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## AER1600 Series Micro Branch Router Quick Start Guide

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### Content

## AER1600 Series Micro Branch Router Quick Start Guide



### Introduction

This document provides a brief overview of the AER1600 Series Micro Branch Router, discusses what's inside the box, and provides basic setup and installation instructions for the device.

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### AER1600 Series Models

This document applies to the following AER1600 Series models.

CRADLEPOINT AER1600	S4A542A
CRADLEPOINT AER1650	S4A547A
CRADLEPOINT AER1600LPE	S4A547A
CRADLEPOINT AER1650LPE	S4A548A
CRADLEPOINT AER1600LP4	S4A637A
CRADLEPOINT AER1650LP4	S4A642A

## **Before You Begin**

Read the following before setting up and installing the AER1600 Series router.

NOTE: Cradlepoint recommends that all branch endpoints be installed by a professional. For assistance with installation or in locating a professional installer, contact [Cradlepoint Sales and Support \(https://cradlepoint.com/support/\)](https://cradlepoint.com/support/).

## **Location Considerations**

To ensure the AER1600 operates efficiently, do the following:

- Ensure the device is positioned to receive optimal signal. Avoid positioning near concrete walls, metal or reflective surfaces, or any other objects that may interfere with RF reception.
- Ensure plenty of ventilation. Avoid installing the device in enclosed spaces.
- Do not install the device in direct exposure to the elements. Extreme heat or cold can and will impact the router's performance.

Refer to the AER1600 Series Safety, Regulatory, and Warranty Guide (included with your hardware) for more information about location considerations.

## **Wi-Fi Capability**

The AER1650, AER1650LPE, and the AER1650LP4 do not support Wi-Fi.

## **SIM Setup for Connectivity**

For enhanced function of the AER1600 Series Micro-Branch Router, you will need at least one activated 2FF-sized SIM card with active cellular data plan. SIMs with wireless broadband data plans are available from wireless carriers such as AT&T, Verizon, and T-Mobile. The SIM must be provisioned by the carrier. Contact your carrier for detail about selecting a data plan and about the process for provisioning your SIM.

## **Installing an Optional External (Modular) Modem**



The AER1600 includes a slot for an additional MC400 modem. This enhanced capability allows for redundancy, advanced configuration, failover, and upgradability. The AER1600 supports both the MC400-600M or the MC400-1200M. Refer to the following for more information:

[MC400 Webpage \(https://cradlepoint.com/product/accessories/mc400-modular-modem/\)](https://cradlepoint.com/product/accessories/mc400-modular-modem/)

[MC400 Spec Sheet \(https://cradlepoint.com/sites/default/files/upload-file/mc400-spec-sheet-005172019.pdf\)](https://cradlepoint.com/sites/default/files/upload-file/mc400-spec-sheet-005172019.pdf)

[MC400 Quick Start Guide \(https://customer.cradlepoint.com/s/article/MC400-Getting-Started\)](https://customer.cradlepoint.com/s/article/MC400-Getting-Started)

## **Required Tools**

- #1 Philips head screwdriver

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## **Setup**

Read through the following to set up your AER1600 Series Micro Branch Router.

### STEP 1: Check box contents.

The AER1600 Series router includes the following:

- An AER1600 Series Router
- An MC400 LTE Modem\*
- A 12V 3A AC/DC Power Adapter
- Modem Antennas (quantities vary by model)
- An Ethernet Cable
- A Safety, Regulatory, and Warranty Guide

\*Included with AER1600LP3 and AER1650LP3. Optional for AER1600, AER1650, AER1600LPE, and AER1650LPE.

### STEP 2: Insert an activated SIM.



If setting up cellular connectivity, do the following:

1. Turn the router over and remove the screw to the SIM door.
2. Lift the SIM 1 card slot and insert an activated 2FF-sized SIM card. Insert the card with the metal contacts facing the interior of the device when closed and notch end up. Refer to the image above.
3. Insert a second activated SIM card into the SIM 2 card slot, if desired.
4. Flip the SIM slot(s) down then close and secure the SIM door with the screw.

### STEP 3 (Optional): Insert a modular MC400 modem.



The AER1600 Series has a slot for a removable modular MC400. If using the optional additional MC400 modem, it must be installed before the AER1600 Series router can be set up. To install this modem, do the following:

1. Insert an activated 2FF-sized SIM card into the MC400 modem, metal contacts down, notch end first.
2. Remove the modem door on the AER1600 Series device.
3. Slide the MC400 modem into the available modem slot, USB plug first, with the Cradlepoint logo facing up.
4. Replace the MC400 modem door cover. NOTE: Remove the plastic SMA covers from the modem door cover for the additional antenna ports on the modem.
5. Secure the door cover screw (beneath the device). NOTE: The modem door cover must be on the router or the embedded modem will not power on.

### STEP 4: Attach the antennas.



Attach the included Wi-Fi antennas to the connectors.

1. Hold the antenna straight and twist the base onto the SMA port on the device.
  - Do not over-tighten. The maximum recommended torque is 4 in-lbs.
2. Bend each antenna at the joint for optimal signal reception.

