



AP61 Hardware Installation Guide

Overview

The Mist AP61 is an IP67 rated outdoor access point which 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

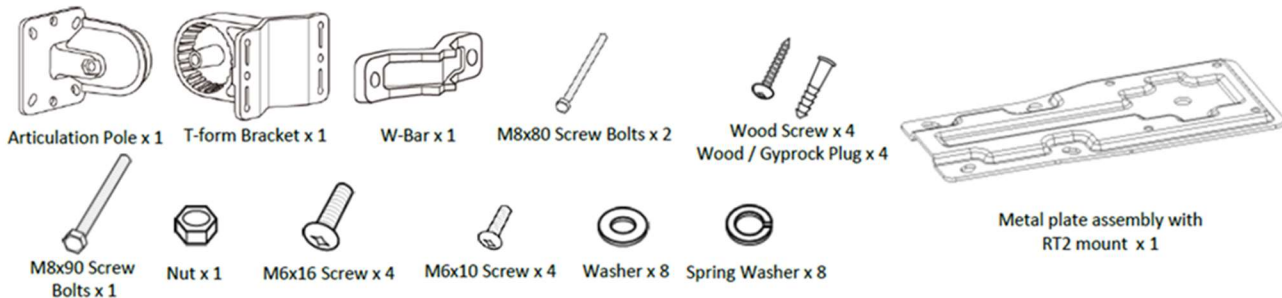


LED/Reset	Reset to the factory default settings
Eth0+PoE	10/100/1000 BaseT RJ45 interface that supports 802.3at PoE PD
Eth1	10/100/1000 BaseT RJ45 interface

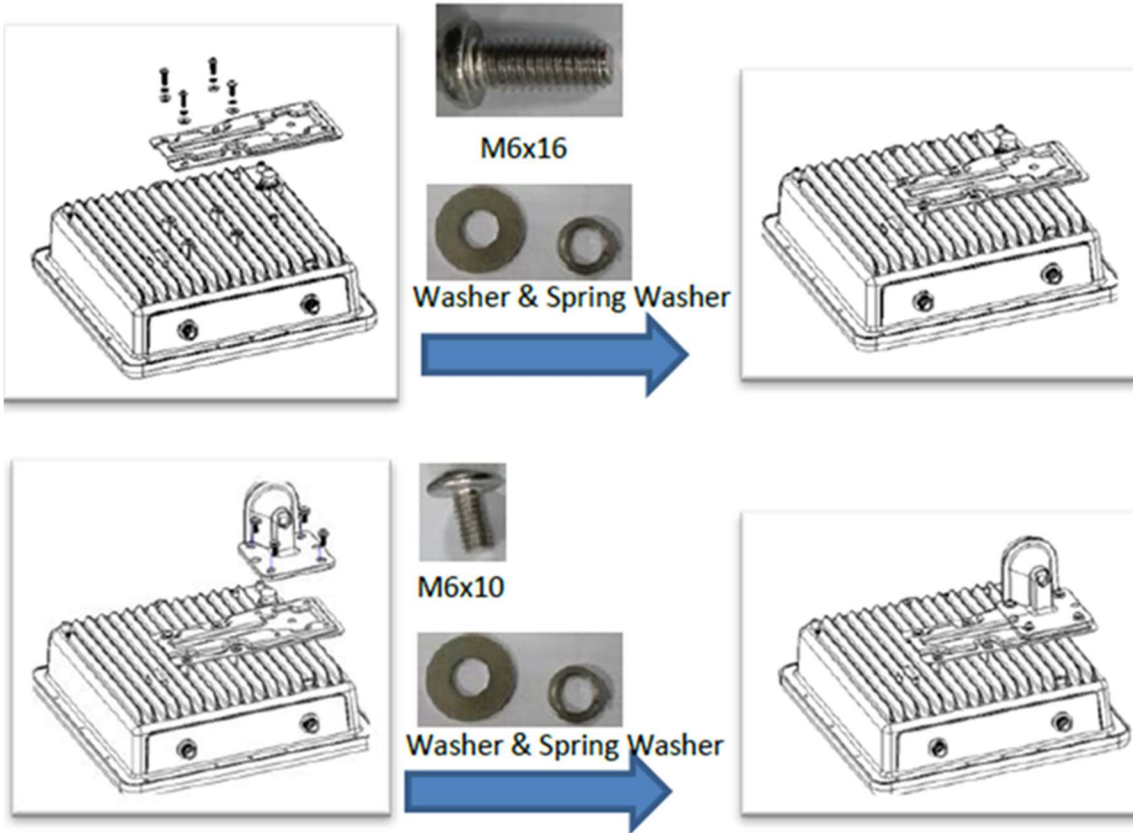
On the AP61E, there are 4 N-type antenna connectors (Ant1-Ant4)

