



AER3100/AER3150

All-in-One, Cloud-Managed Networking Solution



Quick Start Guide

Cradlepoint AER3100/AER3150

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What's In The Box



Cradlepoint AER3100/AER3150
(Models: S4A525A, S4A530A)



Dual-Band 2.4/5 GHz
WiFi Antennas*



MC400 3G/4G Modem with
Antennas



54V 2.25A AC/DC
Power Supply



Ethernet Cable



Quick Start Guide

*-Only on AER3100

Accessories

- Additional MC400 4G LTE modem*
- Rack mounting bracket with flanges
- Replacement power adapters and international power cords
- External modem antennas and cabling

** A Cradlepoint MC400 4G LTE modem comes standard with the AER3100/AER3150. Add a second integrated MC400 modem for a complete "cut-the-wire" 4G LTE solution, fusing enterprise reliability with unparalleled agility.*



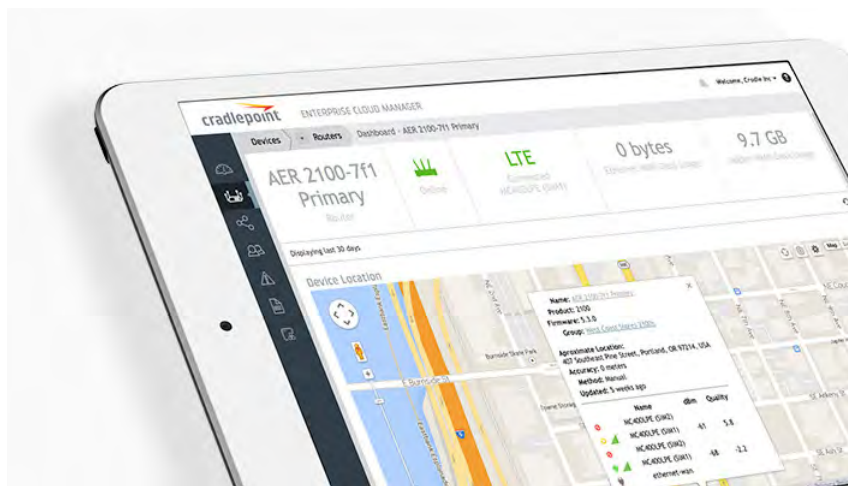
Enterprise Support

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

Cradlepoint Enterprise Cloud Manager

Deploy and Manage the Intelligent Network

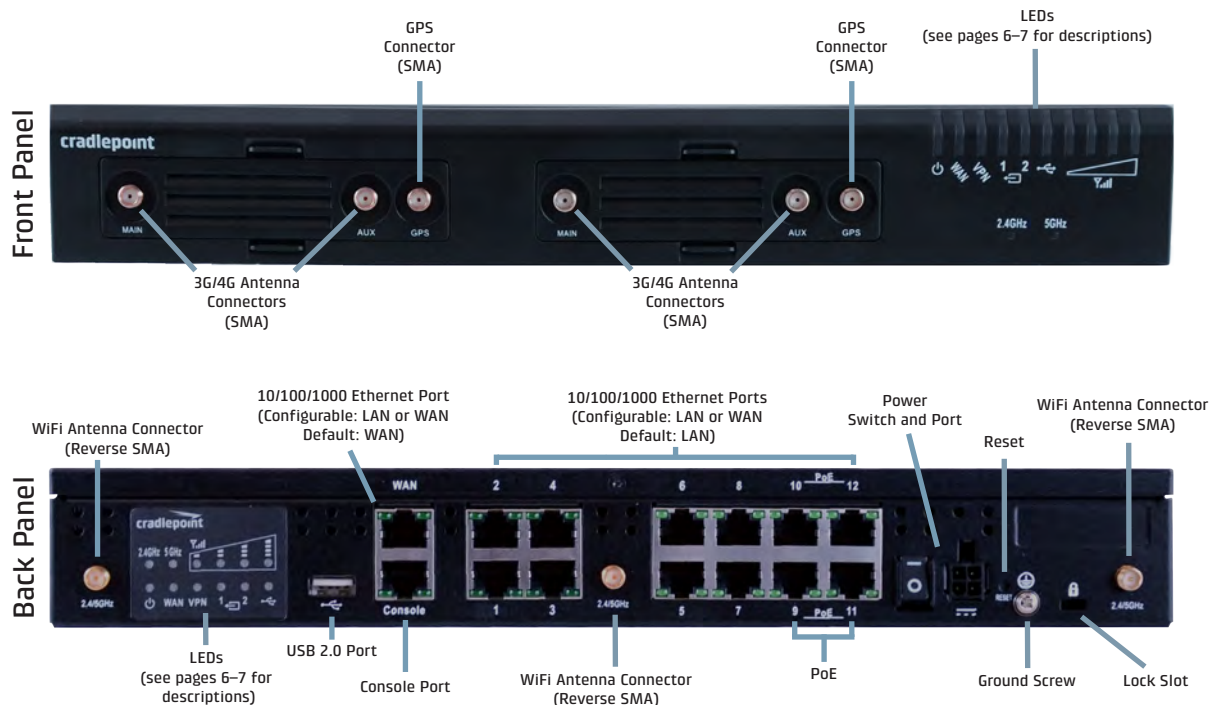
Rapidly deploy and dynamically manage networks at geographically distributed stores and branch locations with Enterprise Cloud Manager, Cradlepoint's network management and application platform. Enterprise Cloud Manager integrates cloud management with your Cradlepoint devices to improve productivity, increase reliability, reduce costs, and enhance the intelligence of your network and business operations.



