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## E300 Series Enterprise Branch Router Quick Start Guide

🕒 Oct 18, 2022 · Knowledge

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# E300 Series Enterprise Branch Router Quick Start Guide



## Introduction

This document provides a brief overview of the Cradlepoint NetCloud Enterprise Branch Service with E300 Series Router, discusses what's inside the box, and provides basic setup and install instructions.

### NOTE:

The Verify app includes many of the same instructions with an alternate order. This document supports the Verify app instructions.

Use the Navigation section below to locate the topics most applicable to troubleshooting your setup issues. For additional setup support, contact a professional installer or [Cradlepoint Support \(https://cradlepoint.com/support/\)](https://cradlepoint.com/support/).

## Navigation

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### E300 Enterprise Branch Router Models

This document applies to the following models:

Router	Model
CRADLEPOINT E300-C18B	MODEL: S5A946A
CRADLEPOINT E300-C7C	MODEL: S5A118A
CRADLEPOINT E300-C7D	MODEL: S5A119A
CRADLEPOINT E300-5GB	MODEL: S5A139A
WITH OPTIONAL PLUG-IN MODULES:	
CRADLEPOINT MC400-1200M-B	MODEL: MC400-1200M
CRADLEPOINT MC400-5GB	MODEL: MC400-5GB

## Before You Begin

Read the following before setting up the router.

### Location Considerations

To ensure the router operates efficiently, following are best practices for determining the installation location:

- Ensure the device is positioned to receive optimal cellular and Wi-Fi signal reception.
- Ensure that the mounting surface is flat.
- Avoid positioning near concrete walls, metal or reflective surfaces, or any other objects that may interfere with the antennas, RF reception, or cables.
- Ensure plenty of airflow for ventilation. Avoid installing the device in enclosed spaces.
- Do not install the device in direct sunlight or in locations where it may be exposed to the elements. Extreme heat or cold can and will impact the router's performance.
- Mount the device in a location compliant with the Safety, Regulatory, and Warranty Guide, included in the product shipping box.

### SIM Card for Wireless Connectivity

A wireless broadband data plan must be added to the router for wireless broadband connectivity. Wireless broadband data plans are available from network operators such as Verizon, AT&T, Telstra, etc. The SIM card must be activated and provisioned by the network operator. Contact your network operator for details about selecting a data plan and about the process for provisioning the SIM.

### Installing a Modular Modem

The router includes a slot for an additional modular modem. This enhanced capability allows for redundancy, advanced configuration, failover, and upgradability. The router supports the MC400 modular modem.

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 \(https://resources.cradlepoint.com/product-docs/mc400-spec-sheet-01202020\)](https://resources.cradlepoint.com/product-docs/mc400-spec-sheet-01202020)
- [MC400 Modular Modem Quick Start Guide \(/s/article/MC400-Getting-Started\)](/s/article/MC400-Getting-Started)

### Required Tools for Setup

- #0 Philips-head screwdriver (for modem door cover)
- #2 Philips-head screwdriver (for the mounting screws)
- Mounting equipment, varies upon desired mounting location. These tools may include, but are not limited to:
  - Drill with 2.5 mm (or equivalent) drill bit
  - Additional screws
  - Zip ties

### Setup

The following instructions walk you through basic setup of the router. For more advanced setups, contact a professional installer.

#### STEP 1: Check box for content.

The contents of the box vary depending upon the model purchased. Refer to the following to ensure you received all items included with the hardware:

- [1] Cradlepoint E300 Enterprise Branch Router
- A number of included antennas, depending on the model:
  - [2] LTE cellular antennas with E300-C7C and E300-C7D
  - [4] LTE cellular antennas with E300-C18B and E300-5GB
- [1] Power supply
- [1] Modem door screw
- [4] Rubber desk mount feet
- [2] Wall/ceiling mount screws
- [1] Antenna Alignment Tool
- [1] Antenna Alignment Tool guide and wall mount template
- [1] Getting Started reference sheet
- [1] Safety, Regulatory, and Warranty guide

#### Accessories

To enable cellular connectivity, you will also need at least one activated 2FF-sized SIM card with an active cellular data plan. Additionally, the router models may be enhanced with a Cradlepoint modular modem and additional external antennas.

#### STEP 2: Remove the modem door.

Unclip and remove the modem door from the router.



#### STEP 3: Insert an activated SIM card.

Insert an activated 2FF-sized SIM card into the the SIM1 slot (contacts down, notch in). The SIM card clicks into place.