Outdoor AP Articulating Mount installation

Mounting kit contents:

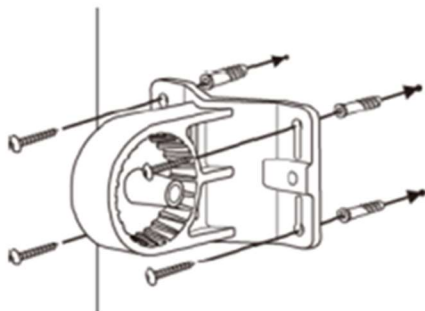


Installation with the articulating mount bracket (included in box):
 Step 1: Install the metal plate to the AP61



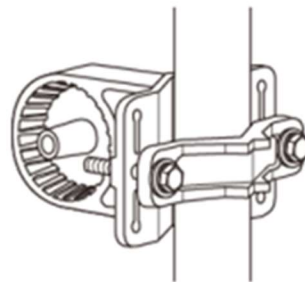
Step 2: Install the T-form bracket to the wall or pole:

Install T-form bracket to a wall



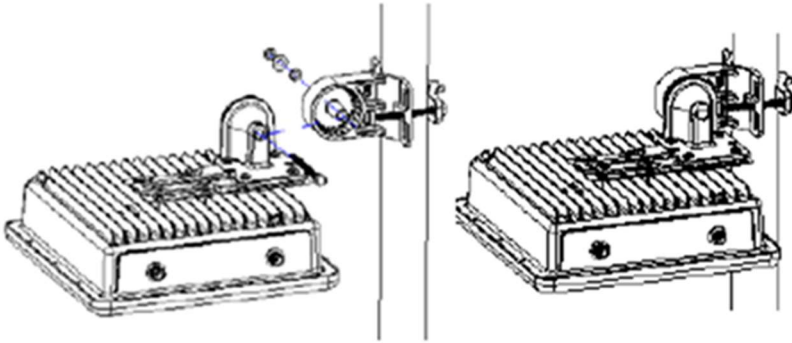
Fix the mount base to the wall using wood / gyprock screws.

Install T-form bracket to a pole



Mounting For Pole Larger than 1.5" (35mm) and Less Than 3" (80 mm)

Step 3: Install the AP61 to the T-form bracket.

