

# cradlepoint

## AER2200 Spec Sheet



Cradlepoint AER2200 Branch Routers are sold as part of an all-inclusive mobile networking solution in a NetCloud Solution Package.

**NetCloud Solution Packages for Mobile include:**

- Ruggedized routers, purpose built for mobile applications
- Award-winning remote cloud management and network intelligence with **NetCloud Manager**
- Secure IoT networking with **NetCloud Perimeter** for perimeter-secured overlay networks
- **24x7 Support and Limited Lifetime Warranty**

## WHAT TO BUY

Description	Part Numbers
NetCloud Essentials for Branch Routers (Prime) with AER2200-600M	BA1-2200600M-NNN
NetCloud Essentials for Branch Routers (Prime) with AER2200-600M	BA3-2200600M-NNN
NetCloud Essentials for Branch Routers (Prime) with AER2200-600M	BA5-2200600M-NNN
NetCloud Advanced Upgrade for Branch Routers (Enterprise)	BAX-NCADV

*x = 1, 3, or 5 years*

**NetCloud Essentials** contains all the features and capabilities required for a broad range of mobile or in-vehicle applications. Essentials packages include 24x7 Support (Phone Support: 24 hour weekdays with Emergency response on weekends, Web: 24x7, Chat: 24x5) and a Limited Lifetime Warranty.

For additional capabilities, a **NetCloud Advanced** Upgrade can be added to the NetCloud Essentials Package at any time.

See additional details of what is included in the Essential and Advanced NetCloud software:

[cradlepoint.com/branch-networks](http://cradlepoint.com/branch-networks)

For more details on the AER2200 Branch Routers, included with the NetCloud Solution Packages for mobile, see below.

## WHAT'S IN THE BOX

- AER2200 with embedded LTE Advanced modem
- External 3G/4G mobile broadband modem antennas (2) (SMA); finger tighten only
- External dual-band high-gain WiFi antennas (4) reverse SMA (5 dBi, 2.4 GHz, 5 dBi 5 GHz, VSWR ≤ 2); finger tighten only
- 54 V, 1.2 A (65 W) AC/DC power adapter, 30 W PoE budget, C8 line cord
- Ethernet cable
- Quick Start Guide
- Warranty information
- Rubber feet (4) for desk mounting

## KEY FEATURES

### WAN

- 600M: LTE Advanced 600/75 Mbps DL/UL, FDD/TDD w/HSPA+ fallback (SIM-based, Auto-carrier Selection for all North American, European, and Asia Pacific carriers)
- One embedded modem
- One MC400 slot for 2nd modem
- Dual SIM slot in each modem
- Active GPS
- 10 10/100/1000 Ethernet ports (WAN/LAN switchable)
- WiFi as WAN
- Smart WAN Selection
- Multi-PDN
- Failover/Failback
- Load Balancing
- Advance Modem Failure Check
- WAN Port Speed Control
- WAN/LAN Affinity
- IP Passthrough
- Standby
- DynDNS
- Auto QoS
- QoS (DSCP and Priority Queuing)

### LAN

- 10 10/100/1000 Ethernet ports (WAN/LAN switchable); Supports four ports of PoE (1–4) for class I, II, III, or IV devices (default 30 W power budget, up to 120 W with accessory power supply)
- LLDP support
- VLAN 802.1Q
- DHCP Server, Client, Relay
- DNS and DNS Proxy
- Split DNS
- STP<sup>1</sup>
- Multicast/Multicast Proxy

### WIFI

- Dual-Band Dual-Concurrent (2×2 2.4 GHz MU-MIMO and 4×4 5 GHz MU-MIMO)
- 802.11 (a/b/g/n/ac) wave 2
- Up to 248 connected devices (124 per channel – 2.4 GHz and 5 GHz)
- WPA/WPA2 Personal, WPA2 Enterprise (WiFi), WEP Auto
- Hotspot/Captive Portal
- SSID-based Priority
- 802.11k – Radio Resource Management - Client load balancing
- 802.11r – Fast Roaming
- 802.11v – Wireless Network Management

## MANAGEMENT

- Cradlepoint NetCloud Manager (NCM)
- Real-time diagnostics/troubleshooting
- Remote connect / OOBM
- Secure remote cloud configuration
- GeoView location services
- Web UI, API, CLI
- NetCloud Engine gateway support
- Client and Traffic Visibility and Control
- SDK support
- GPS Location
- Data Usage Alerts
- Advanced Troubleshooting (support)
- Device Alerts
- SNMP
- SMS control
- Console Port for OOBM