Optionally, insert an activated 2FF-sized SIM into the SIM2 slot with the same orientation.



**STEP 4 (Optional): Set up and install the MC400 modular modem.**

The router has a slot for a second, removable modem (MC400 modular modem). If using an MC400 modular modem with the router, the modem must be installed before the router can be set up.

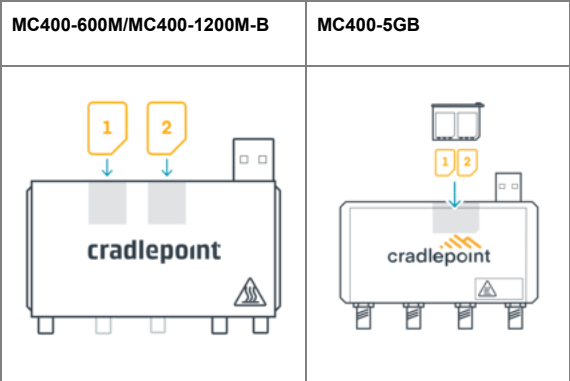
To install the modem, do the following:

1. MC400-5GB modems only: Insert the SIM tray key into the small hole to remove the SIM tray from the modem.



2. Insert an activated 2FF SIM card into the SIM1 slot/tray, metal contacts down and notch in towards the modem.

MC400-600M or MC400-1200M-B modems only: The SIM clicks into place. Depress again to remove the SIM, if necessary.



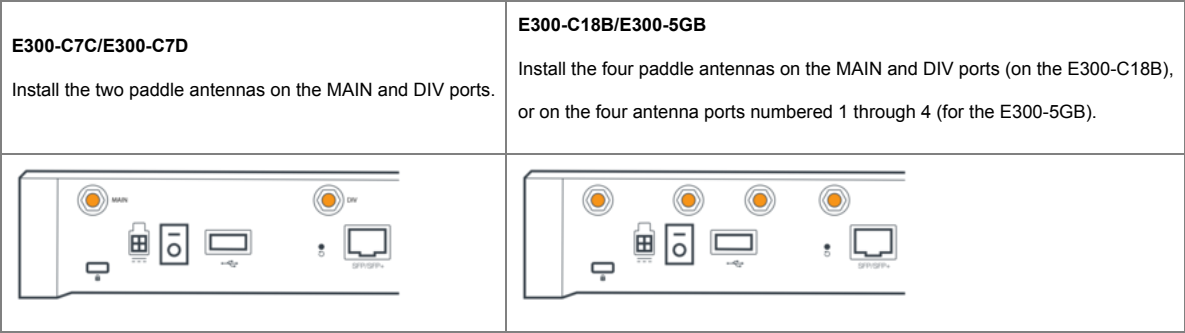
3. MC400-5G modems only: Slide the SIM tray back into the modem.
4. Slide the modem into the modem slot with the USB plug first and the Cradlepoint logo on top.

**STEP 5: Reinstall the modem door.**

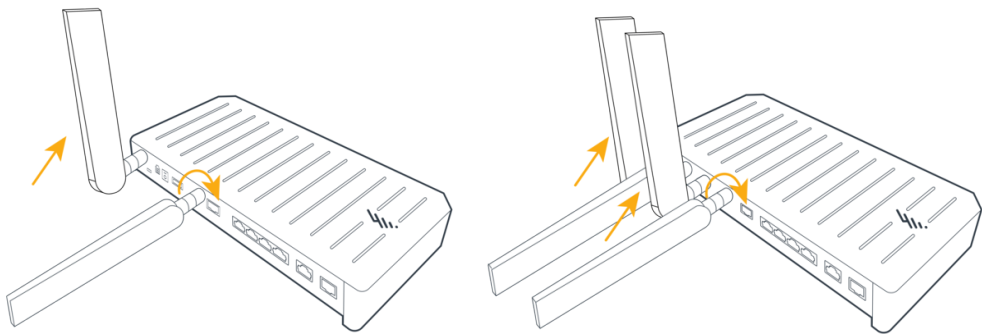
1. If you installed the optional MC400 modular modem, remove the black decal from the front of the modem door to expose the antenna port openings.
2. Snap the modem door into place.
3. Secure the modem door with the modem door screw (included).

