

# Cradlepoint AER1600/AER1650

## Quick Start Guide

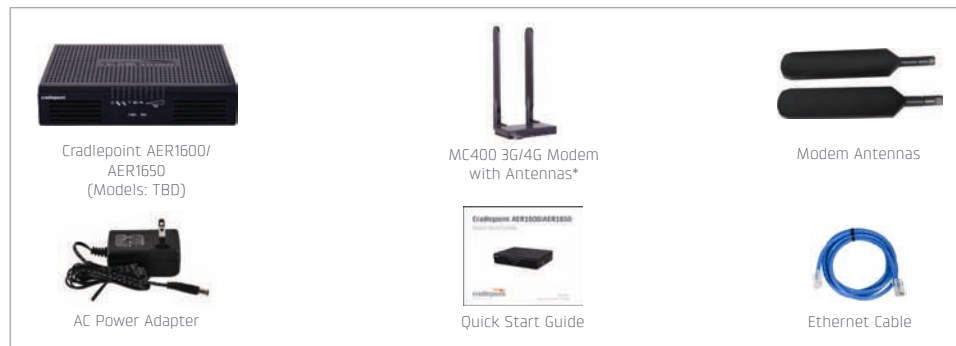


Quick Start Guide Part Number: 170672-000

## WHAT'S IN THE BOX

The Cradlepoint AER1600/AER1650 is available with two different modem options:

- AER1600LPE/AER1650LPE include an embedded modem and a slot to add an MC400 modem
- AER1600/AER1650 and AER1600LP3/AER1650LP3 only include a slot for an MC400 modem and do not include an embedded modem



### Accessories

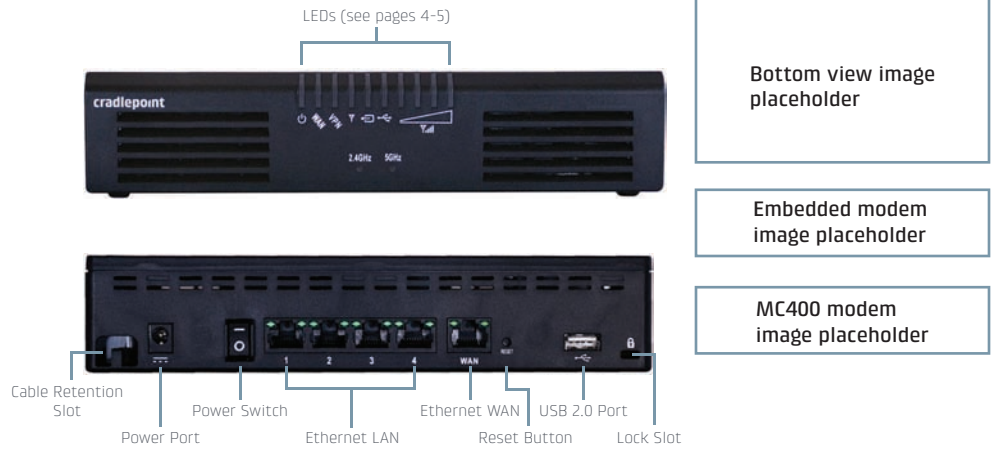
- \* - Included with AER1600LP3/AER1650LP3, optional for AER1600/AER1650 and AER1600LPE/AER1650LPE<sup>1</sup>
- Replacement power adapters
- External modem antennas and cabling

<sup>1</sup> A Cradlepoint 4G LTE modem is embedded in all AER1600/AER1650LPE models. Add a second integrated MC400 modem for a complete "cut-the-wire" 4G LTE solution, fusing enterprise reliability with unparalleled agility.

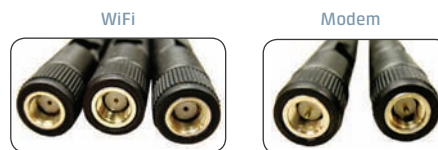
### Enterprise Support

For enhanced services including enterprise-level support, extended warranties, and expert installation, check out Cradlepoint's **CradleCare** suite of services. Visit [cradlepoint.com/cradlecare](http://cradlepoint.com/cradlecare) to learn more.

