

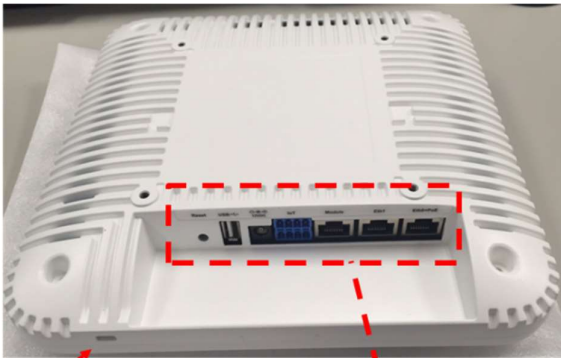


AP41 Hardware Installation Guide

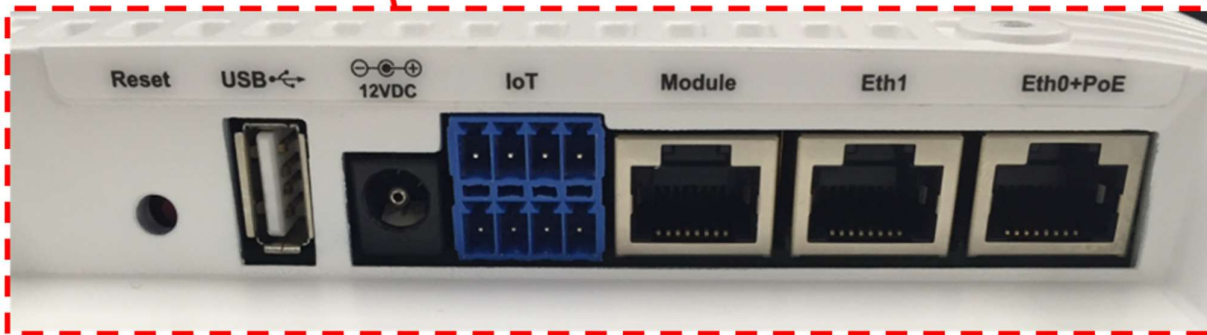
Overview

The Mist AP41 delivers 4x4 MIMO with four spatial streams when operating in multi-user (MU) or single-user (SU) mode that supports the IEEE 802.11ac Wave 2 specification.

