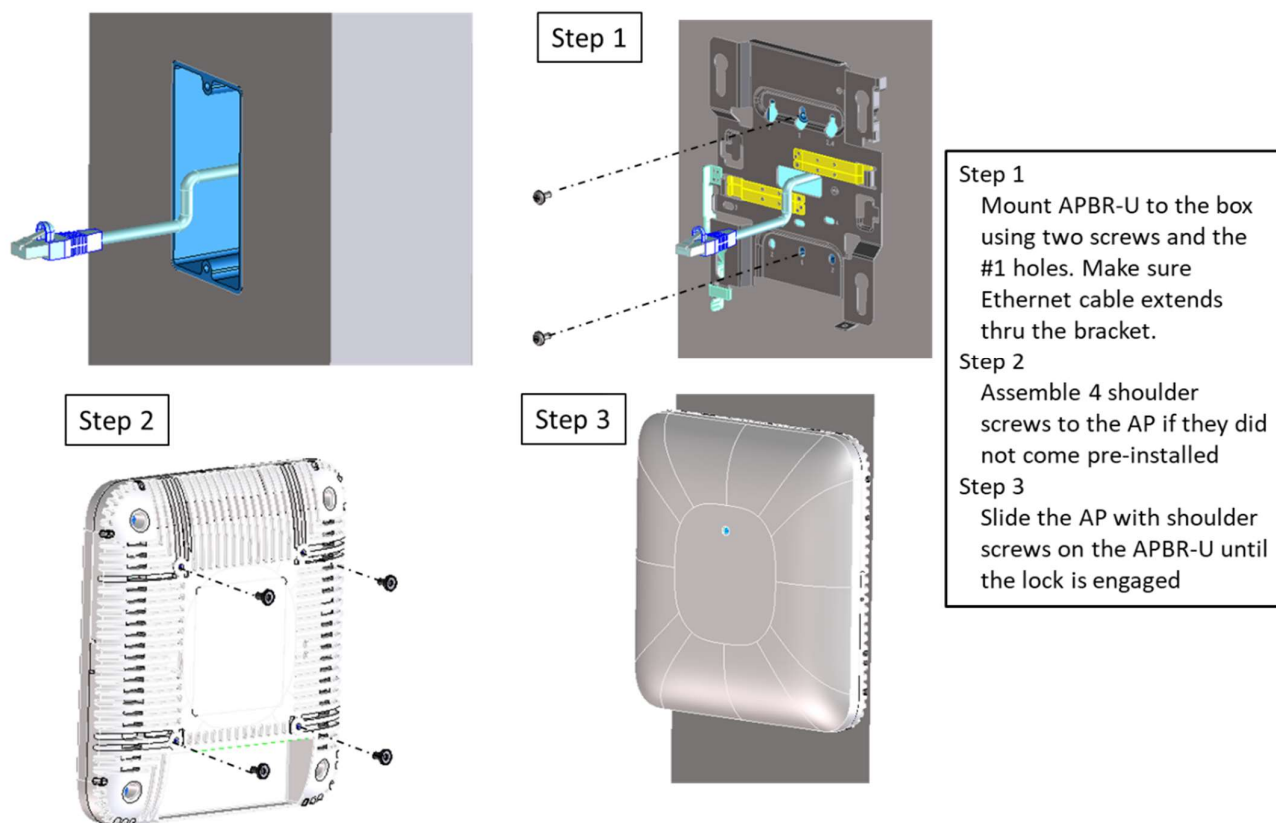
| Holes | Mounting options                             |
|-------|----------------------------------------------|
| 1     | US Single gang, 4 inch round, 3.5 inch round |
| 2     | US Double gang, Wall/ceiling mount           |
| 3     | US 4 inch square                             |
| 4     | EU junction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

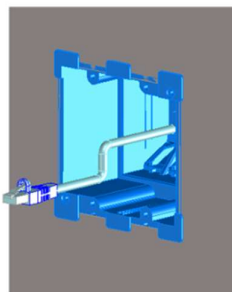
## Mounting to a 9/16 inch or 15/16 inch T-bar



