



AP41 Hardware Installation Guide

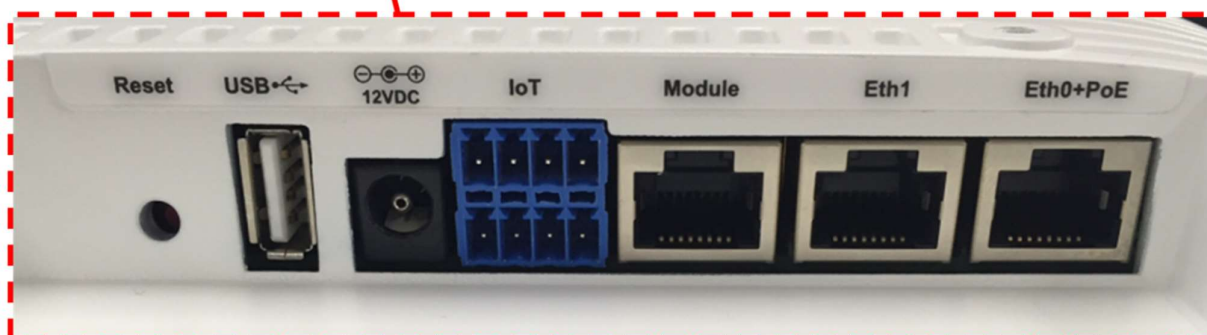
Overview

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

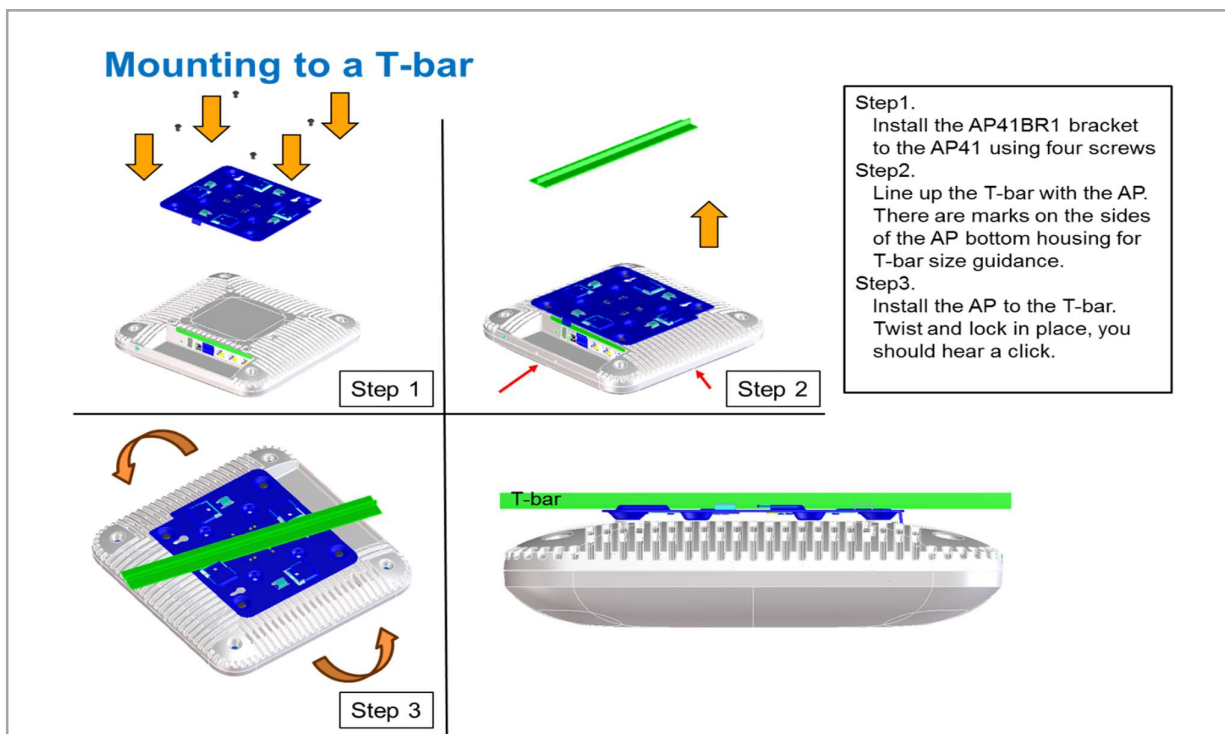


Kensington Lock

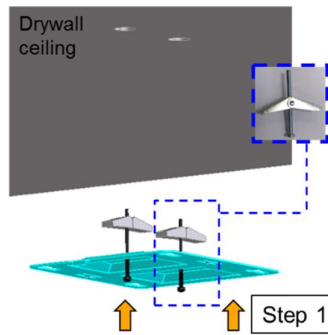


Reset	Reset to the factory default settings
USB	USB2.0 support interface
12VDC	Support for the 12VDC power supply recommended by Mist
IoT	8-pin interface for digital input, digital output, analog input, and ground
Module	10/100/1000 BaseT RJ45 interface
Eth1	10/100/1000 BaseT RJ45 interface
Eth0+PoE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