I/O ports and Kensington lock



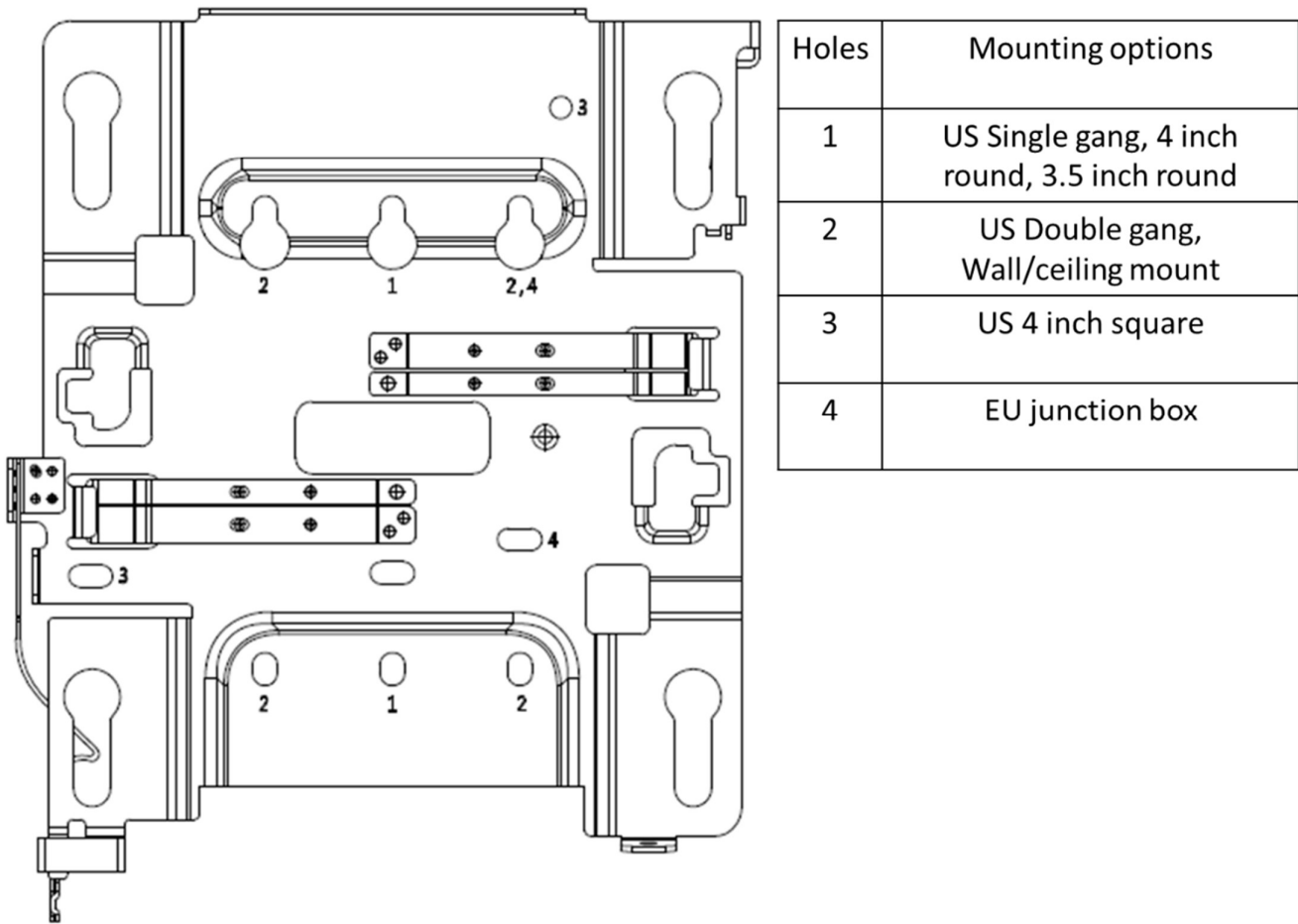
Kensington Lock



Reset	Reset to the factory default settings
USB	USB2.0 support interface
12VDC	Support for the 12VDC power supply recommended by Mist
IoT	8-pin interface for digital input, digital output, analog input, and ground
Module	10/100/1000 BaseT RJ45 interface
Eth1	10/100/1000 BaseT RJ45 interface
Eth0+PoE	10/100/1000 BaseT RJ45 interface that supports 802.3at PoE PD

AP41 Mounting

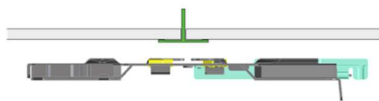
APBR-U Mounting box options



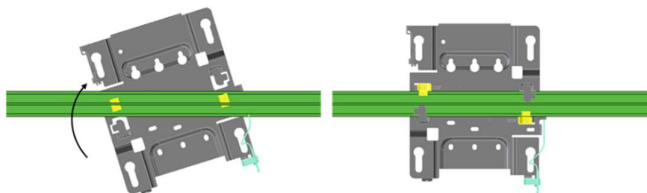
In a wall mount installation, please use screws that have a 1/4in. (6.3mm) diameter head with a length at least 2 in. (50.8mm).