**STEP 6: Attach the LTE cellular antennas.**

1. Attach the LTE cellular (paddle) antennas as described below:



2. Hold the antenna straight and twist the base to thread onto the connector.
3. Tighten with fingers only (maximum torque not to exceed 4 in-lbs/ .45 Nm). Do not over-tighten.

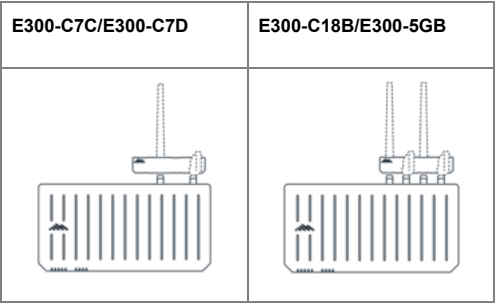


4. (Optional) Attach the cellular antennas to the MC400 modular modem cellular antenna MAIN and DIV ports, or on ports 1 through 4, depending on model of MC400. Take care not to attempt to attach a cellular antenna to a GNSS/GPS port, if present.

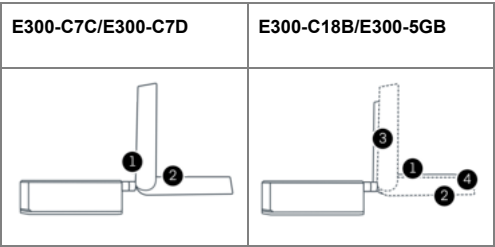
**STEP 7: Attach the Antenna Alignment Tool.**

Ensure all cellular (paddle) antennas are appropriately attached and are pointing straight out from the endpoint then do the following:

- 1. Starting from the corner, bend the first antenna upward to 90 degrees.
- 2. Keep the second antenna pointing straight out.
- 3. For the routers with four antennas, bend the third antenna up to 90 degrees and leave the fourth antenna pointing straight out.



- 4. Hold the Antenna Alignment Tool in the same orientation as the endpoint.
- 5. Slide the Antenna Alignment Tool down the antennas that are bent to 90 degrees until it snaps on the straight antennas.



**NOTE:**

If the MC400 modular modem is installed, use a similar antenna alignment as the router's. The MC400 modular modem does not come with an alignment tool.

**STEP 8: Mount the router.**

The router may be mounted in several ways, including placed on a desk, affixed to a wall, or mounted on the ceiling. Refer to the following for best practices:

**DESK**

- Install the rubber feet (included) on the bottom of the router.
- Place the router on a flat surface away from objects that cause RF interference, including concrete, reflective and metal surface, microwaves, and so on.

**WALL & CEILING**

- Using the included mounting insert, mark the desired mounting location on the ceiling or wall using a pen or marker.
- Ensure the mounting location is away from objects that cause RF interference, including concrete, reflective and metal surface, microwaves, and so on.

- Pre-drill holes for the mounting screws.
- Use wall anchors to ensure the device is securely mounted.

### STEP 9 (Optional): Connect the Ethernet cable.

If using a wired, Ethernet WAN connection, connect the Ethernet cable to the blue port marked WAN on the back of the router. Connect the other end to the WAN source.



If using a wireless WAN (using cellular connectivity), power up the router first, and then access your NetCloud Manager account to complete the setup.

### STEP 10: Power up the router.

1. Connect the power supply to the router and then plug the other end into an electrical outlet.



2. Switch the device to the ON position (O = Off, – = On).



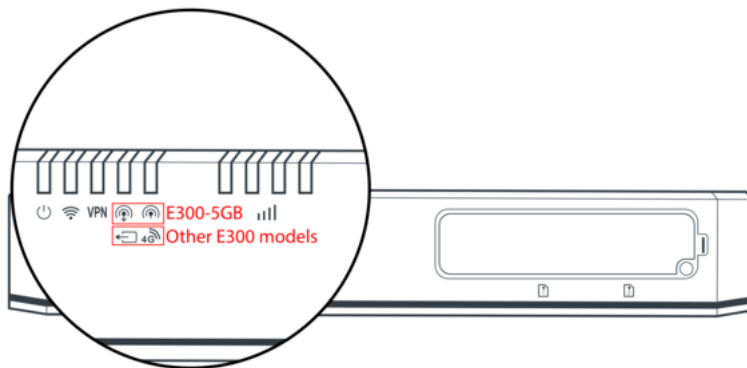
3. Allow one minute for the router to run through its bootup sequence.
4. Refer to the Understanding LEDs section of the guide for more information about LED indicator status.















