

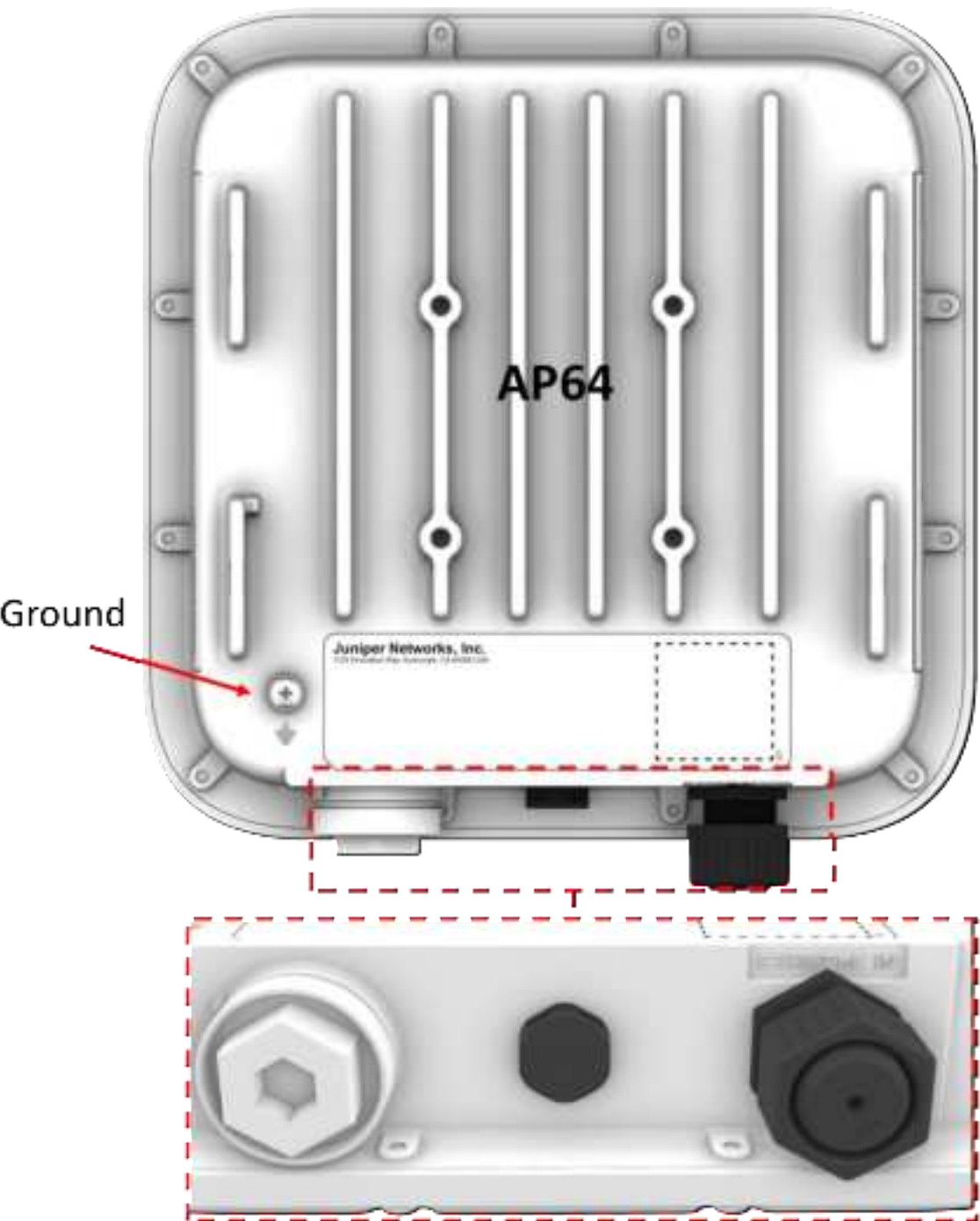


## AP64 Hardware Installation Guide

### Overview

The AP64 contains three IEEE 802.11ax radios that deliver 2x2 MIMO with two spatial streams when operating in multi-user (MU) or single-user (SU) mode. The AP64 can operate simultaneously in the 6GHz band, 5GHz band, and 2.4GHz band or two bands and a dedicated tri-band scan radio.