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

Step 1



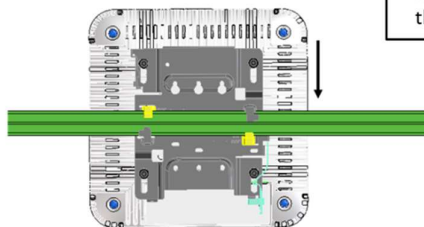
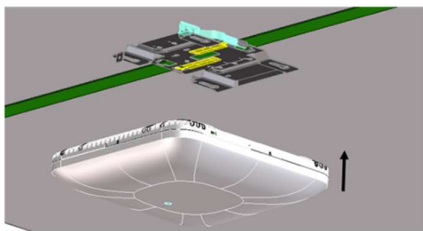
Step 2



Step 3

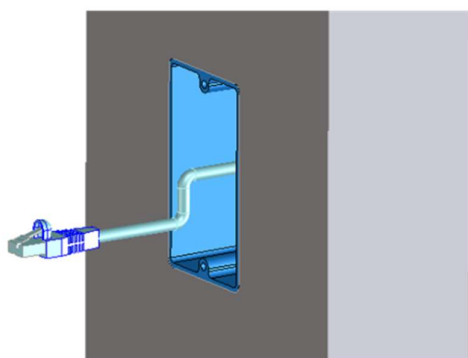


Step 4

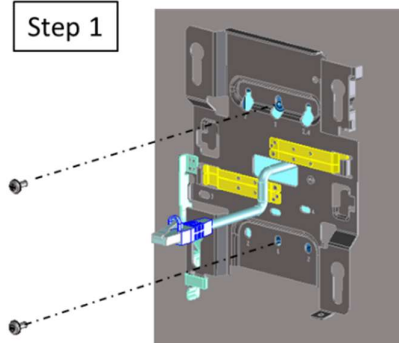


Step1.
Mount APBR-U to the t-bar
Step2.
Rotate APBR-U to lock to the t-bar
Step3.
Assemble 4 shoulder screws to the AP if they did not come pre-installed
Step4.
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

US single gang, 3.5 or 4 inch round junction box



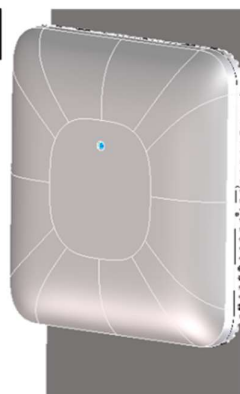
Step 1



Step 2

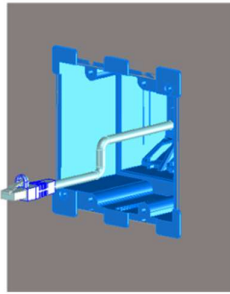


Step 3

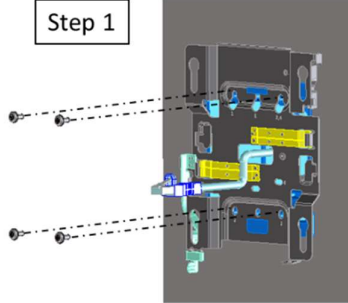


Step 1
Mount APBR-U to the box using two screws and the #1 holes. Make sure Ethernet cable extends thru the bracket.
Step 2
Assemble 4 shoulder screws to the AP if they did not come pre-installed
Step 3
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