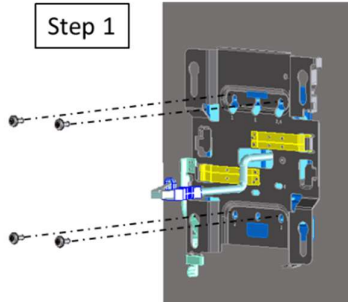
## US single gang, 3.5 or 4 inch round junction box



## US double gang junction box



Step 1



Step 1

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

Step 2

Assemble 4 shoulder screws to the AP if they did not come pre-installed

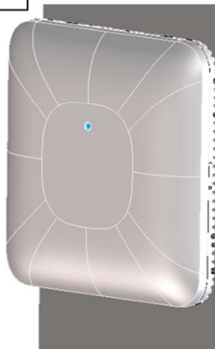
Step 3

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

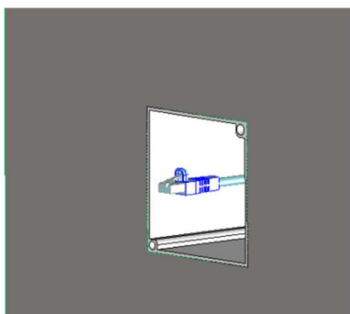
Step 2



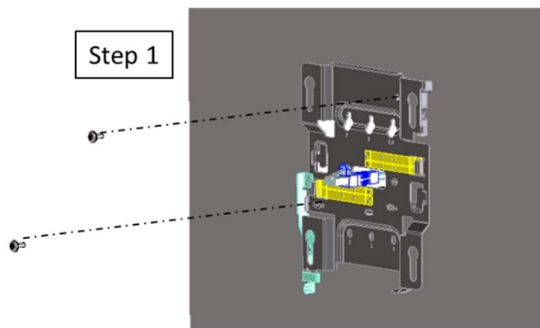
Step 3



## US 4 inch square junction box



Step 1



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