I/O ports

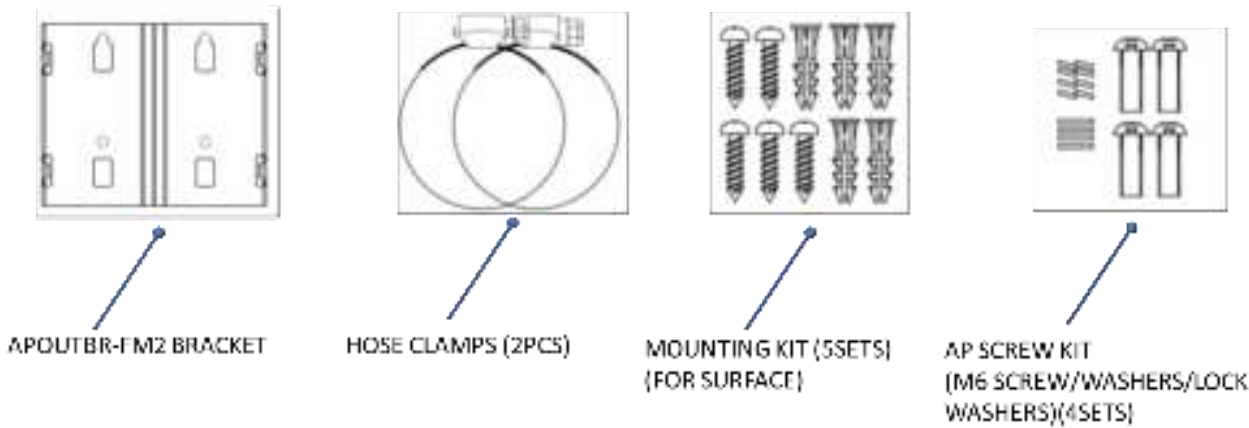


|             |                                                                         |
|-------------|-------------------------------------------------------------------------|
| ETH0/PoE IN | 100/1000/2500BASE-T RJ45 interface that supports 802.3at/802.3bt PoE PD |
|-------------|-------------------------------------------------------------------------|

Ground should be connected to Earth ground using wire that is 8AWG or larger diameter.

