

Installing the ExtremeWiNG AP7662i/AP7662 Access Point

Overview of the AP7662i/AP7662

The AP7662 is an IP67 rated Access Point with 802.11ac dual band 2:2 radios. The AP7662 is easy to install, lightweight, and is available in an internal (AP7662i) and external (AP7662) antenna model. Each model includes 802.11 radios, an IoT radio, and a GPS radio. The AP7662 model comes in two models: AP7662i and AP7662. In this document, the functionality, feature, and the procedure applies to both the models when AP7662i/AP7662 is used.

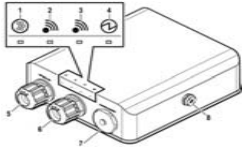
Note: The AP7662i/AP7662 requires a minimum base firmware of WiNG 5.9.1.

The AP7662i/AP7662 model has the following features:

- Radios: 2 radios (2.4GHz and 5GHz); 1 IoT/BLE/802.15.4 Radio (2.4 GHz)
- Console Port: RJ45
- One RJ45, 10/100/1000 Ethernet Port (GE1) with PoE
- One RJ45, 10/100/1000Mb Ethernet port (GE2)
- IP67 Connectors on all ports
- LEDs: 4 (see Figure 1)
- One Reset button
- Power: PoE 802.3af or 802.3at
- GPS Receiver (will be supported via a future firmware release)
- Antennas:
 - AP7662i- Five **internal** antennas (four band locked antennas and one BLE antenna)
 - AP7662- Five **external** antennas (four single band antennas and one BLE antenna)
- Temperature:
 - AP3917i: -40°C to +65°C (-40°F to 149°F) without solar radiation; -40°C to +55°C (-40°F to 131°F) with solar radiation
 - AP3917e: -40°C to +65°C (-40°F to 149°F) without solar radiation; -40°C to +55°C (-40°F to 131°F) with solar radiation
- Enclosure: Cast Aluminum base and Top

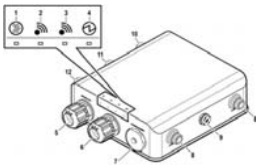
In Figure 1, the top image indicates AP7662i. Figure 2 shows the top and side views of AP7662.

Figure 1 Top and Side Views of AP7662i



1	IoT/BLE Radio
2	Radio - 5 GHz
3	Radio - 2.4 GHz
4	Status
5	GE1 (PoE IN)
6	GE2
7	Console/Reset
8	Vent

Figure 2 Top and Side Views of AP7662



1	IoT/BLE Radio
2	Radio - 5 GHz
3	Radio - 2.4 GHz
4	Status

5	GE1 (PoE IN)
6	GE2
7	Console/Reset
8	2.4 G - Antenna 1 and 2
9	Vent
10	5G - Antenna 1
11	BLE/802.15.4 Antenna
12	5 G - Antenna 2

LEDs on the Front of the AP

Amber LEDs indicate 5 GHz Wi-Fi Radio, Green LEDs indicate 2.4 GHz Wi-Fi Radio, and Blue LED indicates the IoT Radio. The Status LED is ON only during bootup.

For detailed installation information about the AP7662i/AP7662, see the *ExtremeWireless AP7662i/AP7662 Installation Guide*.

Table 1 shows ways to power the AP7662i/AP7662.

Table 1 Powering the AP7662i/AP7662

Power Source	Description
Power over Ethernet (PoE)	Power is provided through the RJ45 Ethernet port (GE1 port).

Verifying the AP7662i/AP7662 Box Contents

Verify the contents of the box and ensure that the following items are available:

Table 2 Contents of the AP7662i/AP7662 Box

Quantity	Item
1	AP7662i/AP7662 Quick Reference Guide
1	Cloud Quick Start Card
The following hardware is included:	
1	M4 screw assembly with star washer
1	Ring terminal

Mounting and Connecting the AP



Electrical Hazard: Only qualified personnel should perform installation procedures.

Use these instructions as guidelines for mounting and connecting the AP7662i/AP7662 easily and safely. The AP7662i/AP7662 mounting brackets are sold separately. For more information about installing the optional bracket and the adapter, see the *ExtremeWireless AP7662i/AP7662 Installation Guide*. For installation videos of the AP, see www.extremenetworks.com/support/

Mounting the AP7662i/AP7662

Use these instructions as guidelines for mounting and connecting the AP7662i/AP7662 easily and safely. The installation of the AP7662i/AP7662 should be performed by a professional installer to ensure proper operation and compliance with local safety guidelines.