Assemble 4 shoulder screws to the AP if they did not come pre-installed

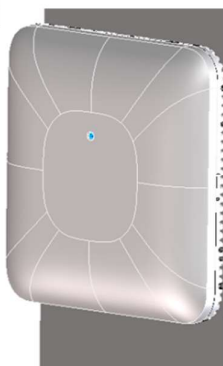
Step 3

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

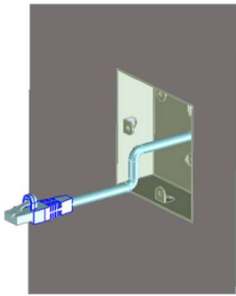
Step 2



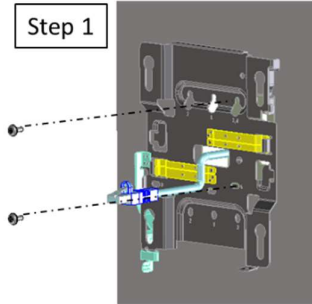
Step 3



## 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.

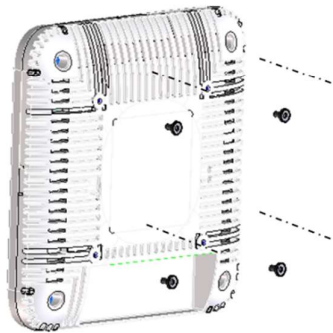
Step 2

Assemble 4 shoulder screws to the AP if they did not come pre-installed

Step 3

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

Step 2