To learn more about **Cradlepoint Enterprise Cloud Manager** and to begin a free 30-day trial, contact services@cradlepoint.com or visit cradlepoint.com/ecm.

Hardware

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Hardware

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Modem Covers Removed



Antennas

WiFi



Modem



When connecting the provided antennas, review the connection points.

- WiFi antennas (only included on AER3100) have flat circular bases (RSMA).
- Modem antennas have protruding pins (SMA).



POWER The Cradlepoint AER3100/AER3150 must be powered using an approved 54V 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 12) 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 AER3100) 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.

 **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.)

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

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

Both internal and external USB 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

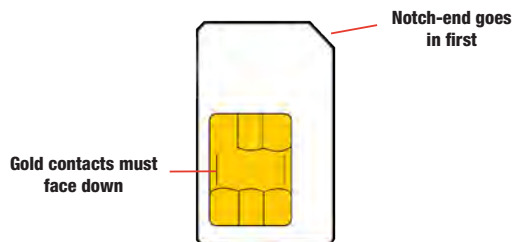
- Several different LEDs flash when the factory reset button is detected.
- Two of the modem LEDs blink red in unison for 10 seconds when there is an error during firmware upgrade.

1. Insert an activated SIM.

A wireless broadband data plan must be added to your Cradlepoint AER3100/AER3150. Wireless broadband data plans are available from wireless carriers such as Verizon, AT&T, Sprint, EE, and Vodafone. The SIM must be provisioned with the carrier. Contact your carrier for details about selecting a data plan and about the process for provisioning your SIM.

Once you have an activated 2FF SIM, insert it into the integrated modem. Insert the SIM card into the slot marked **SIM 1** (use the other slot, **SIM 2**, for a secondary/backup SIM). Be sure to insert the card with the notch-end first and the gold contacts facing down—it will click into place.

Sample SIM card



2. Attach the internal modem.

Follow these steps to attach the internal modem:

1. On front of router, press two tabs on modem cover together and pull cover straight out. Remove Main, Aux, and GPS plugs.
2. Slide modem(s) into USB port(s).
3. Reattach the modem cover. If desired, use a Phillips screwdriver to secure modem door screws to bottom side of the router near the front.



Step 1



Step 2



Step 3

3. Attach the WiFi* and modem antennas.

Attach the three included WiFi antennas and two included modem antennas to the connectors. Antennas are jointed, which enables you to position them for optimal signal. To attach, hold the antenna straight and twist the base of the antenna to connect, folding the joint if needed.

Examples of suggested antenna orientations:



Care should be taken to ensure that the router antennas are not near metal or other RF reflective surfaces. Do not mount router on a wall.

*-Only on AER3100

4. Connect the power source.

Plug the provided power supply (54V DC wall adapter) into an electrical outlet. Then connect the power supply to the router.

Ensure power is switched on:

- O = OFF
- I = ON



When you set the power switch to the ON (I) position, watch for the power LED to illuminate.

5. Connect to a computer or other network equipment.

Connect wirelessly to the WiFi* broadcast or with an Ethernet cable connected to your computer and then plugged into one of the Ethernet LAN ports (numbered 1–12). The default WiFi network name is “AER3100-xxx”, where “xxx” is the last three characters of your router’s MAC address (this is the **SSID** on the product label). To connect to the WiFi, you will need to input the **DEFAULT PASSWORD** when prompted. The **DEFAULT PASSWORD** is provided on the product label found on the bottom of your router.

Accessing the Administration Pages (local GUI)

Once you are connected, open the Cradlepoint AER3100/AER3150’s GUI-based local administration pages to make configuration changes to your router.