Attach the AP7662i/AP7662 to a surface that can support the AP and in an environment it can withstand. It can be mounted to a wall, girder, ceiling, or pole, and the surface material can be concrete, brick, wood, metal, or plastic.

Positioning the AP for Installation

Mount the AP so that the glands are on the side of the AP closest to the ground, and not above the plastic cover. You must provide a 3-inch drip loop on all cables.



Note: Do not remove the dust cap until you need to install the BLE/IoT antennas.

Attach the Ground Wire

Use the M4 ground screw assembly, with the star washer, to attach the ground wire's ring terminal to the back of the AP. The wire should be as close to the AP bottom as possible. Tighten the screw to a torque of 13.0-13.5 in-lbs.



Note: Attach the H bracket after attaching the ground wire onto the AP. Tighten the torque, tighten the screws, and attach the LAN cable.

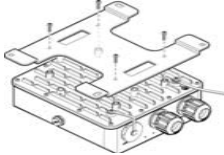
Mounting the AP7662i/AP7662 to a Wall



Note: The "H" type Mounting Bracket (WS-MBO-HO1) is sold as a separate accessory (ordering part #30519).

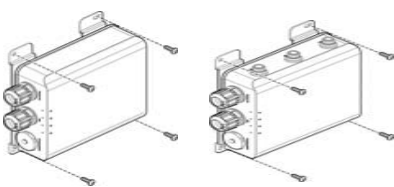
- 1 Using the mounting bracket as a guide, mark the location for the mounting screws. The wall bracket provides eight attachment holes. Use four (one in each corner). Place the bracket and mark the four hole centers.
- 2 Drill four holes into the wall as follows:
 - for installing the AP on a masonry wall, use a 5/16" diameter bit.
 - for other materials, use the appropriate drill for the screws being used.
- 3 For masonry installations, drill at least 1/8" (3mm) past the depth of the screw, or bolt, being used, and place four anchor assemblies into the holes.
- 4 Attach the AP to the "H" Bracket:
 - a Use four M4 screw assemblies to attach the AP to the "H" bracket on the side that does *not* have the PEM stand-offs.
 - b Tighten the four screws to a torque of 13.0-13.5 in-lbs.

Figure 3 Attaching the "H" Bracket to the AP



- 5 Secure the anchors to the wall, then secure the bracket to the anchors.
- 6 If using #10 screws, tighten them to a torque of 25 in-lbs. If using 1/4" screws, tighten them to 45 in-lbs.

Figure 4 AP7662i and AP7662 Wall Mount "H" Bracket



Mounting the AP7662i/AP7662 to a Pole



Note: The Pole Mounting Bracket (WS-MBO-POLE01) is sold as a separate accessory (ordering part #30520).

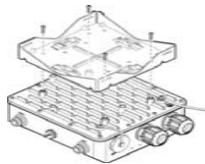
- 1 Determine the diameter of the pole.

Pole Diameter	Cable Clamp Size
<= 2.5" (63.5mm)	Use small cable clamp.
5" - 7" (127mm)	Use large cable clamp

For other pole diameters, provide your own stainless steel cable clamp. The band must be 1/2" (12.7mm) wide.

- 2 Attach the AP to the "Pole Mount" bracket using 4 M4 screws. Tighten the four screws to a torque of 13.0-13.5 in-lbs.

Figure 5 Attaching a Pole Bracket to the AP



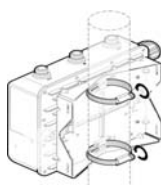
- 3 Attach the cable clamp to the pole bracket. Open the cable clamp by turning a flat bladed screwdriver counterclockwise. Then, insert the non-clamp end into the pole bracket through the holes.



Note: It is easier to install both clamps before attaching to the pole.

- 4 Put the metal band around the pole and insert it into the clamp. Turn the clamp screw clockwise, tightening the band around the pole.

Figure 6 AP with Mounting Bracket—Vertical Pole



Mounting the AP7662i/AP7662 to a Wall/Pole using the WS-MBO-ART01 2 Axis Extension Arm

You can mount the AP7662i/AP7662 to a wall or a pole using a 10" extension arm (WS-MBO-ART01, ordering part #30514). For mounting and installation instructions, refer to the *ExtremeWireless AP7662i/AP7662 Installation Guide*.