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

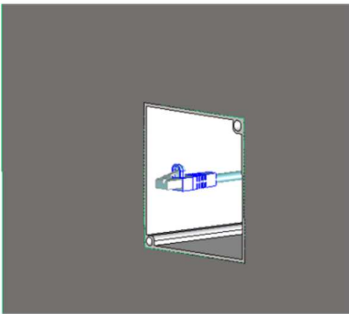
Step 2



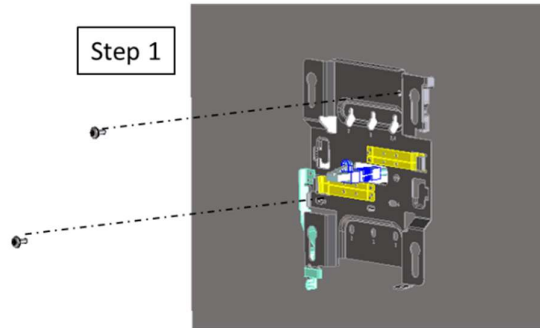
Step 3



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

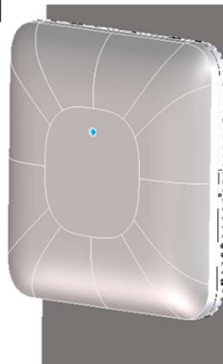
Step 3

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

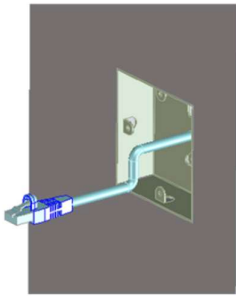
Step 2



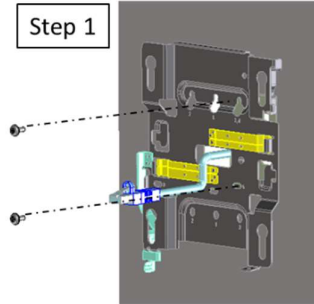
Step 3



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.