**STEP 5: Connect the power source.**

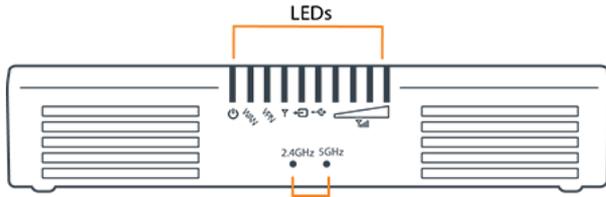


1. Connect the power supply to the router and then plug the other end into an electrical outlet.
2. Switch the device to ON (O = Off, – = ON). The LED lights will begin lighting up.

**STEP 6: Connect to NetCloud.**

Once the AER1600 is powered on, log into your NetCloud account to activate the router. Your device is packaged with NetCloud services and requires that you log into your NetCloud account to activate your device. Refer to [Getting Started with NetCloud \(https://customer.cradlepoint.com/s/article/Getting-Started-with-NetCloud-Manager\)](https://customer.cradlepoint.com/s/article/Getting-Started-with-NetCloud-Manager) for more information.

**Understanding LEDs**



Refer to the following table for information about LED indicators.

INDICATOR	BEHAVIOR
	<p><b>Power:</b> The AER1600 series device must be powered using an approved 12V AC power source.</p> <ul style="list-style-type: none"> <li>• <b>No Light</b> = Not receiving power. Check the power switch and the power source connection.</li> <li>• <b>Green</b> = Powered on</li> <li>• <b>Amber</b> = Attention. Open the administration pages and check the router status. The LED will show amber until the default Administrator and WiFi passwords are changed. Default passwords must be changed to secure the router.</li> </ul>
<b>WAN</b>	<p><b>Ethernet WAN:</b> indicates information about a data source connected to the Ethernet WAN port.</p> <ul style="list-style-type: none"> <li>• <b>Blue</b> = Connected to an ethernet WAN interface</li> </ul>
<b>VPN</b>	<p><b>VPN:</b> Indicates information about a VPN data source.</p> <ul style="list-style-type: none"> <li>• <b>Green</b> = Active VPN tunnel</li> </ul>
	<p><b>Embedded Modem:</b> indicates the status of embedded modem (only on AER1600LPE/AER1650LPE)</p> <ul style="list-style-type: none"> <li>• <b>Green</b> = Modem has established an active connection.</li> <li>• <b>Blinking Green</b> = Modem is connecting.</li> <li>• <b>Blinking Amber</b> = Data connection error. No modem connection possible.</li> <li>• <b>Blinking Red</b> = Modem is in the process of resetting.</li> </ul>
	<p><b>Removable MC400 Modem:</b> Indicates the status of the removable MC400 modem.</p> <ul style="list-style-type: none"> <li>• <b>No light</b> = No modem detected.</li> <li>• <b>Blue</b> = MC400 has an active connection.</li> </ul>
	<p><b>External USB Modem:</b> Indicates the status of removable modem(s).</p> <ul style="list-style-type: none"> <li>• <b>No light</b> = No modem detected.</li> <li>• <b>Blue</b> = USB modem has an active connection.</li> </ul>

INDICATOR	BEHAVIOR
	<p><b>Signal Strength:</b> Blue LED bars indicate the active modem's signal strength for integrated and removable modems.</p> <ul style="list-style-type: none"> <li>• <b>4 Solid bars</b> = Strongest signal</li> <li>• <b>1 Blinking bar</b> = Weakest signal. (A blinking bar indicates half of a bar)</li> </ul>
	<p><b>WiFi Broadcast:</b> Indicates activity on the WiFi broadcast for both the 2.4 GHz and 5 GHz bands (AER1600 only).</p> <ul style="list-style-type: none"> <li>• <b>2.4 GHz</b> (green) = 2.4 GHz WiFi is on and operating normally.</li> <li>• <b>5 GHz</b> (blue) = 5 GHz WiFi is on and operating normally.</li> </ul>

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### Troubleshooting

If the router takes longer than 5 minutes to connect to the Internet, you may need to log into the local UI of the device to make configuration changes or to start the troubleshooting process. You must be physically co-located with the device in order to do this. Once the router connects to the Internet, it should then connect to your NetCloud account and start its configuration download. Refer to [No Internet or Connection Issues](https://customer.cradlepoint.com/s/article/No-Internet-or-Connection-Issues) (<https://customer.cradlepoint.com/s/article/No-Internet-or-Connection-Issues>) for more troubleshooting information.

### Resources

[AER1600 Series Webpage](https://cradlepoint.com/product/endpoints/aer1600/) (<https://cradlepoint.com/product/endpoints/aer1600/>)  
[AER1600 Spec Sheet](https://resources.cradlepoint.com/product-docs/spec-sheet-aer1600) (<https://resources.cradlepoint.com/product-docs/spec-sheet-aer1600>)

### Help and Support

[Cradlepoint Customer Connect Community](https://customer.cradlepoint.com/s/) (<https://customer.cradlepoint.com/s/>)  
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