## VPN & ROUTING

- IPsec Tunnel – up to 20 concurrent sessions
- IKEv2 support (includes MOBIKE)
- OpenVPN (SSL VPN)
- L2TP<sup>1</sup>
- GRE Tunnel
- OSPF/BGP/RIP
- Route Filters (Access Control Lists, Prefix Filters, Route Maps, Communities for BGP)
- Policy-based Routing
- Per-Interface Routing
- Static Routing
- NAT
- NAT-less Routing
- WAN Affinity
- Virtual Server/Port Forwarding
- VTI Tunnel Support
- NEMO/DMNR
- IPv6
- VRRP
- STP
- NHRP

## SECURITY

- RADIUS and TACACS+ support\*
- 802.1x authentication for Wireless and Wired Networks
- Zscaler Internet Security<sup>2</sup>
- Certificate support
- Application-level gateways
- MAC Address Filtering
- CP Secure Threat Management<sup>1</sup>

- Advanced Security Mode (local user management only)
- IP Filtering
- Content Filtering
- FIPS 140-2 Inside version available

\* - Native support for authentication. Authorization and accounting support through hotspot/captive portal services  
1 – Requires a [CP Secure Threat Management](#) license  
2 – Requires [Zscaler](#) Internet Security License

## SPECIFICATIONS

### WAN:

- Embedded 600M LTE Advanced modem (with DC-HSPA+ failover)
- MC400 slot for optional 2nd modem
- 10 10/100/1000 Ethernet ports (cable/DSL/T1/satellite/Metro Ethernet; WAN/LAN switchable)
- WiFi (as WAN; Metro WiFi) 2×2 MIMO 2.4 GHz and 4×4 MIMO 5 GHz (802.11 a/b/g/n/ac)

### LAN:

- Dual-band dual-concurrent WiFi (802.11 a/b/g/n/ac wave 2)
- 10 10/100/1000 Ethernet ports (WAN/LAN switchable)
- Serial console

### TEMPERATURE:

- 0 °C to 50 °C (32 °F to 122 °F) operating
- -20 °C to 70 °C (-4 °F to 158 °F) storage
- Redundant internal fans for reliable cooling

### HUMIDITY (non-condensing):

- 10% to 85% operating
- 5% to 90% storage

**MEMORY:** 512 MB DRAM; 8 GB eMMC

### SIZE:

- 7.3 × 8.3 × 1.7 in (185 × 210 × 44 mm)
- 1U height for rack mount

**WEIGHT:** 3 lb 5 oz (1.5 kg)

**CERTIFICATIONS:** FCC, WiFi Alliance, CE, IC, carrier certifications

### WIFI POWER (FCC):

- 2402–2483.5 MHz (2.4 GHz band): 28.3 dBm conducted
- 5150–5250 MHz (5 GHz band 1): 29.1 dBm conducted
- 5725–5850 MHz (5 GHz band 3): 30.0 dBm conducted

### WIFI POWER (Europe/Rest of World):

- 2.4 GHz band: 19.88 dBm EIRP
- 5150-5250 MHz: 22.96 dBm EIRP

**GPS:** Modem-based GPS

## ACCESSORIES

- Second integrated 4G LTE modem
  - MC400LP6 (North America or EU)
  - MC400LP5 (Asia Pacific or Saudi Arabia)
  - MC400LP4 (AT&T, Verizon, T-Mobile and Canada)
  - MC400LPE-VZ (Verizon)
  - MC400LPE-AT (AT&T)
  - MC400LPE-SP (Sprint)
  - MC400LPE-GN (generic – for use on T-Mobile in the U.S. and Rogers, Bell, & TELUS in Canada)
  - MC400LP3-EU (Europe)
- 700 MHz–2700 MHz Wide Band Directional Antenna (Yagi/Log- Periodic) Part #: 170588-000
- AER2200 high power supply for up to 4 ports of PoE+ .at (30W) power (120W PoE budget) (C14 line cord not included) Part #: 170751-000
- AER2200, 54V 2.22A (60W PoE budget) power supply (C14 line cord not included) Part #: 170671-000
- AER2200 Rack-Mount Brackets Part #: 170749-000
- 12" Mag-Mount Antenna with SMA Male Connector Part #: 170605-000
- 4" Mini Mag-Mount Antenna with SMA Male Connector Part #: 170606-000
- 2.4/5 GHz Dual-band Dual-concurrent WiFi Antenna Part #: 170628-000
- Universal 3G/4G/LTE Modem Antenna Part #: 170649-000
- GPS Screw-Mount Antenna Part #: 170651-000
- GPS Mag-Mount Antenna Part #: 170652-000
- Multi-Band Omni-Directional Antenna Part #: 170668-000
- Indoor/Outdoor Panel Patch Part #: 170669-000