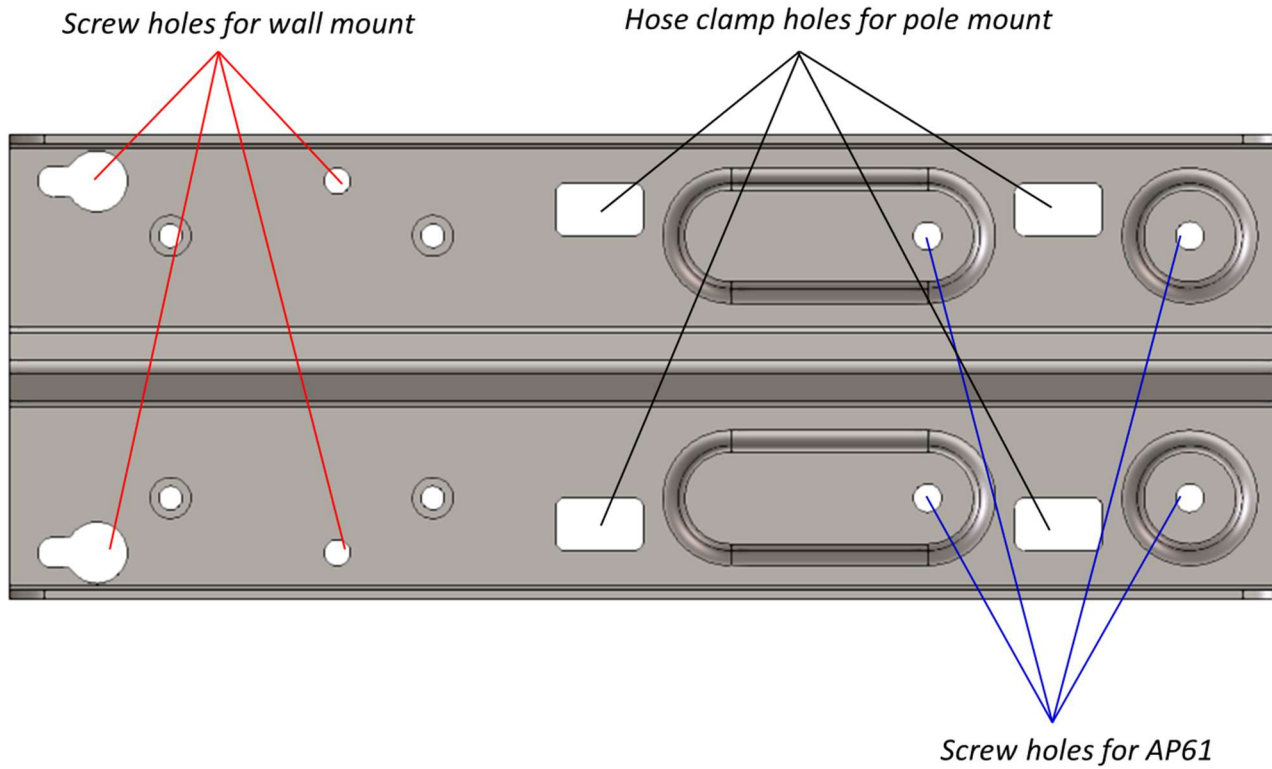


Attach the articulation pole to the mount base articulation using M8x90 bolt, nut and washers.

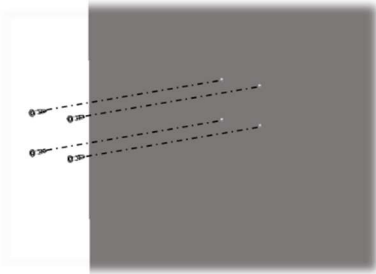
In a wall mount installation, please use screws that have a 1/4in. (6.3mm) diameter head with a length at least 2 in. (50.8mm).

In a pole mount installation, please use the M8x80 screws to attach to the pole mount kit.

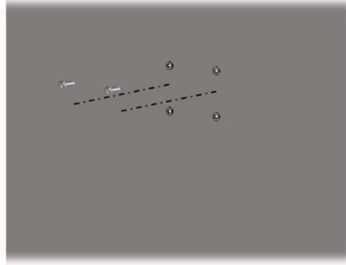
Outdoor AP Flush Mount installation



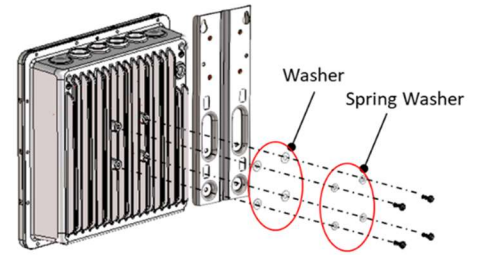
AP61 Flush Mount Bracket – Wall Mount



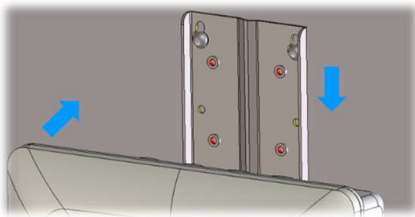
(a) Drill four holes in the wall and insert anchors



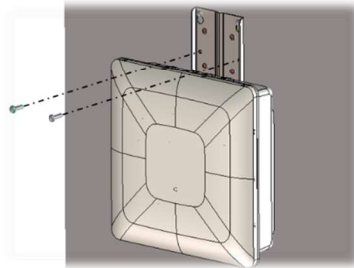
(b) Install the upper two screws, but do not fully tighten the screws