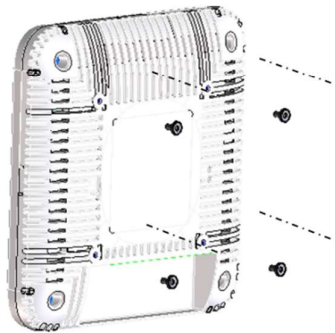
Step 2

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

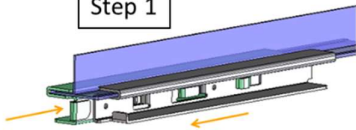


Step 3



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

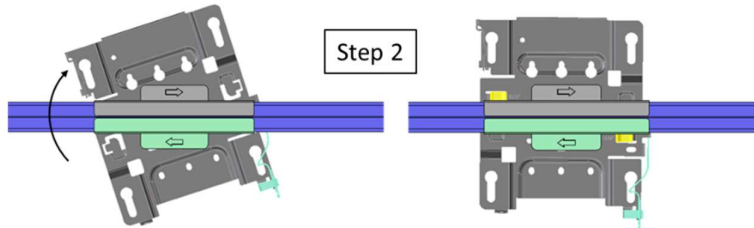
Step 3

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

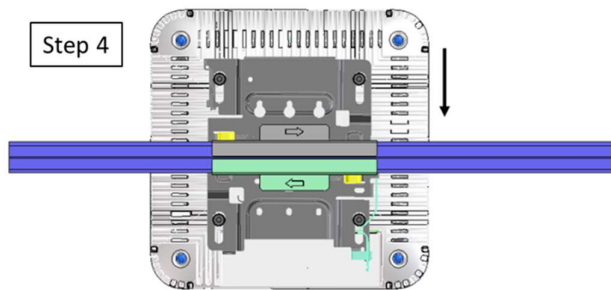
Step 2



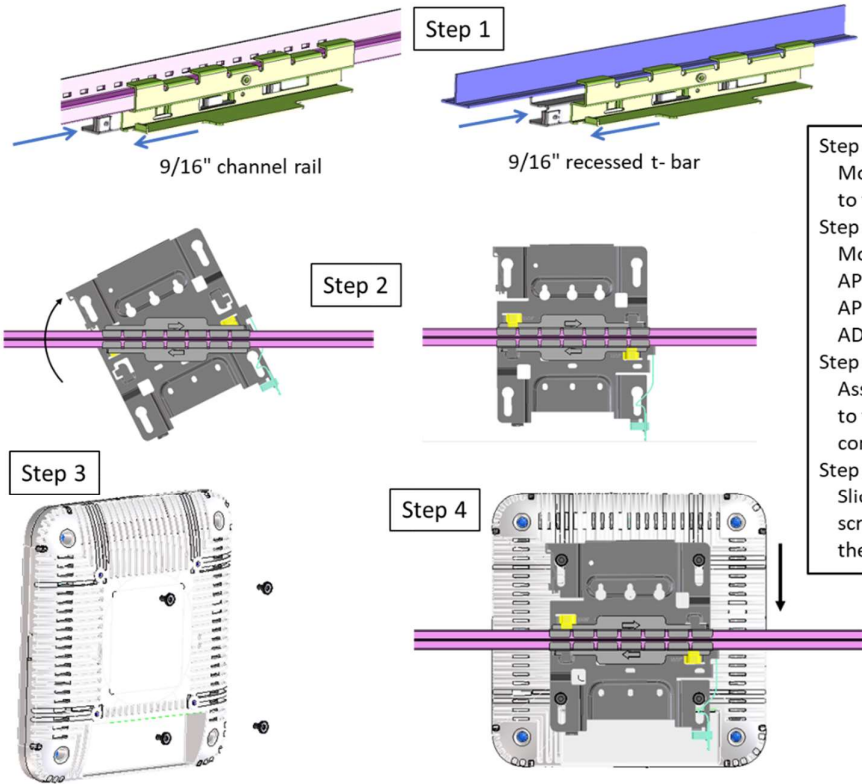
Step 3