## BUSINESS-GRADE MODEM SPECIFICATIONS

AER2200 600M models include an embedded LTE Advanced 600 Mbps 4G LTE modem. The 600M modems support Worldwide, SIM-based, Auto-carrier selection. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

The LTE bands certified for each carrier are listed below.

### AER2200-600M-NA:

- Technology: LTE Advanced, DC-HSPA+
- Downlink Rates: LTE 600 Mbps, DC-HSPA+ 42.2 Mbps
- Uplink Rates: LTE 75 Mbps, DC-HSPA+ 5.76 Mbps
- Frequency Bands:
  - LTE Bands
    - LTE FDD: 1–5, 7–8, 12–13, 17, 20, 25–26, 28–30, 66
    - LTE TDD: 38, 40–41
    - HSPA+: 1–2, 4–5, 8
- LTE 2DL Carrier Aggregation Combinations:
  - B2+B2, B2+B4, B2+B5, B2+B12, B2+B13, B2+B17, B2+B29, B2+B30, B4+B4, B4+B5, B4+B7, B4+B12, B4+B13, B4+B17, B4+B29, B4+B30, B5+B30, B12+B12, B12+B30, B25+B25, B25+B26, B25+B41, B26+B41, B29+B30, B41+B41, B1+B20, B3+B3, B3+B7, B3+B20, B3+B38, B7+B7, B7+B8, B7+B20, B38+B38, B1+B3, B1+B7, B1+B28, B3+B8, B3+B28, B5+B7, B5+B40, B7+B8, B7+B20

- LTE 3DL Carrier Aggregation Combinations:
  - B2+B2+B12/17, B2+B2+B13, B2+B2+B4, B2+B4+B5, B2+B4+B12, B2+B4+B13, B2+B4+B29, B2+B5+B30, B2+B12+B12, B2+B12+B30, B2+B29+B30, B4+B4+B5, B4+B4+B7, B4+B4+B12, B4+B4+B13, B4+B5+B30, B4+B12+B12, B4+B12+B30, B4+B29+B30, B25+B26+B41, B25+B41+B41, B26+B41+B41, B41+B41+B41, B1+B3+B20, B1+B7+B20, B3+B3+B7, B3+B3+B20, B3+B7+B20, B3+B7+B7, B3+B20+B38, B3+B38+B38, B3+B3+B5, B3+B3+B8, B3+B7+B7, B3+B7+B28, B7+B7+B28, B28+B40+B40, B40+B40+B40
- Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 2, 4, 5, 8
- Power: LTE: 23 dBm ±1; DC-HSPA+: 23 dBm ±1
- Antennas: two SMA male (plug), finger tighten only (maximum torque spec is 7 kgf/cm2)
- GPS: active GPS support
- SMS: SMS support
- Industry Standards & Certs: CE, FCC, GCF-CC, IC, PTCRB, AT&T, Sprint (pending certification), Verizon, Verizon NEMO/DMNR for Primary Wireless Access