Installing External Antennas

- 1 Professionally install the external antennas intended for area coverage. For information about antenna selection and installation, refer to the *External Antenna Site Preparation and Installation Guide*.
- 2 Attach the external antenna cables to the Standard Polarity Type-N connectors on the AP7662i/AP7662.

Connecting a Power Supply to the AP7662i/AP7662

If you need to power the AP7662i/AP7662, you can do so by using the GE1 port on the AP. The power LED on the front face of the AP illuminates when the device is powered on. Refer to the *ExtremeWireless AP7662i/AP7662 Installation Guide* for more information.

LAN/Console Connections

The AP7662i/AP7662 has two LAN (Ethernet) ports and a Console port. Refer to Figure 1 and Figure 2 for the location of these ports. During administration and maintenance through the LAN or Console, the AP must still have a power connection through either an Ethernet PoE cable or a DC power supply.

Professional Installation Instruction

Installation personnel

This product is designed for specific application and needs to be installed by a qualified personnel who has RF and related rule knowledge. The general user shall not attempt to install or change the setting.

Installation location

The product shall be installed at a location where the radiating antenna can be kept 20 cm for AP7662i and 35 cm for AP7662 (FCC) and 20 cm for AP7662i and 42 cm for AP7662 (ISED) from nearby person in normal operation condition to meet regulatory RF exposure requirement.

External antenna

Use only the antennas which have been approved by the applicant. The non-approved antenna(s) may produce unwanted spurious or excessive RF transmitting power which may lead to the violation of FCC/ISED limit and is prohibited.

Installation procedure

Please refer to user's manual for the detail.

Warning: Please carefully select the installation position and make sure that the final output power does not exceed the limit set force in relevant rules. The violation of the rule could lead to serious federal penalty.

Instructions d'installation professionnelle

Installation

Ce produit est destiné à un usage spécifique et doit être installé par un personnel qualifié maîtrisant les radiofréquences et les règles s'y rapportant. L'installation et les réglages ne doivent pas être modifiés par l'utilisateur final.

Emplacement d'installation

En usage normal, afin de respecter les exigences réglementaires concernant l'exposition aux radiofréquences, ce produit doit être installé de façon à respecter une distance de 20cm pour AP7662i et 35 cm pour AP7662 (FCC) et 20 cm pour AP7662i et 42 cm pour AP7662 (ISED) entre l'antenne émettrice et les personnes.

Antenn externe

Utiliser uniquement les antennes approuvées par le fabricant. L'utilisation d'autres antennes peut conduire à un niveau de rayonnement essentiel ou non essentiel dépassant les niveaux limites définis par ISED, ce qui est interdit.

Procédure d'installation

Consulter le manuel d'utilisation.

Warning: Avertissement: Choisir avec soin la position d'installation et s'assurer que la puissance de sortie ne dépasse pas les limites en vigueur. La violation de cette règle peut conduire à de sérieuses pénalités fédérales.

Regulatory and Compliance Information
Safety Guidelines

This section contains notices that are intended to protect your personal safety and prevent damage to the equipment.

Qualified Personnel:
Electrical Hazard: Only qualified personnel should perform installation procedures. Within the context of the safety notes in this documentation, qualified persons are defined as persons who are authorized to commission, ground and label devices, systems, and circuits in accordance with established safety practices and standards.

Federal Communications Commission (FCC) Notice

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.

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 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

Warning: FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 20 cm for AP7662i and 35 cm for AP7662 between the radiator & your body.

Industry Canada Notice

This device complies with ISED's licence-exempt RSSs. 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.

Le présent appareil est conforme aux CNR d'ISED applicables aux appareils radio exempts de licence. L'exploitation est autorisée 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.

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;
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
Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Avertissement:

- 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;
- 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;
- 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 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

Warning: IC Radiation Exposure Statement: This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm for AP7662i and 42 cm for AP7662 between the radiator & your body.

Warning: Déclaration d'exposition aux radiations: Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm pour AP7662i et 42 cm pour AP7662 de distance entre la source de rayonnement et votre corps.

Product compliance information table with multiple columns for various standards and test results.

This radio transmitter (IC: 4141B-AP3917E/ Model: AP3917e & AP7662) has been approved by ISED to operate with the antenna type listed below with maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 4141B-AP3917E/ Model: AP3917e & AP7662) a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Table with 7 columns: Item, Function, Antenna Type, Part No, Connector, Gain (dBi). Lists various antenna configurations and their gain values.