Step 4

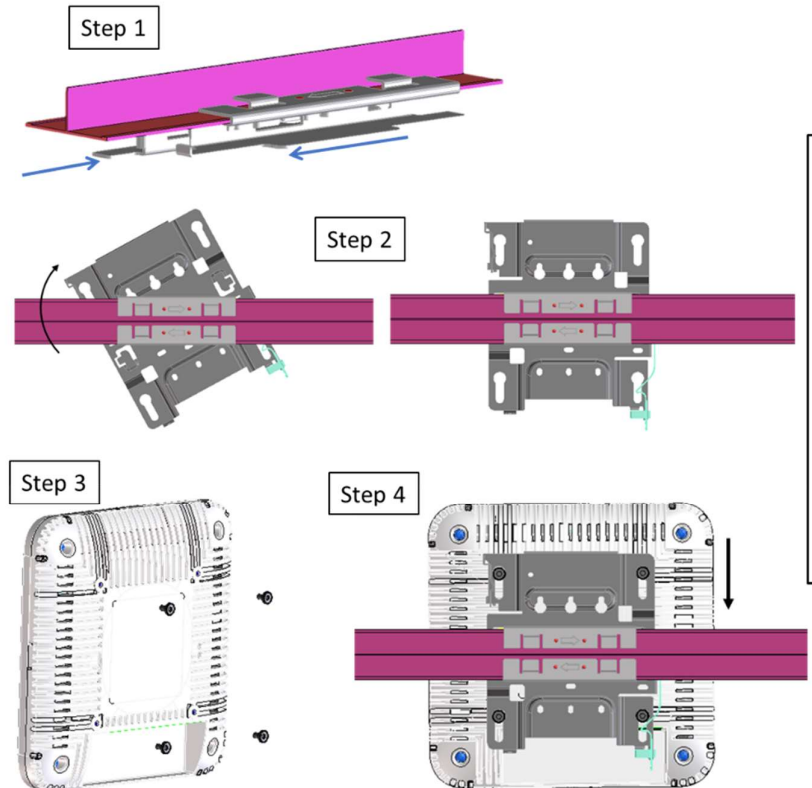


Recessed 9/16 inch T-bar or channel rail



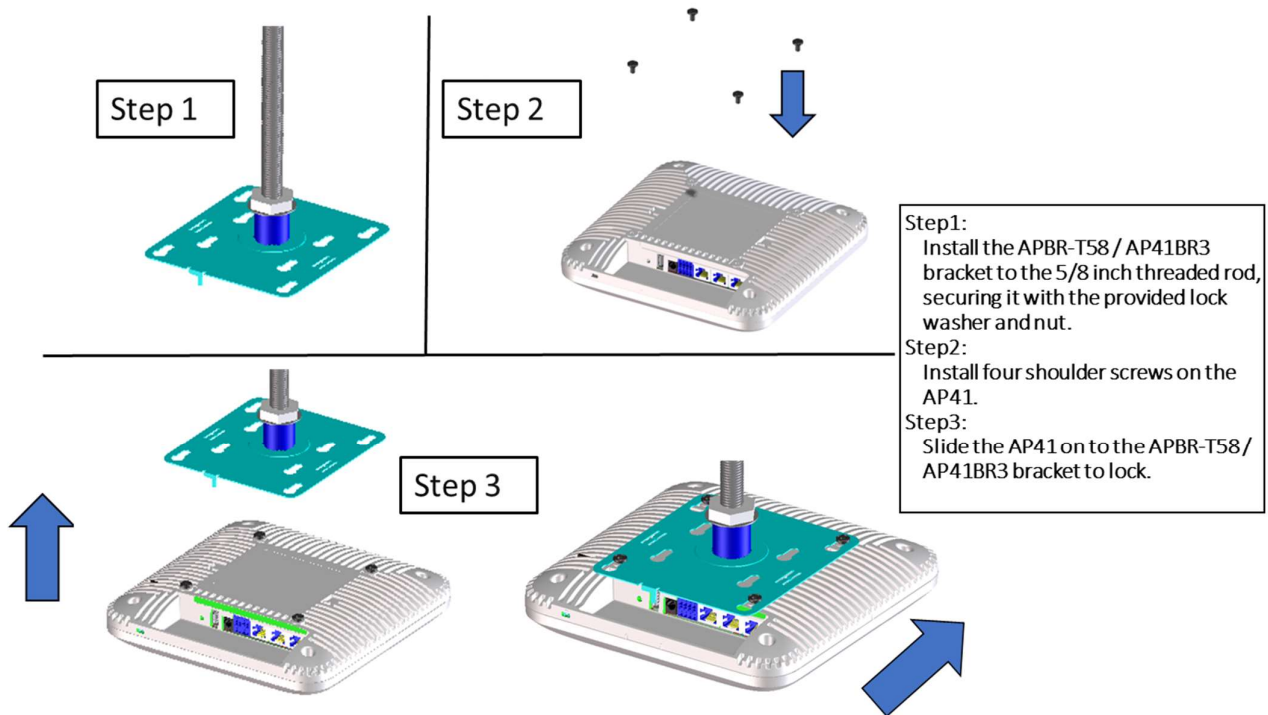
- Step 1
Mount the APBR-ADP-CR9 to the t-bar
- Step 2
Mount the APBR-U to the APBR-ADP-CR9. Rotate the APBR-U to lock to the APBR-ADP-CR9
- Step 3
Assemble 4 shoulder screws to the AP if they did not come pre-installed
- Step 4
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