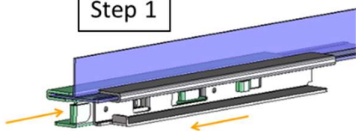


Step 3



## Recessed 15/16 inch T-bar

Step 1



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

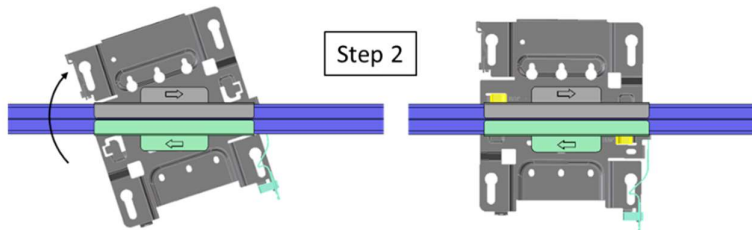
Step 3

Assemble 4 shoulder screws to the AP if they did not come pre-installed

Step 4

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

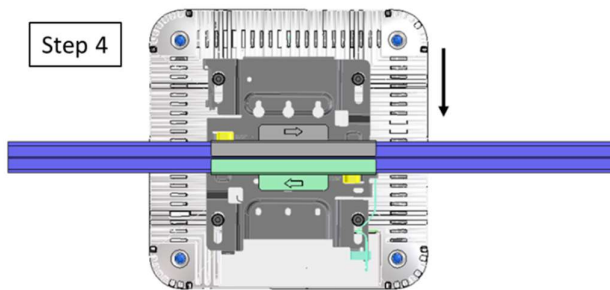
Step 2



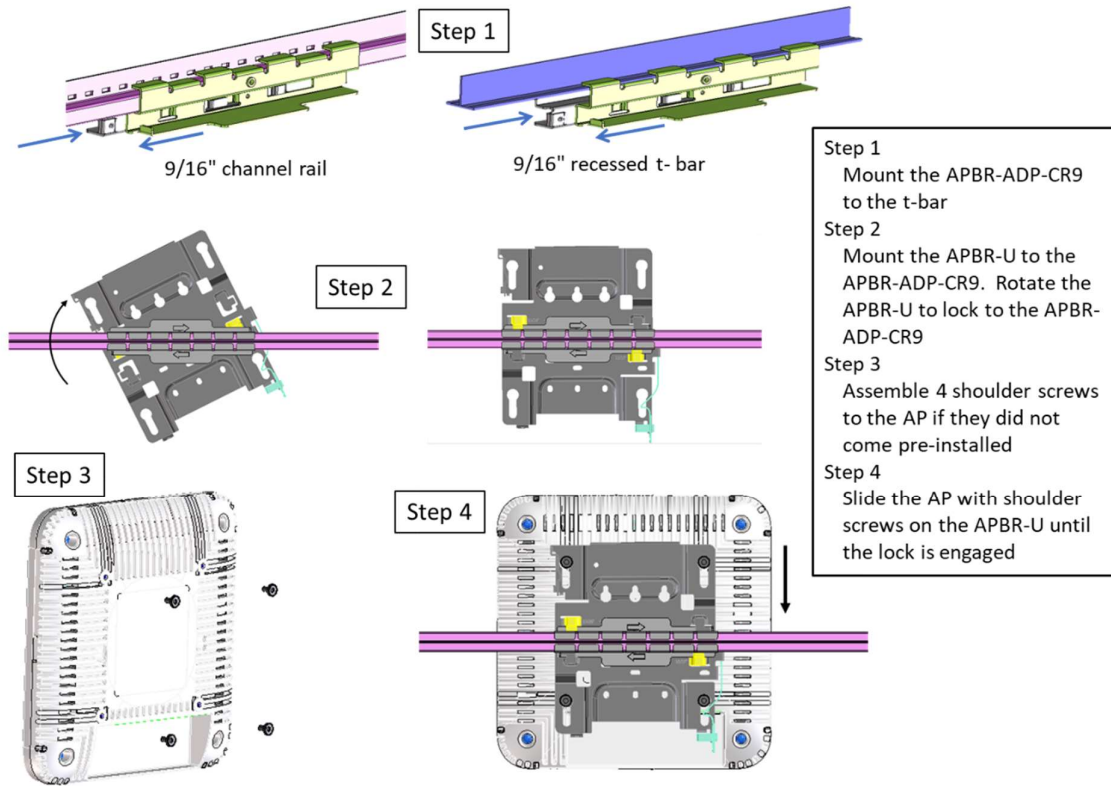
Step 3



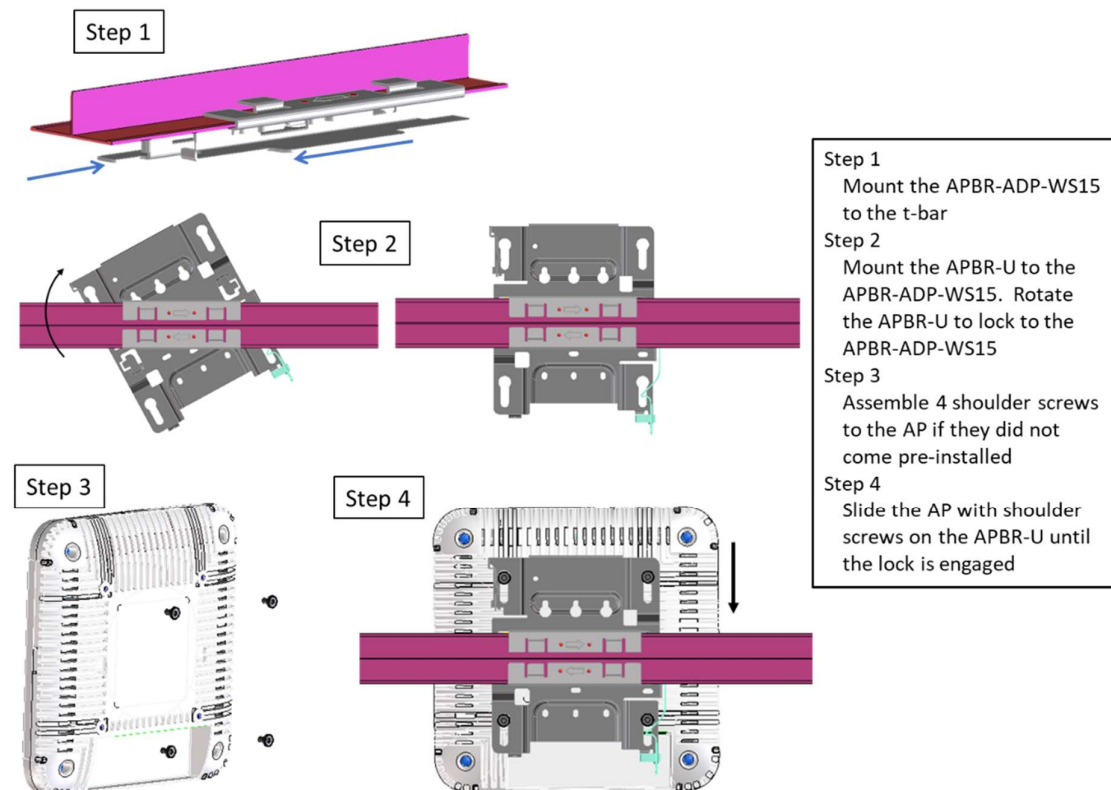
Step 4



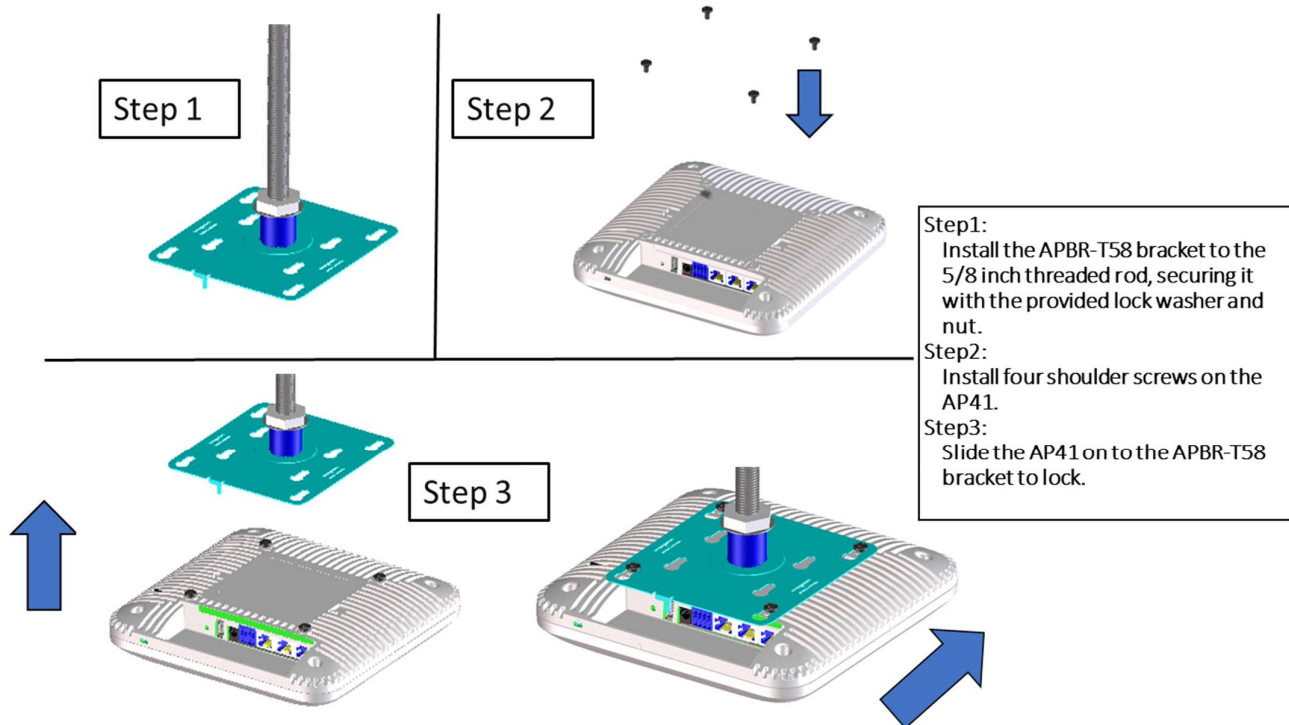
## Recessed 9/16 inch T-bar or channel rail