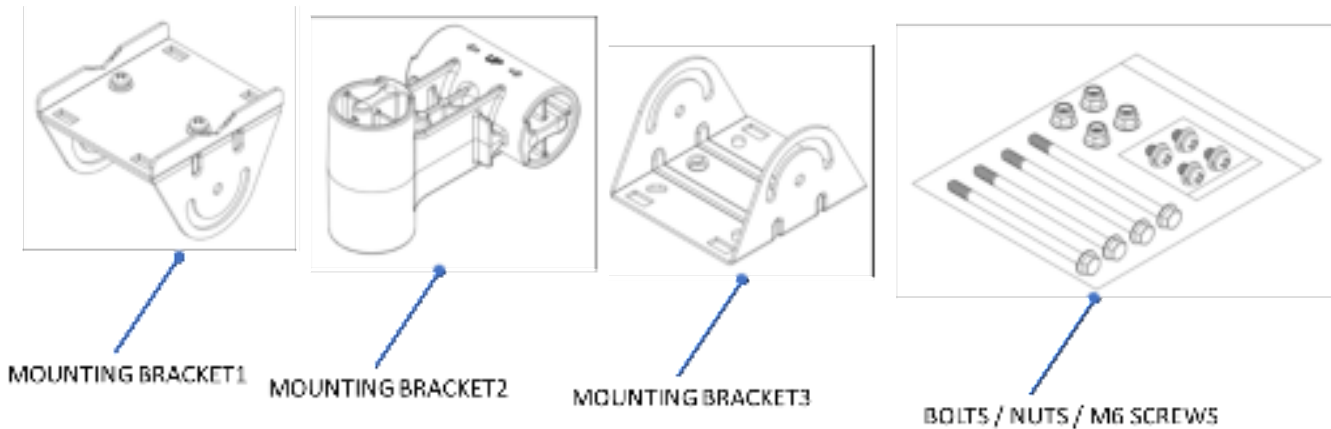
**AP64 Mounting  
Flush Mount Bracket**

**APOUTBR-FM2 Mounting kit**

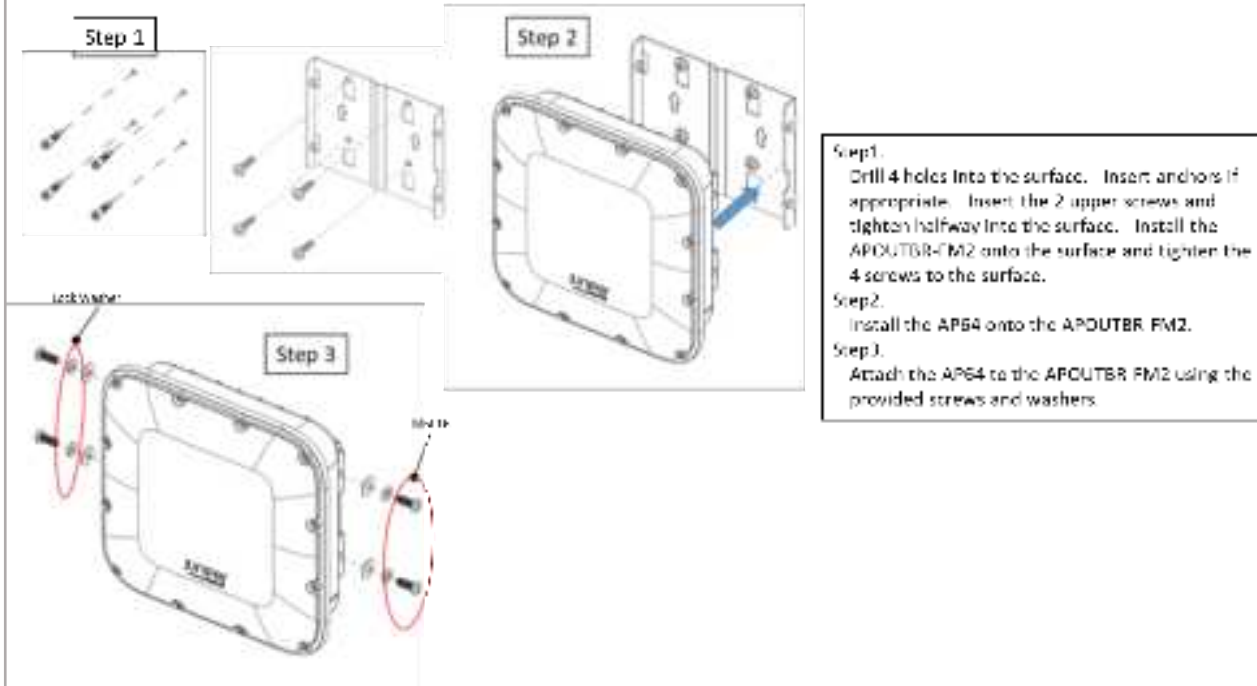


**Articulating Mount Bracket**

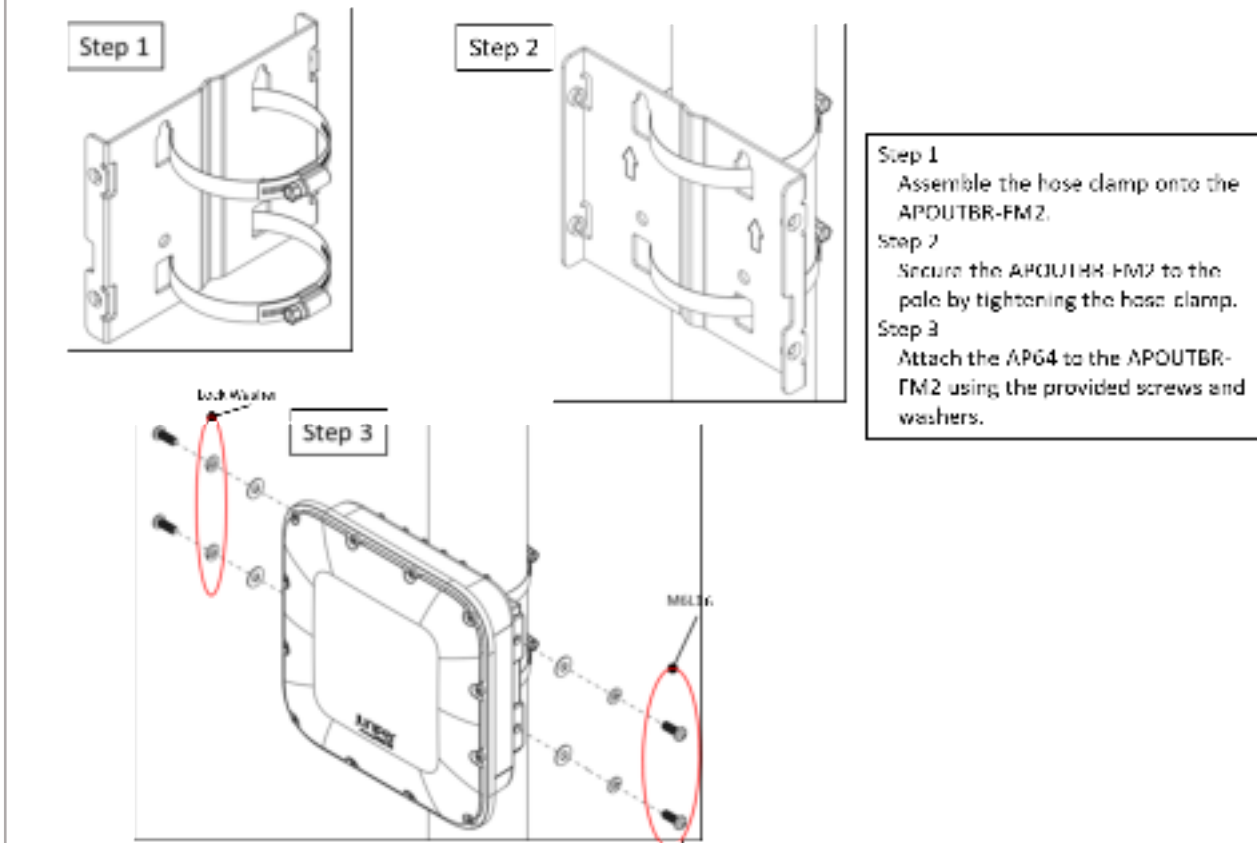
**APOUTBR-ART2 Mounting kit**



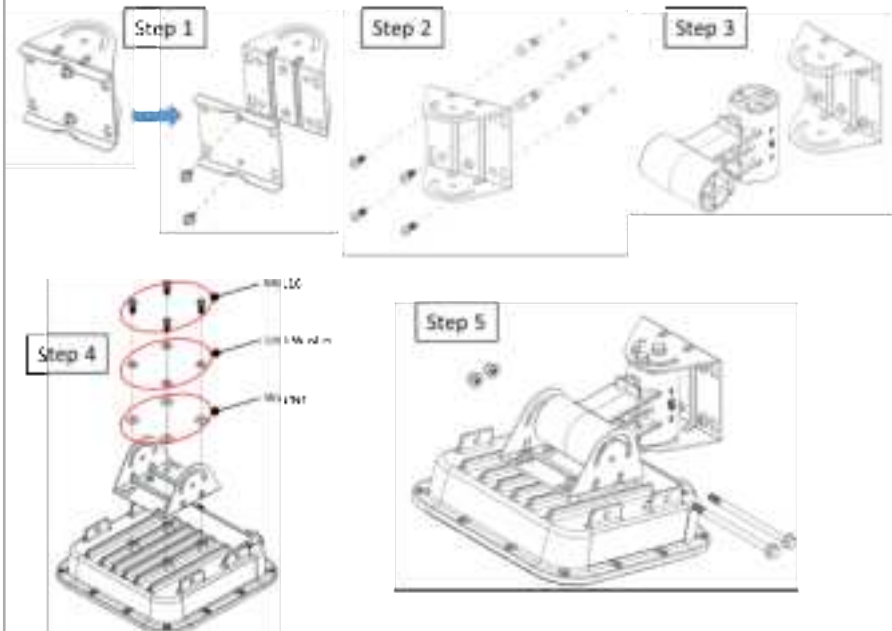