4.9G Antenna for Item 6 and Item 11 will be secondary primary permanent fixed operations use only.

European Waste Electrical and Electronic Equipment (WEEE) Notice



- The symbol above indicates that separate collection of electrical and electronic equipment is required.
- When this product has reached the end of its serviceable life, it cannot be disposed of as unsorted municipal waste. It must be collected and treated separately.
- It has been determined by the European Parliament that there are potential negative effects on the environment and human health as a result of the presence of hazardous substances in electrical and electronic equipment.
- It is the users' responsibility to utilize the available collection system to ensure WEEE is properly treated.

For information about the available collection system, please contact Extreme Customer Support at +353 61 705500 (Ireland).

Hazardous Substances

This product complies with the requirements of Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

NCC Statement

Low power radio frequency electromagnetic management method

Article 12 Type approval certificate of low power radio frequency equipment, non-permissible, company, non-permissible or user's non-permissible modification

Article 14 Low power radio frequency equipment use shall not affect the safety and interference of radio communication; if found to affect radio communication, it shall be stopped, and the user shall not continue to use the equipment.

Low power radio frequency equipment use shall not affect the safety and interference of radio communication; if found to affect radio communication, it shall be stopped, and the user shall not continue to use the equipment.

Low power radio frequency equipment use shall not affect the safety and interference of radio communication; if found to affect radio communication, it shall be stopped, and the user shall not continue to use the equipment.

● "Electromagnetic field strength MPE level 1mV/cm², this product uses the building distance 35cm;

- This product is 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:

Declaration of Conformity in Languages of the European Community

English: Hereby, Extreme Networks, declares that this Radio LAN device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Finnish: Valmistaja Extreme Networks vakuuttaa täten että Radio LAN device tyypin laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

Dutch: Hierbij verklaart Extreme Networks dat het toestel Radio LAN device in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

Bij deze verklaart Extreme Networks dat deze Radio LAN device voldoet aan de essentiële eisen en aan de overige relevante bepalingen van Richtlijn 1999/5/EC.

French: Par la présente Extreme Networks déclare que l'appareil Radio LAN device est conforme aux exigences essentielles et aux autres dispositions de la directive 1999/5/CE.

Par la présente, Extreme Networks déclare que ce Radio LAN device est conforme aux exigences essentielles et aux autres dispositions de la directive 1999/5/CE qui lui sont applicables.

Swedish: Härmed intygar Extreme Networks att denna Radio LAN device står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Danish: Undertegnede Extreme Networks erklærer herved, at følgende udstyr Radio LAN device overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

German: Hiermit erklärt Extreme Networks die Übereinstimmung des "WLAN Wireless Controller bzw. Access Points" mit den grundlegenden Anforderungen und den anderen relevanten Festlegungen der Richtlinie 1999/5/EG.

Greek: ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Extreme Networks ΔΗΛΩΝΕΙ ΟΤΙ Radio LAN device ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΟΔΕΙΞ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

Icelandic: Extreme Networks lýsir her með yfir að thessi bunadur, Radio LAN device, uppfyllir allar grunnkröfur, sem gerðar eru í RÁTTE tilskipun ESB nr 1999/5/EC.

Italian: Con la presente Extreme Networks dichiara che questo Radio LAN device è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Spanish: Por medio de la presente Extreme Networks declara que el Radio LAN device cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Portuguese: Extreme Networks declara que este Radio LAN device está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Malti: Hawnehk, Extreme Networks, jidjkljara li dan Radio LAN device jikkonforma mal-hliġijiet essenzjali u ma provvedimiet oħraġn rilevanti li hemm fid-Direttiva 1999/5/EC.

ExtremeWiNG™ Access Points

Quick Reference

- P/N 37121 AP-7662-680B30-US
- P/N 37122 AP-7662-680B30-WR
- P/N 37123 AP-7662-680B40-US
- P/N 37124 AP-7662-680B40-WR

Notice
Copyright © 2017 Extreme Networks, Inc. All Rights Reserved.

Legal Notices
Extreme Networks, Inc., on behalf of or through its wholly-owned subsidiary, Enterasys Networks, Inc., reserves the right to make changes in specifications and other information contained in this document and its website without prior notice.

The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

Trademarks
Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries.

All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see: www.extremenetworks.com/company/legal/trademarks/

Documentation & Support
For product support, including documentation, visit: www.extremenetworks.com/support/