# HARDWARE



## Antennas



When connecting the provided antennas, review the connection points.

- WiFi antennas (only included on AER1600) have flat circular bases (RSMA).
- Modem antennas have protruding pins (SMA).

## LEDS

 **POWER** The Cradlepoint AER1600/AER1650 must be powered using an approved 12V DC power source.

- Green = Powered ON.
- No Light = Not receiving power. Check the power switch and the power source connection.
- Flashing Amber = Attention. Open the administration pages (see page 7) and check the router status.

 **ETHERNET WAN** Indicates information about a data source connected to the Ethernet WAN port.

- Blue = Connected to an active Ethernet WAN interface.

 **VPN** Indicates information about a VPN data source.

- Green = Active VPN tunnel.

 **WiFi BROADCAST (only on AER1600)** These two LEDs indicate activity on the WiFi broadcast for both the 2.4 GHz and 5 GHz bands.

- **2.4GHz** (green) = 2.4 GHz WiFi is on and operating normally.
- **5GHz** (blue) = 5 GHz WiFi is on and operating normally.

## LEDS

 **SIGNAL STRENGTH** Blue LED bars indicate the active modem's signal strength.

- 4 Solid Bars = Strongest signal.
- 1 Blinking Bar = Weakest signal. (A blinking bar indicates half of a bar.)

 **EMBEDDED MODEM** Indicates the status of embedded modem.

 **INTERNAL MODEM** Indicates the status of internal modems.

 **EXTERNAL USB MODEM** Indicates the status of external USB modems.

All modems have the following LED indicators:

- Green = Modem has established an active connection.
- Blinking Green = Modem is connecting.
- Amber = Modem is not active.
- Blinking Amber = Data connection error. No modem connection possible.
- Blinking Red = Modem is in the process of resetting.

### ADDITIONAL LED INDICATIONS

- Several different LEDs flash when the factory reset button is detected.
- Two of the modem LEDs blink red in unison for 10 seconds when there is an error during firmware upgrade.

## BASIC SETUP

### 1. Insert an activated SIM into the modem.

The Cradlepoint AER1600/AER1650 requires a SIM with an activated wireless broadband data plan. Contact your carrier for details about selecting a data plan and about the process for provisioning your SIM. Once you have an activated SIM:

- + **For AER1600LPE/AER1650LPE only:** Remove embedded modem SIM cover and insert activated SIM into embedded modem. Replace embedded modem SIM cover.
- + Insert activated SIM(s) into internal modem (*optional for AER1600LPE/AER1650LPE*). Insert the SIM card into the slot marked SIM 1 (*use the other slot, SIM 2, for a secondary/backup SIM*).

Insert the card with the notch-end first and the gold contacts facing down – it will click into place.

### 2. Reinsert the internal modem.

Slide the internal modem back into its slot. Put the cover back into place and insert the included security screw if desired (requires small Phillips screwdriver). **NOTE: To remove modem, attach included modem antennas (finger-tighten only) and pull modem straight out.**

### 3. Attach included modem antennas.

Antennas are finger-tighten only. Attach to connectors marked MAIN and AUX.

### 4. Connect to a power source.

Attach the included adapter to the device and to a power source and loop cable through cable retention slot. Then turn the power switch on (I).

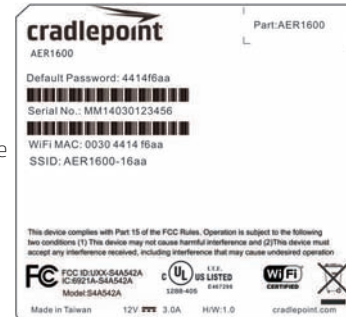
### 5. Connect to a computer or other network equipment.

Connect via Ethernet to LAN or WiFi for local management.

## ACCESSING THE ADMINISTRATION PAGES

To make configuration changes to your router, open the AER1600/AER1650's GUI-based administration pages.