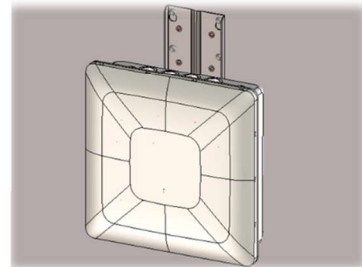
(c) Install the Flush Mount Bracket onto AP61



(d) Install the Flush Mount Bracket with AP61 onto the screws in the wall and slide down



(e) Install the remaining two screws and tighten all the screws



(f) Installation complete

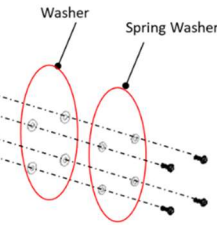
AP61 Flush Mount Bracket – Pole Mount



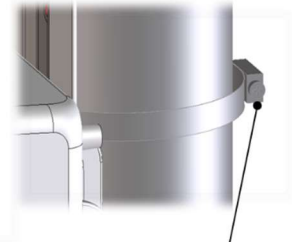
(a) Assemble the hose clamps onto the flush mount bracket



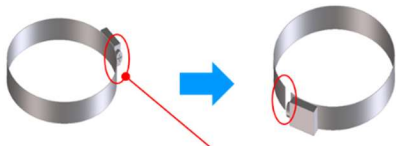
(b) Assemble the flush mount bracket with hose clamps onto the AP61



(c) Assemble the AP61 with flush mount bracket onto the pole, and use a screwdriver to tighten the hose clamps



**Use a screwdriver to tighten*



** Use a screwdriver to release the hose clamp.*

Caution:

During the installation of the access point, we recommend that accessible metal parts of the product are connected to Ground with 18 AWG wire.

Technical Specifications:

Feature	Description
Power options	802.3at PoE
Dimensions	AP61 – 12.2in x 12.2in x 4.2in (310mm x 310mm x 107mm) AP61E – 12.2in x 13.5in x 4.2in (310mm x 343mm x 107mm)
Weight	AP61 – 9.85 lbs (4.47 kg) AP61E – 10.1 lbs (4.59 kg)
Operating temperature	Internal antenna -20° to 65° C External antenna -20° to 65° C
Operating humidity	10% to 90% maximum relative humidity, non-condensing
Operating altitude	3,048m (10,000 ft)
I/O	1 - 10/100/1000BASE-T auto-sensing RJ-45 with PoE 1 - 10/100/1000BASE-T auto-sensing RJ-45
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	FCC Part 15.247, 15.407, 15.107, and 15.109 FCC Part 15 Class B 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 EN 55032:2015 + AC:2016, Class B IP67 rated

Recommended power supply specifications:

1. UL certified with a voltage rating of 50-57Vdc and 600mA
2. Rated for 65C
3. Altitude spec of 3,048m
4. Comply with LPS

Warranty Information

The AP61 family of Access Points comes with a limited lifetime warranty.

Ordering Information:

Access Points

AP61-US	Premium Outdoor Wi-Fi & BLE Array AP - Internal Antenna for the US Regulatory domain
AP61E-US	Premium Outdoor Wi-Fi & BLE Array AP - External Antenna for the US Regulatory domain
AP61-WW	Premium Outdoor Wi-Fi & BLE Array AP - Internal Antenna for the WW Regulatory domain
AP61E-WW	Premium Outdoor Wi-Fi & BLE Array AP - External Antenna for the WW Regulatory domain

Accessories and spare parts

SP-01	Ethernet Surge Protector
APOUT-BR1 / APOUTBR-ART	Articulating mount for Outdoor AP
APOUTBR-FM	Flush mount for Outdoor AP

The AP61 product includes an articulating mount bracket kit.
The flush mount kit can be ordered separately.

Regulatory Compliance Information:

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 32cm 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 41cm 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 41 cm de distance entre la source de rayonnement et votre corps.

IC Caution

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 (AP61) 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	9.55

WLAN:

Frequency range (MHz)	Maximum EIRP in EU (dBm)
2400 – 2483.5	19.98
5500 – 5700	29.94