1.5 inch T-bar



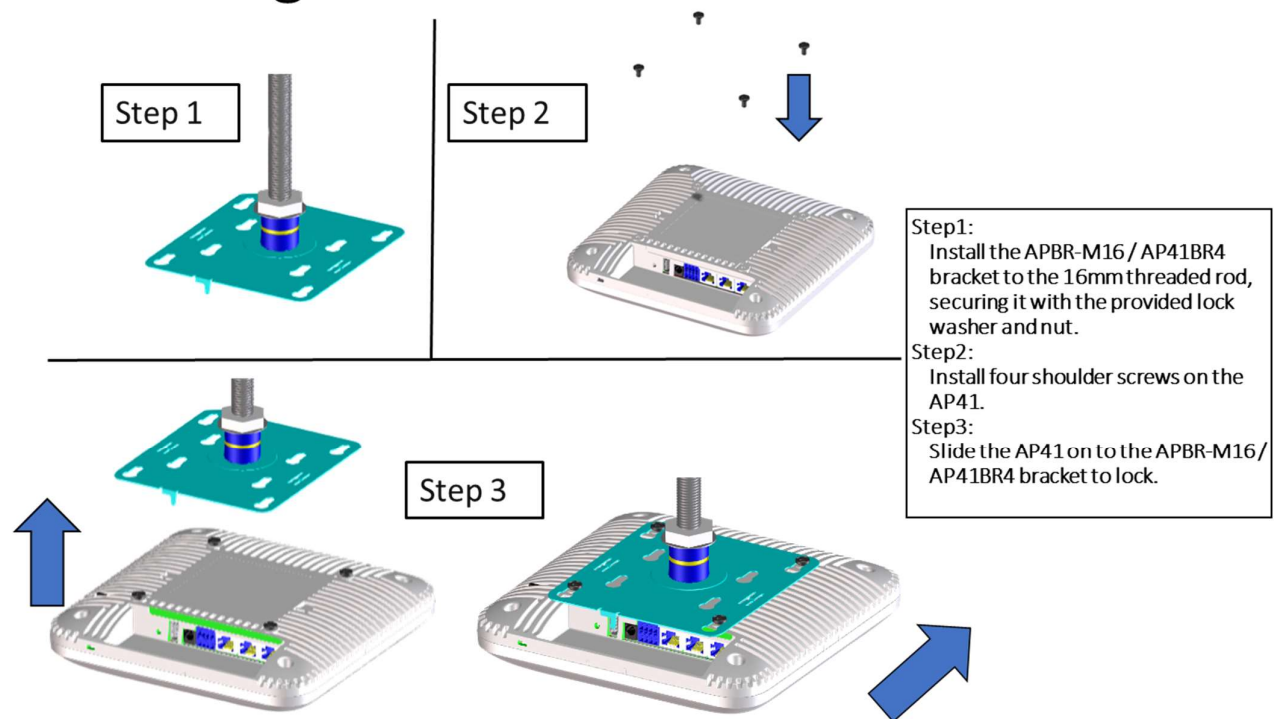
- Step 1
Mount the APBR-ADP-WS15 to the t-bar
- Step 2
Mount the APBR-U to the APBR-ADP-WS15. Rotate the APBR-U to lock to the APBR-ADP-WS15
- Step 3
Assemble 4 shoulder screws to the AP if they did not come pre-installed
- Step 4
Slide the AP with shoulder screws on the APBR-U until the lock is engaged

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 PoE 12V/3A DC power supply
Powering adaptor	100-240VAC, 50-60 Hz, input All regions (output): 12V/3A DC output
Dimensions	215mm x 215mm x 52mm (8.46in x 8.46in x 2.05in)
Weight	1.6 kg (3.53 lbs)
Operating temperature	Internal antenna 0° to 40° C External antenna -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 - 10/100/1000BASE-T auto-sensing RJ-45 with PoE 1 - 10/100/1000BASE-T auto-sensing RJ-45 1 - 10/100/1000BASE-T auto-sensing RJ-45 USB2.0 IoT terminal block 12VDC
RF	2.4GHz - 4x4:4 spatial streams 802.11ac MU-MIMO & SU-MIMO 5GHz - 4x4:4 spatial streams 802.11ac MU-MIMO & SU-MIMO 2.4GHz / 5GHz scanning radio 2.4GHz BLE with Dynamic Antenna Array
Maximum PHY rate	Total maximum PHY rate – 2533Mbps 5GHz – 1733 Mbps 2.4GHz – 800Mbps
Indicators	Multi-color status LED
Compliance standards	UL 60950-1 & CAN/CSA-C22.2 No. 60950-1 UL 2043 FCC Part 15.247, 15.407, 15.107, and 15.109 RSS-247 & ICES-003 (Canada) EN 301 489-1 V2.1.1 EN 301 489-17 V3.1.1 EN 300 328 V2.1.1 EN 301 893 V2.1.1 EN 50385: 2002 IEC/EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013 EN 55032:2015 + AC:2016, Class B

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 AP41 family of Access Points comes with a limited lifetime warranty.