## Flush Mount to Surface



## Flush Mount to Pole

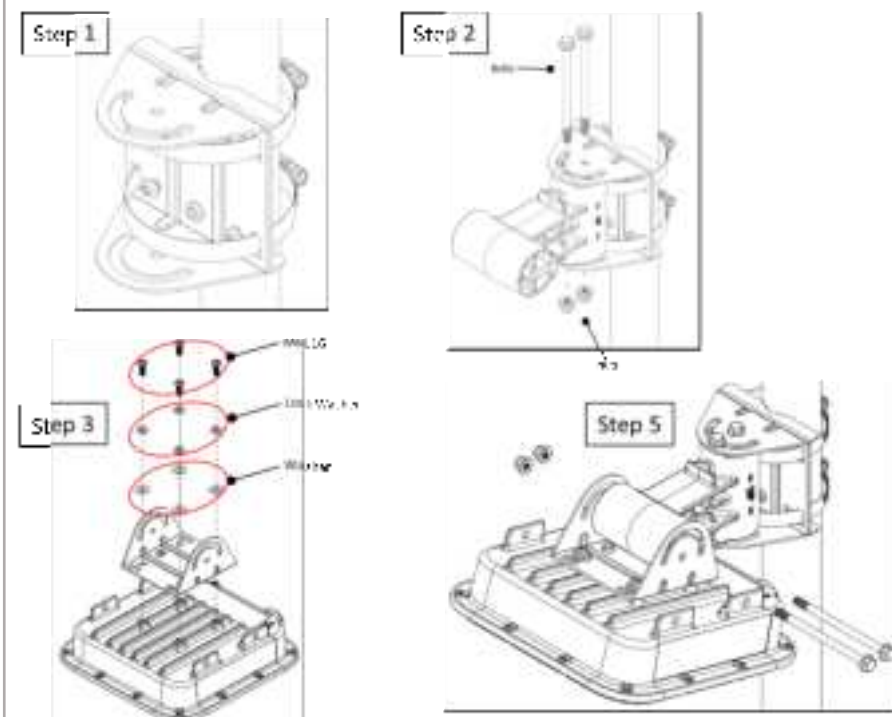


## Articulating Mount to Surface



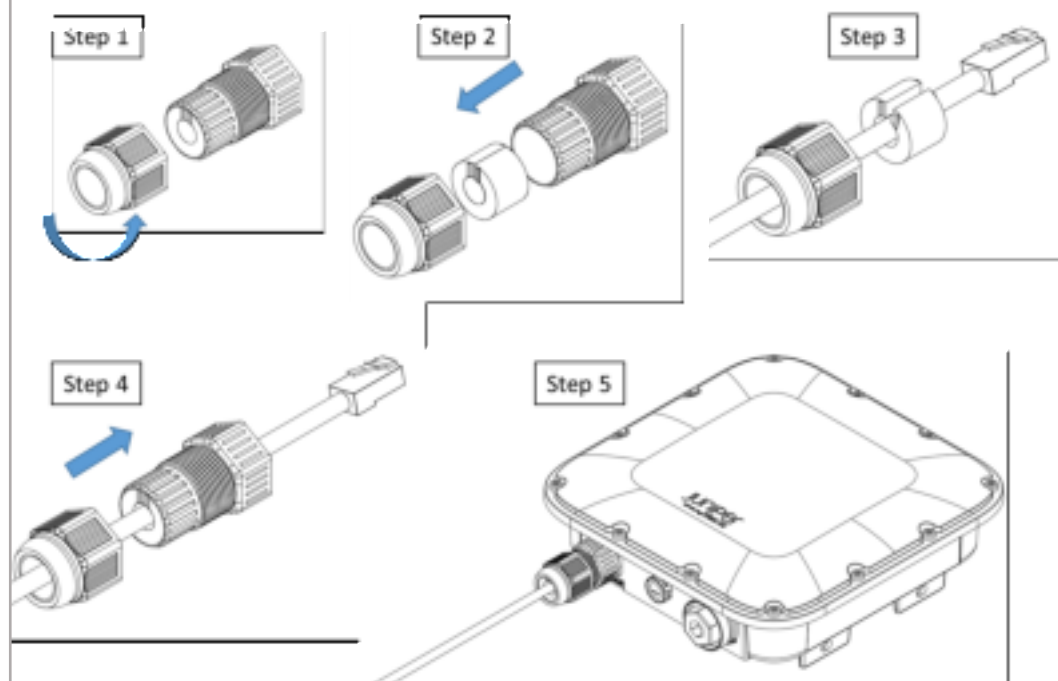
- Step 1**  
Disassemble APOUTBR ART2 Mounting Bracket1.
- Step 2**  
Install APOUTBR ART2 Mounting Bracket1 to the surface.
- Step 3**  
Assemble APOUTBR-ART2 Mounting Bracket2 to Bracket1. Attach the side with "← UP →" to Bracket1.
- Step 4**  
Install the APOUTBR ART2 Mounting Bracket3 to the AP64.
- Step 5**  
Assemble the AP64 with Bracket3 to the Bracket2 using the long screws and nuts.