## 1.5 inch T-bar

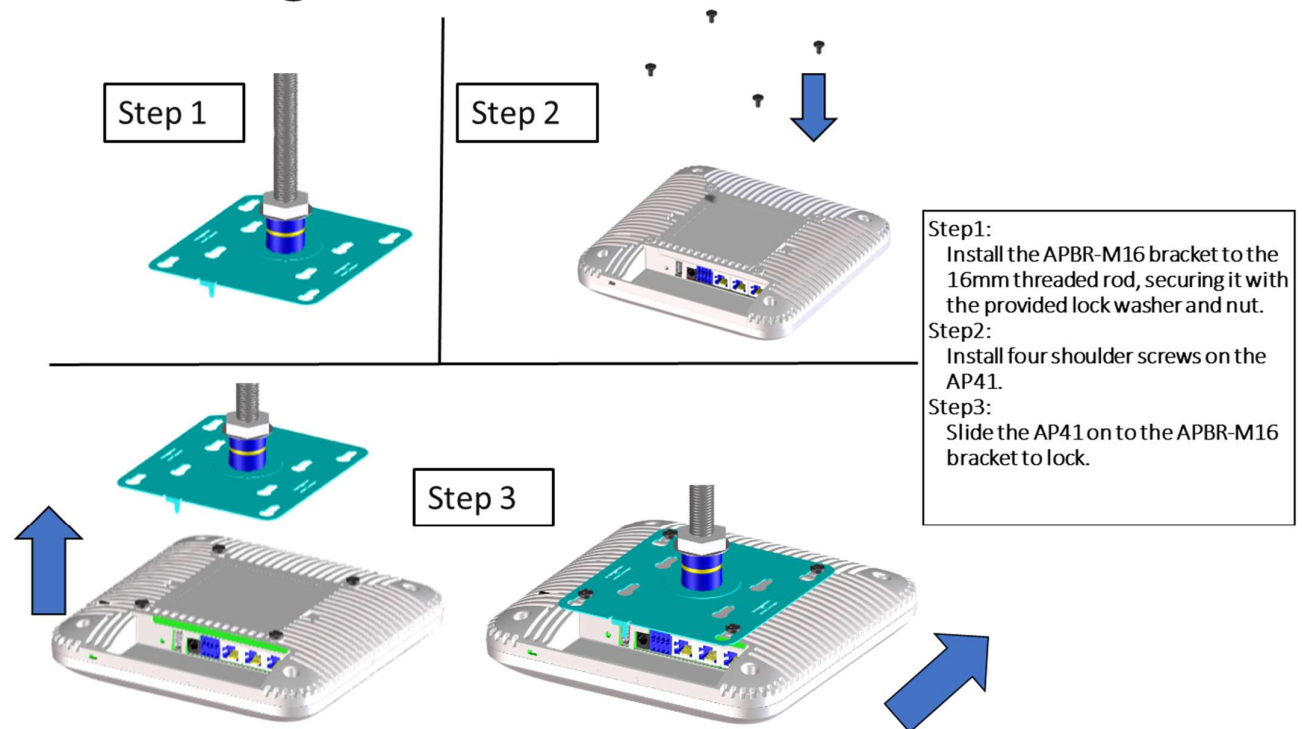


## Mounting to a 5/8 inch threaded rod



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.

## Technical Specifications:

| Feature                   | Description                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power options             | 802.3at/802.3bt PoE<br>12V/3A DC power supply                                                                                                                             |
| Powering adaptor          | 100-240VAC, 50-60 Hz, input<br>All regions (output): 12V/3A DC output                                                                                                     |
| Dimensions                | 222mm x 222mm x 53mm (8.74in x 8.74in x 2.09in)                                                                                                                           |
| Weight                    | AP43: 1.39 kg (3.06 lbs)<br>AP43E: 1.46 kg (3.21 lbs)                                                                                                                     |
| Operating temperature     | AP43: 0° to 40° C<br>AP43E: -20° to 50° C                                                                                                                                 |
| Operating humidity        | 10% to 90% maximum relative humidity, non-condensing                                                                                                                      |
| Operating altitude        | 3,048m (10,000 ft)                                                                                                                                                        |
| Electromagnetic emissions | FCC Part 15 Class B                                                                                                                                                       |
| I/O                       | 1 – 100/1000/2500BASE-T auto-sensing RJ-45 with PoE<br>1 – 10/100/1000BASE-T auto-sensing RJ-45<br>USB2.0<br>IoT terminal block<br>12VDC                                  |
| RF                        | 2.4GHz or 5GHz - 4x4:4SS 802.11ax MU-MIMO & SU-MIMO<br>5GHz - 4x4:4SS 802.11ax MU-MIMO & SU-MIMO<br>2.4GHz / 5GHz scanning radio<br>2.4GHz BLE with Dynamic Antenna Array |