Ordering Information:

Access Points

AP41-US	Premium Wi-Fi & BLE Array AP with internal antennas for the US Regulatory domain
AP41E-US	Premium Wi-Fi & BLE Array AP with external antenna connectors for the US Regulatory domain
AP41-WW	Premium Wi-Fi & BLE Array AP with internal antennas for the WW Regulatory domain
AP41E-WW	Premium Wi-Fi & BLE Array AP with external antenna connectors for the WW Regulatory domain

Mounting brackets

APBR-U	Universal AP Bracket for T-Rail and Drywall mounting for Indoor Access Points
AP41BR1	Premium AP T-bar ceiling mounting bracket kit
AP41BR2	Premium AP drywall ceiling mounting bracket kit
APBR-T58 / AP41BR3	5/8-inch threaded rod bracket
APBR-M16 / AP41BR4	16mm threaded rod bracket
APBR-ADP-CR9 / AP41BR1-CR	Adapter for channel rail and recessed 9/16" t-rail
APBR-ADP-RT15 / AP41BR1-RT	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 All regions (output): 12V/3A DC output
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This product is intended to be supplied by an approved limited power source (adapter label marked with L.P.S. or LPS) with an output rated 12Vdc/3A minimum or 50-57Vdc/600mA minimum which has an operating temperature range of 50C and operating altitude of 3,048 meters.

If using a class I adapter / power injector, the power cord needs to be connected to the outlet utilizing the ground pin.

Antennas

M6060060MP1D43620	Ventev Patch Antenna, 6dBi/6dBi (2.4GHz/5GHz)
PDQ24518-MI1	Laird Patch Antenna 8dBi/8dBi (2.4GHz/5GHz)

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 35cm 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 44cm 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 44 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.



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

Hereby, Mist Systems, Inc. declares that the radio equipment type (AP41) is in compliance with Directive 2014/53/EU.

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	9.43

WLAN:

Frequency range (MHz)	Maximum EIRP in EU (dBm)
2400 – 2483.5	19.84
5150 – 5250	22.90
5250 – 5350	22.68
5500 – 5700	29.62

South Korea

해당 무선설비는 운용 중 전파혼신 가능성이 있음

Brazil

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados

Taiwan

- ◆ 本器材之WLAN介面於工作頻率5.150 ~ 5.250GHz 該頻段限於室內使用。
- ◆ 高增益指向性天線只得應用於固定式點對點系統
- ◆ 低功率警語:
 - 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。
 - 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。
 - 應避免影響附近雷達系統之操作。

Pakistan



Russia

Подтверждение соответствия 1) Минкомсвязи России и 2) Евразийского Таможенного Союза:

1. Декларация соответствия Евразийского Таможенного Союза № RU Д-US.PA01/B.64313/19 от (09.08.2019) года, действительна до (08.08.2022) года, зарегистрирована в реестре Евразийского Таможенного Союза (09.08.2019) года
2. Сертификат соответствия № ОС-2-РД-1294 от (04.10.2019) года, действителен до (04.10.2022) года, зарегистрирован в Федеральном агентстве связи (04.10.2019) года
3. Декларация соответствия № УВРД – 6420 от (01.11.2019) года, действительна до (01.11.2025) года, зарегистрирована в Федеральном агентстве связи (14.11.2019) года
4. Декларация соответствия № УВРД – 6419 от (01.11.2019) года, действительна до (01.11.2025) года, зарегистрирована в Федеральном агентстве связи (14.11.2019) года

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 [8] dB. El uso con este equipo de antenas no incluidas en esta lista o que tengan una ganancia mayor que [8] dB quedan prohibidas. La impedancia requerida de la antena es de [50] ohms.

Belarus



Thailand



เครื่องวิทยุคมนาคมนี้ ได้รับยกเว้น ไม่ต้องได้รับ
ใบอนุญาตให้มี ใช้งานเครื่องวิทยุคมนาคม
หรือตั้งสถานีวิทยุคมนาคมตามประกาศ กสทช.
เรื่อง เครื่องวิทยุคมนาคม และสถานีวิทยุ
คมนาคมที่ได้รับยกเว้นไม่ต้องได้รับใบอนุญาต
วิทยุคมนาคม ตามพระราชบัญญัติวิทยุ
คมนาคม พ.ศ. 2498



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