## Articulating Mount to Pole



- Step 1**  
Install APOUTBR-ART2 Mounting Bracket1 to the pole using the hose clamps.
- Step 2**  
Assemble APOUTBR-ART2 Mounting Bracket2 to Bracket1. Attach the side with "← UP →" to Bracket1.
- Step 3**  
Install the APOUTBR ART2 Mounting Bracket3 to the AP64.
- Step 4**  
Assemble the AP64 with Bracket3 to the Bracket2 using the long screws and nuts.

## Connecting RJ45 Cable Gland



- Step 1.**  
Disassemble cable gland
- Step 2.**  
Remove the blue seal from the cable gland. Select the proper seal.  
Blue seal diameter is 7mm - 9.5mm  
Red seal diameter is 5.5mm - 7mm
- Step 3.**  
Open the seal, squeeze where you see the 2 lines, and insert the ethernet cable thru the nut and seal
- Step 4.**  
Push Ethernet cable thru the gland.  
Push the seal into the gland and loosely tighten the nut
- Step 5.**  
Connect the RJ45, tighten the cable gland to the AP64 meeting a torque spec of 10-12kg-cm, and fully tighten the nut to the cable gland meeting a torque spec of 7-10kg-cm

## Technical Specifications:

| Feature                   | Description                                                                                                                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power options             | 802.3at/802.3bt PoE                                                                                                                                                                                            |
| Dimensions                | 215mm x 215mm x 64mm (8.46in x 8.46in x 2.52in)                                                                                                                                                                |
| Weight                    | AP64: 1.50 kg (3.31 lbs)                                                                                                                                                                                       |
| Operating temperature     | AP64: -40° to 65° C without solar loading<br>AP64: -40° to 55° C with solar loading                                                                                                                            |
| 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                                                                                                                                                            |
| RF                        | 2.4GHz or 6GHz - 2x2:2SS 802.11ax MU-MIMO & SU-MIMO<br>5GHz - 2x2:2SS 802.11ax MU-MIMO & SU-MIMO<br>1x1: 1SS 802.11ax 2.4GHz/5GHz/6GHz scan<br>2.4GHz BLE with Antenna<br>Zigbee: 802.15.4<br>Thread: 802.15.4 |
| Maximum PHY rate          | Total maximum PHY rate – 3600 Mbps<br>6GHz – 2400 Mbps<br>5GHz – 1200 Mbps<br>2.4GHz – 600 Mbps                                                                                                                |
| Indicators                | Multi-color status LED                                                                                                                                                                                         |
| Safety standards          | CSA 62368-1<br>CAN/CSA-C22.2 No. 62368-1-19<br>ICES-003:2020 Issue 7, Class B (Canada)                                                                                                                         |

## Warranty Information

The AP64 family of Access Points comes with a one-year limited warranty.

### Included in the box:

1. AP64
2. APOUTBR-FM2
3. RJ45 cable gland

### Ordering Information:

#### Access Points:

|         |                                                                          |
|---------|--------------------------------------------------------------------------|
| AP64-US | 802.11ax WiFi6E 2+2+2 AP – Internal Antenna for the US Regulatory domain |
| AP64-WW | 802.11ax WiFi6E 2+2+2 AP – Internal Antenna for the WW Regulatory domain |

#### Mounting bracket included in the box:

|             |                            |
|-------------|----------------------------|
| APOUTBR-FM2 | Flush mount bracket for AP |
|-------------|----------------------------|

#### Optional accessory bracket:

|              |                           |
|--------------|---------------------------|
| APOUTBR-ART2 | Articulating mount for AP |
|--------------|---------------------------|

#### Power Supply options:

802.3at or 802.3bt PoE power



## Regulatory Compliance Information:

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 Part 15.247, 15.407, 15.107, and 15.109

## 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 between the radiator & your body; AP64 – 20cm

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.
- The 5.925 ~ 7.125GHz operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10,000 feet.
- Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or Communications with unmanned aircraft systems.

## Industry Canada

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). 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.

Cet appareil contient des émetteurs / récepteurs exempts de licence qui sont conformes au (x) RSS (s) exemptés de licence d'Innovation, Sciences et Développement économique Canada. L'opération est soumise 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.