1. Connect via Ethernet WAN or WiFi.
2. Open a browser window and type "cp/" or "192.168.0.1" in the address bar. Press enter/return.
3. When prompted for your password, type the eight character DEFAULT PASSWORD found on the product label.



## FIRST TIME SETUP WIZARD

When you log in for the first time, you are automatically directed to the FIRST TIME SETUP WIZARD, which will help you customize your AER1600/AER1650. Change any of the following:

- + Administrator Password
- + Time Zone
- + WiFi Settings
- + Access Point Name (APN)
- + Modem Authentication
- + Failure Check

*NOTE: To return to the First Time Setup Wizard after your initial login, select GETTING STARTED on the top navigation bar and FIRST TIME SETUP in the dropdown menu.*

**RESET:** To restore the AER1600/AER1650 to its factory default settings, press and hold the RESET button on the back of the device for ten seconds. Reset returns the login password to the DEFAULT PASSWORD and resets all configuration changes.



## CLOUD MANAGEMENT

Rapidly deploy and dynamically manage networks at geographically distributed locations with Enterprise Cloud Manager, Cradlepoint's network management and application platform.

To learn more about how cloud-based management can help your organization improve productivity, reduce costs, and enhance network intelligence, visit [Cradlepoint.com/ECM](http://Cradlepoint.com/ECM). No static IP required for OOBM through ECM to a connected device.

## UPDATING FIRMWARE

### VIA ENTERPRISE CLOUD MANAGER

1. Log in at [cradlepointecm.com](http://cradlepointecm.com) using your Enterprise Cloud Manager credentials.
2. Navigate to the Groups page.
3. Select a group and click on the Firmware option in the top toolbar. In the dropdown menu that opens, select the desired firmware version. Wait for firmware to load.

### VIA THE LOCAL ADMINISTRATION PAGES

1. Log into the local administration pages (*see page 7*). You may have changed the ADMINISTRATOR PASSWORD.
2. Select SYSTEM SETTINGS > SYSTEM SOFTWARE.
3. If new firmware is available, select AUTOMATIC (*Internet*). Wait for firmware to load.

If you do not have an active Internet connection, you may need to use the MANUAL FIRMWARE UPLOAD option by downloading new firmware from the Customer Connect Portal to a local device. Upload to the router on the SYSTEM SETTINGS > SYSTEM SOFTWARE page.



### **Federal Communication Commission Interference Statement**

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 frequency range, it is restricted to indoor environment. This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

**Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 27cm between the radiator & your body.

**FOR COUNTRY CODE SELECTION USAGE (WLAN DEVICES)**

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

**RF EXPOSURE SAFETY NOTICE:**

To comply with FCC/IC RF Exposure Limits set forth for an uncontrolled environment, the product must be installed and operated with a minimum separation distance (between nearby person(s) and radiating antenna) according to the following scenarios:

The device may transmit simultaneously with other collocated radio transmitters within a host device, provided the following conditions are met:

1. 27cm separation distance between the antenna and the user's body must be maintained at all times, when use this product or with tested optional 3G/4G module FCC ID: N7NMC7355 Model MC7354 & MC400LPE.
2. For co-transmission scenario which is not covered above, please consult the RF technician or device supplier.

### **Industry Canada statement:**

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.

### **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 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) 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:**

(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 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) 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.

**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 33cm 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 33 cm de distance entre la source de rayonnement et votre corps.

The device may transmit simultaneously with other collocated radio transmitters within a host device, provided the following conditions are met:

1. 32cm separation distance between the antenna and the user's body must be maintained at all times, when use this product or with tested optional 3G/4G module IC ID: 6921A-S4A542A Model MC7354 & MC400LPE.
2. For co-transmission scenario which is not covered above, please consult the RF technician or device supplier.

**DETACHABLE ANTENNA USAGE**

This radio transmitter (IC: 6921A-S4A542A / Model: S4A542A, S4A543A) has been approved by Industry Canada 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: 6921A-S4A542A / Model: S4A542A, S4A543A) a été approuvé par Industrie Canada 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.