1. Open a browser window and type “cp/” or “192.168.0.1” in the address bar. Press **ENTER/RETURN**.
2. When prompted for your password, type the eight character **DEFAULT PASSWORD** found on the product label.



NOTE: All configuration changes can be made remotely through Cradlepoint Enterprise Cloud Manager. See page 14 for information about connecting to Enterprise Cloud Manager.

*-Only on AER3100

When you log in to the local administration pages for the first time, you will be automatically directed to the **FIRST TIME SETUP WIZARD**, which will walk you through basic steps to customize your Cradlepoint AER3100/AER3150. You have the ability to configure any of the following:

- Administrator Password
- Time Zone
- WiFi Network Name*
- Security Mode
- Access Point Name (APN)
- Modem Authentication
- Failure Check

If you are currently using the router's WiFi network, you will need to reconnect your devices to the network using the newly established wireless network name and password.

*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.*

*-Only on AER3100

Connecting to Cradlepoint Enterprise Cloud Manager

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Depending on your ordering process, your devices may have already been bulk-loaded into Enterprise Cloud Manager (ECM). Simply log in at **cradlepointecm.com** using your ECM credentials and begin managing your devices seamlessly from the cloud.

If your device has not yet been loaded into your ECM account, you need to register. Log into the local administration pages (see page 12) and go to **GETTING STARTED | ENTERPRISE CLOUD MANAGER REGISTRATION**. Enter your ECM username and password, and click on “Register”.

Once you are logged into **cradlepointecm.com**, begin managing your devices individually or by group. For example:

- View the **Dashboard** for a visual analytics overview of your devices, including a data usage chart.
- Make a configuration change and apply it to all the devices in a **Group**.
- Set up email **Alerts** for when a modem reaches its Data Cap Threshold, for a Configuration Change, etc.

For more information about how to use Cradlepoint Enterprise Cloud Manager, see the following Knowledge Base articles:

- knowledgebase.cradlepoint.com/articles/Support/CradlePoint-Enterprise-Cloud-Manager
- knowledgebase.cradlepoint.com/articles/Support/Getting-Started-with-Enterprise-Cloud-Manager

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UPDATING FIRMWARE

VIA ENTERPRISE CLOUD MANAGER

1. Log in at **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 12). 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.

Depending on your modem, you may need to specify the **APN** (Access Point Name). Cradlepoint devices attempt to auto-detect the correct APN. In most cases, the APN will be correctly detected and your device will connect. If your device does not connect within approximately 5-10 minutes, follow the steps below to manually enter the APN.

SELECT THE APN

1. Log into the administration pages (see page 12).
2. Select **INTERNET | CONNECTION MANAGER**.
3. Select the modem you would like to manage. Click **EDIT** to open the WAN Configuration editor.
4. Select the **SIM/APN/AUTH SETTINGS** tab. In the **ACCESS POINT CONFIGURATION** field, select **DEFAULT OVERRIDE** and manually enter the desired APN.
5. Input the username and password for authentication if required by your carrier.
6. Click **SUBMIT**.

The [Cradlepoint AER3100/AER3150](#) is a business-grade router specifically designed to meet the needs of distributed enterprise: retail locations, branch offices, restaurants, and convenience stores. Optimized for performance, reliability, and maximum WiFi* range, the AER3100/AER3150 has access to a cloud-enabled management and application platform called [Cradlepoint Enterprise Cloud Manager](#) (see page 20) for rapid deployment, dynamic management, and enhanced intelligence of Cradlepoint enterprise edge solutions.

Secure Access

The Cradlepoint AER3100/AER3150 supports WEP, WPA, and WPA2 encryption modes to create secure Internet connections for up to 128 connected devices per WiFi* channel (2.4 GHz and 5 GHz). 253 users can connect via Ethernet (with default DHCP settings). Prevent unwanted access to computers connected to your networks with an SPI Firewall and NAT (Network Address Translation). Features like URL Filtering, Traffic Filtering, DMZ, Virtual Server, Port Forwarding, and FTP pass-through (passive and active) are also available to enable safe Internet access for all connected users.

HOW TO CONFIGURE: Select **NETWORK SETTINGS | FIREWALL** for firewall options. Select **NETWORK SETTINGS | WIFI / LOCAL NETWORKS** for WiFi* security settings, IPv6 configuration, and more.

VPN (Virtual Private Networking), GRE (Generic Route Encapsulation)

Create, manage, and terminate secure VPN tunnels between remote computers and secure corporate networks with IPsec. With up to 40 concurrent sessions, the Cradlepoint AER3100/AER3150 supports both VPN and GRE, including multiple routes in a single tunnel. Provide end-to-end protection of secure company communications with Hash and Cipher encryption algorithm protocols.