## IC Caution

- (i) 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;
- (ii) 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
- (iii) Operation on oil platforms, cars, trains, boats and aircraft shall be prohibited except for on large aircraft flying above 10,000 ft.
- (iv) Devices shall not be used for control of or communications with unmanned aircraft systems.
- (v) 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.
- (vi) The transmitter module may not be co-located with any other transmitter or antenna.

## Avertissement

- (i) 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.;
- (ii) 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;
- (iii) Utilisation interdite à bord de plateformes de forage pétrolier, de voitures, de trains, de bateaux et d'aéronefs, sauf à bord d'un gros aéronef volant à plus de 10 000 pieds d'altitude.
- (iv) Les dispositifs ne doivent pas être utilisés pour commander des systèmes d'aéronef sans pilote ni pour communiquer avec de tels systèmes.

- (v) 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.
- (vi) Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.

### **Radiation Exposure Statement:**

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm (AP64) between the radiator & your body.

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 20cm (AP64) de distance entre la source de rayonnement et votre corps.



Hereby, Juniper Networks, Inc. declares that the radio equipment type (AP64) 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 transmitted Power in EU:

Bluetooth/Thread/Zigbee:

| Frequency range (MHz) | Maximum EIRP in EU (dBm) |
|-----------------------|--------------------------|
| 2400 – 2483.5         | 8.45                     |

WLAN:

| Frequency range (MHz) | Maximum EIRP in EU (dBm) |
|-----------------------|--------------------------|
| 2400 – 2483.5         | 19.97                    |
| 5150 – 5250           | 22.97                    |
| 5250 – 5350           | 22.97                    |
| 5500 – 5700           | 29.96                    |
| 5745 – 5825           | 13.97                    |
| 5945 – 6425           | 22.97                    |

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

The device is restricted to indoor use only when operating in 5150 to 5350 MHz and 5945 to 6425MHz frequency ranges.

|  |    |    |    |    |    |        |    |    |    |
|--|----|----|----|----|----|--------|----|----|----|
|  | 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) |    |    |    |

## UK

Hereby, Juniper Networks, Inc. declares that the radio equipment type (AP64) is in compliance with Radio Equipment Regulations 2017.

The full text of the UK declaration of conformity is available at the following:

<https://www.mist.com/support/>

The frequency and maximum transmitted Power in UK:

### Bluetooth:

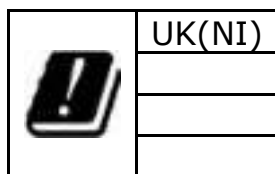
| Frequency range (MHz) | Maximum EIRP in UK (dBm) |
|-----------------------|--------------------------|
| 2400 – 2483.5         | 8.45                     |

### WLAN:

| Frequency range (MHz) | Maximum EIRP in UK (dBm) |
|-----------------------|--------------------------|
| 2400 – 2483.5         | 19.97                    |
| 5150 – 5250           | 22.96                    |
| 5250 – 5350           | 22.96                    |
| 5500 – 5700           | 29.74                    |
| 5745 – 5825           | 22.98                    |
| 5925 – 6425           | 22.97                    |

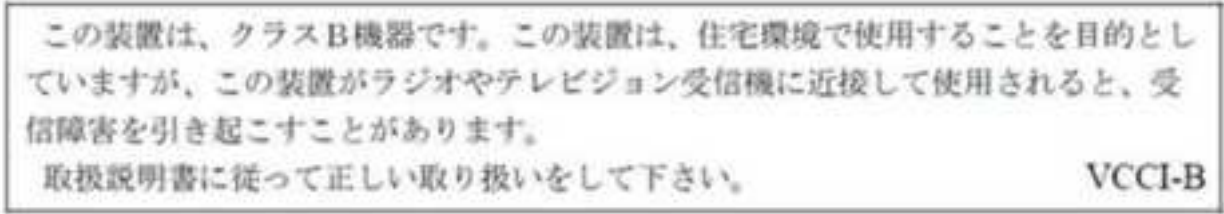
This equipment complies with UK radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

The device is restricted to indoor use only when operating in 5150 to 5350 MHz and 5945 to 6425MHz frequency ranges.



## Japan

AP64 Access Point is restricted to indoor use only when operating in 5150-5350MHz and 5925 to 6425MHz frequency ranges.



## Taiwan

NCC 低功率射頻器材技術規範(LP0002)警語

取得審驗證明之低功率射頻器材，非經核准，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。低功率射頻器材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。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材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。