### STEP 11: Activate the router in NetCloud Manager.

Activate the router through NetCloud Manager. Device activation requires that you log into your NetCloud Manager account. Refer to [Getting Started with NetCloud Manager](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

The E300 series routers use LED lights on the front panel to communicate various status conditions. Use the chart below to verify the status of your router after the 1-minute boot-up cycle.



	<b>POWER:</b> Detects that the unit has power  <b>NOTE:</b> The router must be powered using an approved 12 VDC power source.	
		<b>No Light</b> = Not receiving power. Check the power switch and the power source connection.
		<b>Green</b> = Powered on.
	<b>Wi-Fi:</b> Indicates activity on the Wi-Fi broadcast for both 2.4 GHz and 5 GHz bands.	
		<b>Blue</b> - Wi-Fi is on and operating normally.
		<b>No Light</b> - Wi-Fi is not operating.
<b>VPN</b>	<b>VPN:</b> Indicates the status of the VPN connection.	
		<b>Blue</b> - Connected to an active VPN.
		<b>Green</b> - Router is connected to a remote modem via WAN (captive modem).
OR 	<b>MC400 MODEM STATE:</b> Indicates information about the optional MC400 modem	
		<b>No Light</b> = No removable modem detected.
		<b>Green</b> = Modem has established an active connection.
		<b>Blinking Green</b> = Modem is connecting.
		<b>Blinking Yellow</b> = Data connection error. No modem connection possible.
		<b>Blinking Red</b> = Modem is in the process of resetting.

<div>4G</div> <div>OR</div> <div></div>	<b>EMBEDDED MODEM STATE:</b> Indicates information about the integrated modem		
	<div></div>	<b>No Light</b> - Modem not connected.	
	<div></div>	<b>Solid Green</b> - Modem has established an active WAN connection.	
	<div></div>	<b>Blinking Green</b> - Modem is connecting.	
	<div></div>	<b>Solid Yellow</b> - Modem is not active.	
	<div></div>	<b>Blinking Yellow</b> - Data connection error. No modem connection possible.	
	<div></div>	<b>Blinking Red</b> - Modem is in the process of resetting. <b>Blinking Red with Signal Strength LEDs</b> - SIM door is not installed, modem is off.	
<div></div>	<b>CELLULAR HEALTH:</b> Indicates the health of the primary cellular modem's signal		
	<div><div></div><div></div><div></div><div></div></div> <ul style="list-style-type: none"><li>When the embedded modem is active, the bars are blue ( <div></div> ).</li></ul>		
	<div><div></div><div></div><div></div><div></div></div> <ul style="list-style-type: none"><li>When the removable (MC400) modem is active, the bars are green ( <div></div> ).</li></ul>		
	<div><div></div><div></div><div></div><div></div></div> <ul style="list-style-type: none"><li>When a remote (captive) modem is active, the bars will be cyan ( <div></div> blue-green color).</li></ul>		
	<div></div>	<div></div>	<div></div>
<div></div>	<div></div>	<div></div>	<b>One Blinking Bar</b> - Weakest signal (a blinking bar indicates half of a bar).
<div></div>	<div></div>	<div></div>	<b>Four Blinking Bars</b> - SIM door is not installed, modem is off.
OTHER	ADDITIONAL LED INDICATORS		



	The white lights along the base of the router and the Cradlepoint logo on the top face of the device light up when the device is connected to a registered NetCloud Manager account.
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## Troubleshooting

If the device takes longer than five minutes to connect to the Internet, 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 to do this. Refer to [No Internet or Connection Issues](https://customer.cradlepoint.com/s/article/NCOS-No-Internet-or-Connection-Issues) (<https://customer.cradlepoint.com/s/article/NCOS-No-Internet-or-Connection-Issues>) for more information.

Once the device connects to the Internet, it should then connect to your NetCloud Manager account and start its configuration download.

## Resources

[E300 Series Enterprise Branch Router Webpage](https://cradlepoint.com/product/endpoints/e300/) (<https://cradlepoint.com/product/endpoints/e300/>).

[E300 Series Enterprise Branch Router Data Sheet](https://resources.cradlepoint.com/product-docs/e300-data-sheet) (<https://resources.cradlepoint.com/product-docs/e300-data-sheet>).

## Help and Support

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

[Cradlepoint Support Services](https://cradlepoint.com/support/) (<https://cradlepoint.com/support/>).

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