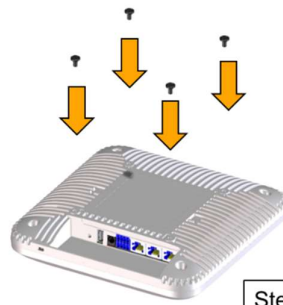
Mounting kit installation



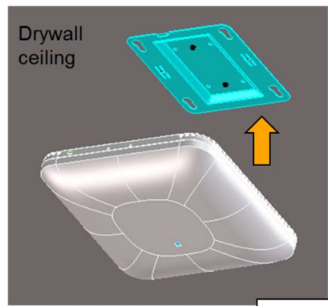
Mounting to a drywall ceiling



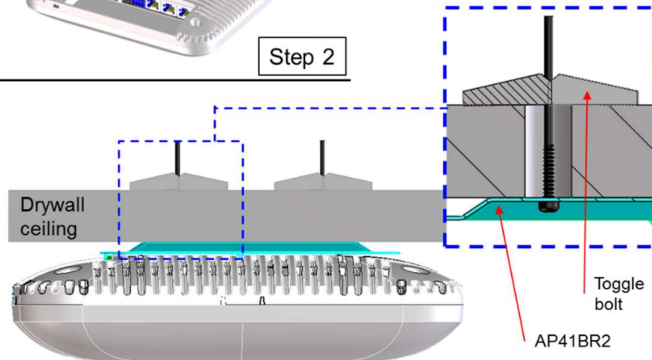
Step 1



Step 2

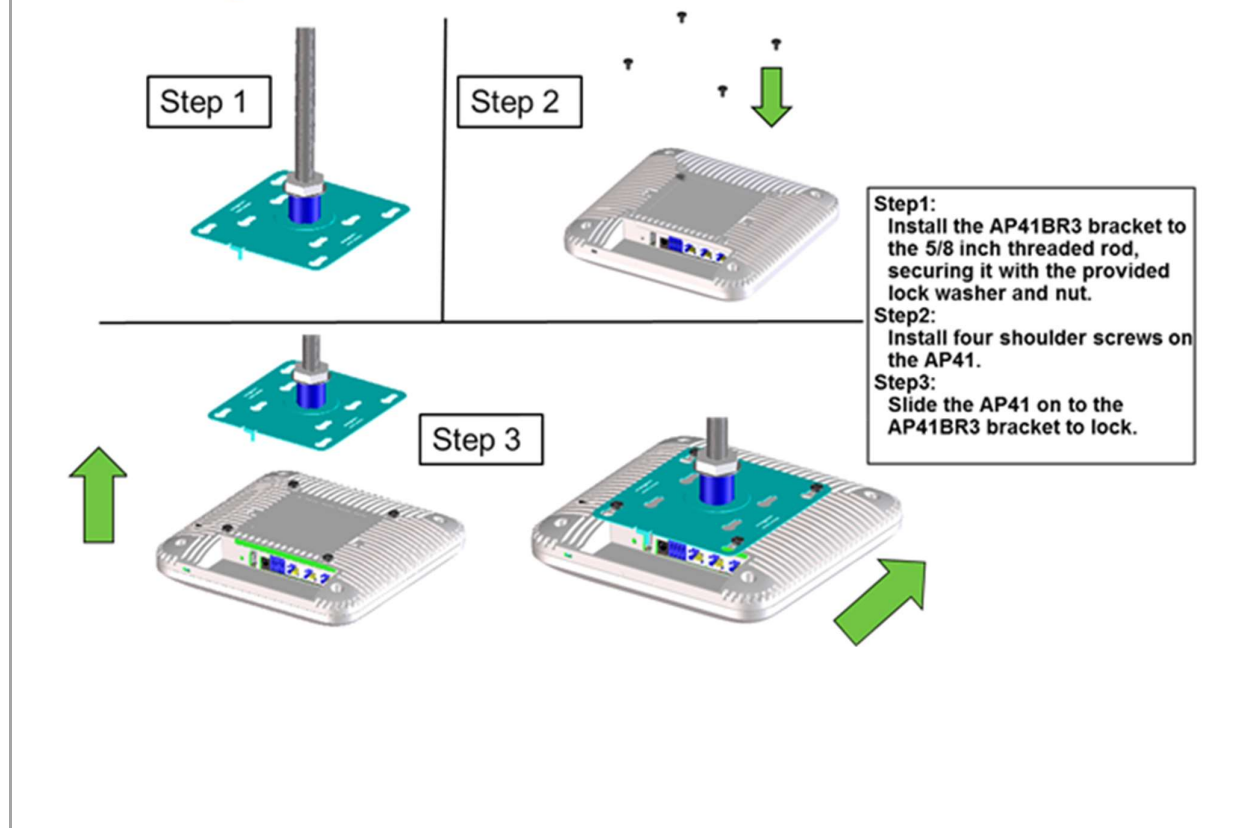


Step 3



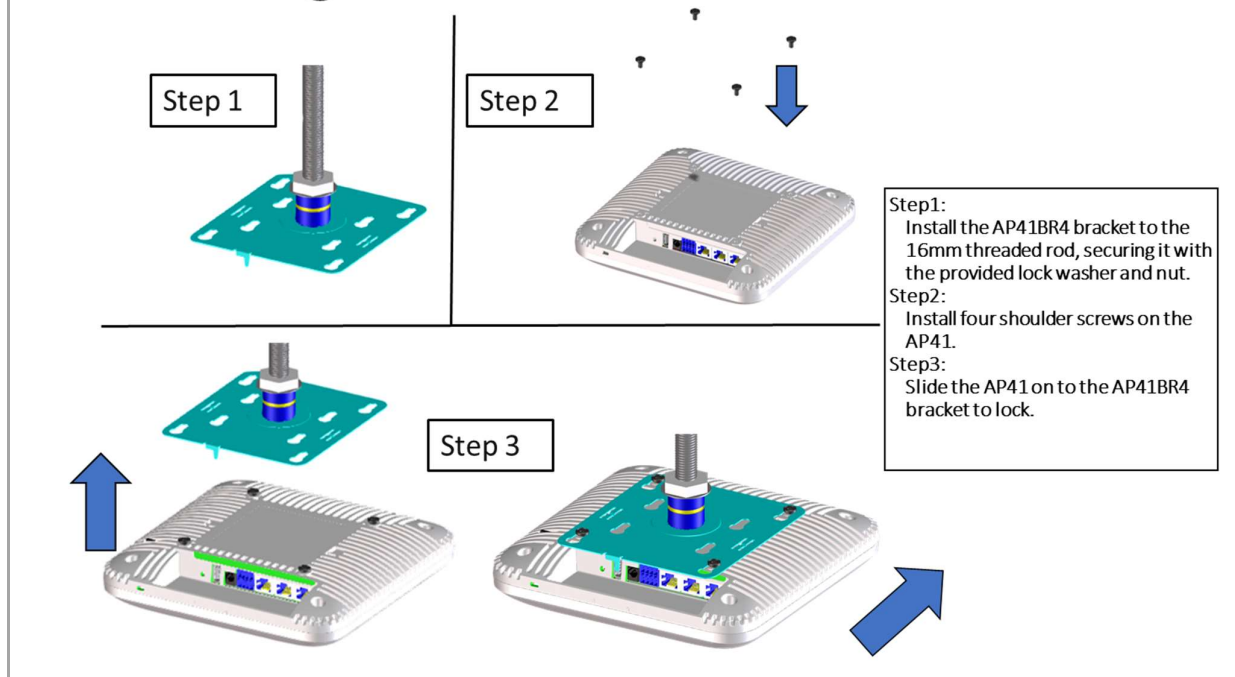
- Step1.
Mark the drywall and drill 2 5/8" holes into the drywall ceiling. Assemble two toggle bolts with the AP41BR2 bracket and install in the drywall ceiling.
- Step2.
Install four shoulder screws on the AP.
- Step3.
Slide the AP on to the AP41BR2 bracket to lock.

Mounting to a 5/8 inch threaded rod



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). The AP41BR3 attaches to a rod that is 5/8"-11.

Mounting to a 16mm threaded rod



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). The AP41BR4 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.

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

AP41BR1	Premium AP T-bar ceiling mounting bracket kit
AP41BR2	Premium AP drywall ceiling mounting bracket kit
AP41BR3	Premium AP 5/8 inch threaded mounting bracket kit
AP41BR4	Premium AP 16mm threaded mounting bracket kit

Power Supply options

12V DC supply	100-240VAC, 50-60 Hz, input 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 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 5 350 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 5 850 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