| Maximum PHY rate          | Total maximum PHY rate – 4800 Mbps<br>5GHz – 2400 Mbps<br>2.4GHz or 5GHz – 1148 Mbps or 2400Mbps                                                                          |
| Indicators                | Multi-color status LED                                                                                                                                                    |
| Compliance standards      | UL 62368-1<br>CAN/CSA-C22.2 No. 62368-1-14<br>UL 2043<br>FCC Part 15.247, 15.407, 15.107, and 15.109<br>RSS-247<br>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.

## Warranty Information

The AP43 family of Access Points comes with a limited lifetime warranty.

### Ordering Information:

#### Access Points

|          |                                                                                  |
|----------|----------------------------------------------------------------------------------|
| AP43-US  | Premium 802.11ax WiFi and BLE AP – Internal Antenna for the US Regulatory domain |
| AP43E-US | Premium 802.11ax WiFi and BLE AP – External Antenna for the US Regulatory domain |
| AP43-WW  | Premium 802.11ax WiFi and BLE AP – Internal Antenna for the WW Regulatory domain |
| AP43E-WW | Premium 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                                              |

#### Power Supply options

|       |                                                                       |
|-------|-----------------------------------------------------------------------|
| DC-01 | 100-240VAC, 50-60 Hz, input<br>All regions (output): 12V/3A DC output |
|-------|-----------------------------------------------------------------------|

## **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.

Operations in the 5.15GHz – 5.35GHz band are restricted to indoor usage only.

If you need further assistance with purchasing the power source, please contact Mist Systems, 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 37 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.
- For operation within 5.15 ~ 5.25GHz / 5.47 ~ 5.725GHz frequency range, it is restricted to indoor environment.

## 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.

### 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 38 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 38 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.