HOW TO CONFIGURE: Select **INTERNET | VPN Tunnels** or **INTERNET | GRE Tunnels**. Click **ADD** to create a new tunnel.

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Load Balancing

When multiple data sources are connected to the router (4G, Ethernet, WiFi*), it can be configured to distribute all connected users or device traffic across active data connections. This feature distributes each connected user to the best data source available, relieving congestion and pressure on any single data source.

HOW TO CONFIGURE: Select **INTERNET | CONNECTION MANAGER**. In the WAN Interfaces table, select **LOAD BALANCE** for the WAN devices you want configured for load balancing.

Failover

When multiple Internet sources (4G, Ethernet, WiFi*) are connected to the Cradlepoint AER3100/AER3150, the router can automatically detect an Internet outage and “fail over” to a secondary connection and “fail back” when the primary data service returns. Redundant connection keeps your business going.

HOW TO CONFIGURE: Select **INTERNET | CONNECTION MANAGER**. Order your connections by failover priority.

Dual-Band Concurrent WiFi* Networks

The Cradlepoint AER3100 can broadcast up to four WiFi networks on both the 2.4 GHz and 5 GHz bands. Secured SSIDs are used for your trusted workgroup members. Guest (public) SSIDs can provide full, secure access to the Internet, but users are restricted from accessing the router administration console or any connected devices on the private network. Each network can be configured with its own security, QoS, and VLAN Settings. You also have the ability to “Hide” network names (SSIDs) from broadcast.

HOW TO CONFIGURE: Initial WiFi settings are available in the First Time Setup Wizard. For more WiFi configuration options, go to **NETWORK SETTINGS | WIFI / LOCAL NETWORKS**.

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VLAN Support

Create and manage virtual LANs to segregate and secure your network.

HOW TO CONFIGURE: Select **NETWORK SETTINGS | WIFI / LOCAL NETWORKS**. Select the “VLAN Interfaces” tab under **LOCAL NETWORK INTERFACES**.

WiFi as WAN*

The Cradlepoint AER3100 can receive an existing WiFi signal and use it to create secure Internet access, allowing you to connect devices using the Cradlepoint AER3100's security features. The WiFi as WAN feature can be used as a WiFi repeater or as a WiFi-to-Ethernet adapter for non-WiFi devices.

HOW TO CONFIGURE: Select **INTERNET | WIFI AS WAN**. In the “WiFi Client Mode” field, select **WIRELESS AS WAN**. The router automatically detects nearby WiFi networks: import the desired network.

VRRP (Virtual Router Redundancy Protocol)

VRRP provides hardware redundancy for increased reliability. Configure master and backup routers for your network.

HOW TO CONFIGURE: Select **NETWORK SETTINGS | WIFI / LOCAL NETWORKS**. Select the desired network and click **EDIT**. Select the VRRP tab for configuration options. Requires a feature license.

Advanced Routing Protocols (BGP/OSPF/RIP)

Border Gateway Protocol (BGP), Open Shortest Path First (OSPF), and Routing Information Protocol (RIP) are enterprise routing protocols that improve router communication and understanding of the network topology.

HOW TO CONFIGURE: Select **NETWORK SETTINGS | ROUTING PROTOCOLS**. Select the desired routing protocol to view configuration options. Requires a feature license.

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Zscaler Internet Security

Combined with Cradlepoint Enterprise Cloud Manager, Zscaler Internet Security enables enterprises to embrace cloud applications and mobility, while delivering a superior user experience. Configured in minutes, Zscaler Internet Security leverages the threat intelligence harnessed from the Zscaler cloud. Now any business, regardless of size, can connect to the Internet with confidence. To learn more, visit cradlepoint.com/product/zscaler-internet-security.

CP Secure Threat Management

CP Secure Threat Management is a comprehensive intrusion prevention (IPS) and intrusion detection system (IDS) that defends against evasion attacks, improves network availability, and protects sensitive data. Powered by Trend Micro's industry leading DPI engine, CP Secure Threat Management can be deployed instantly through Cradlepoint Enterprise Cloud Manager providing multifunctional and single-pass deep packet inspection (DPI) scanning with optimized notification alerts. To learn more, visit cradlepoint.com/products/threat-management.

CP Secure VPN

Configured, deployed, and managed from Enterprise Cloud Manager, CP Secure VPN delivers a virtual private data network that minimizes both cost and complexity. Unlike traditional bulky head-end concentrator hardware solutions, CP Secure VPN allows IT managers to secure their expanding edge networks using architectures that scale quickly and are easy to maintain. To learn more, visit cradlepoint.com/products/cp-secure-vpn.