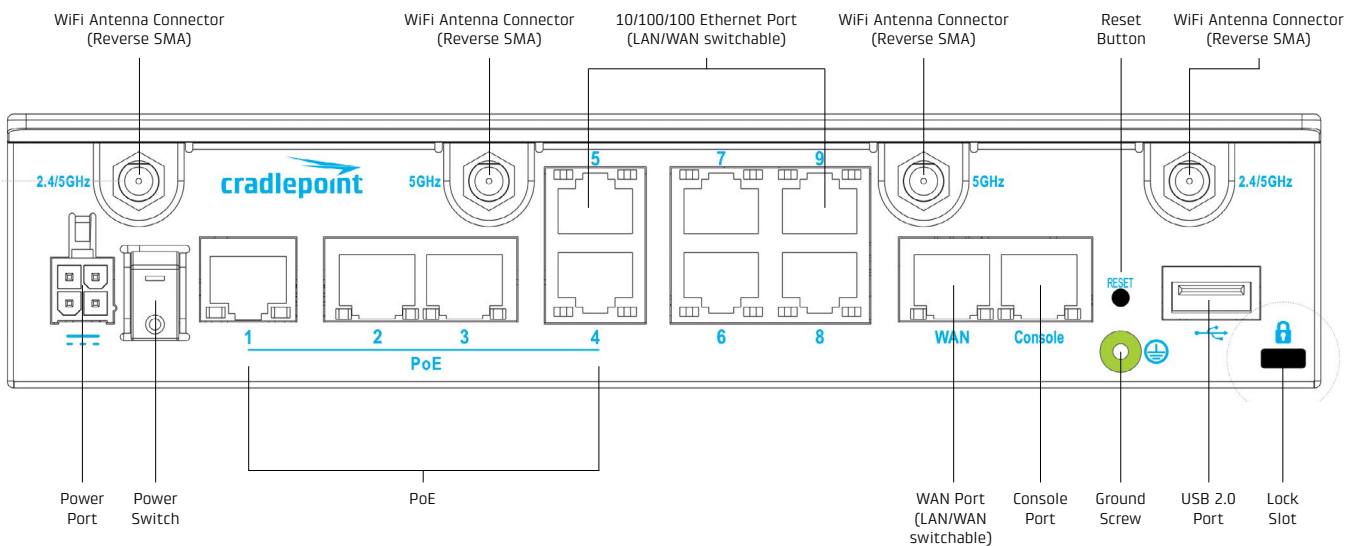
## SUPPORT & WARRANTY

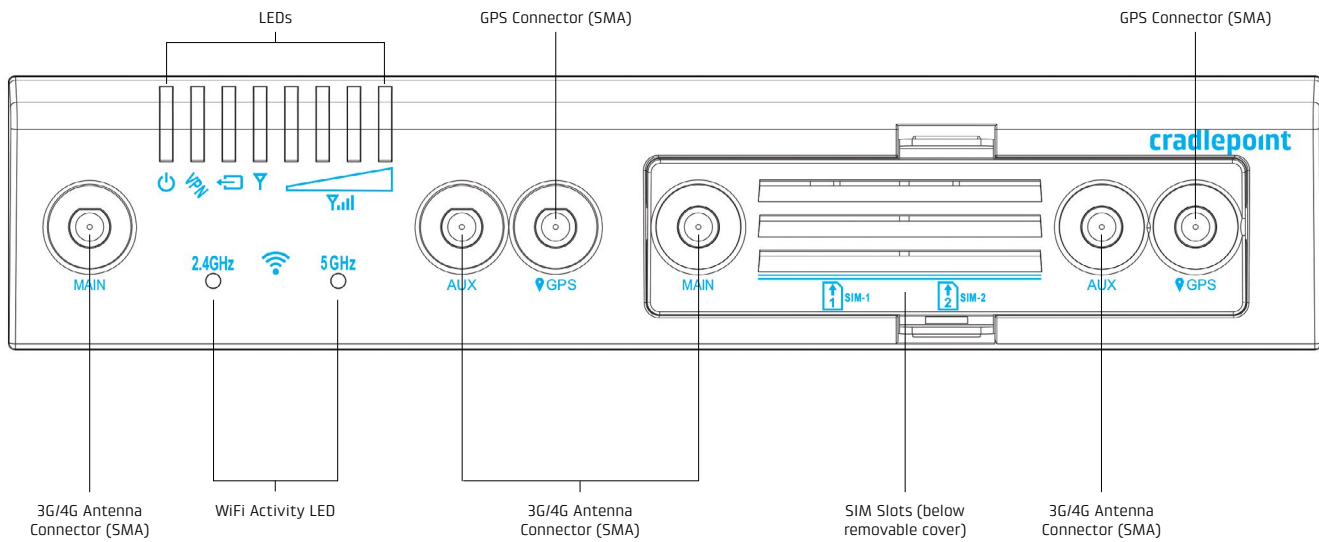
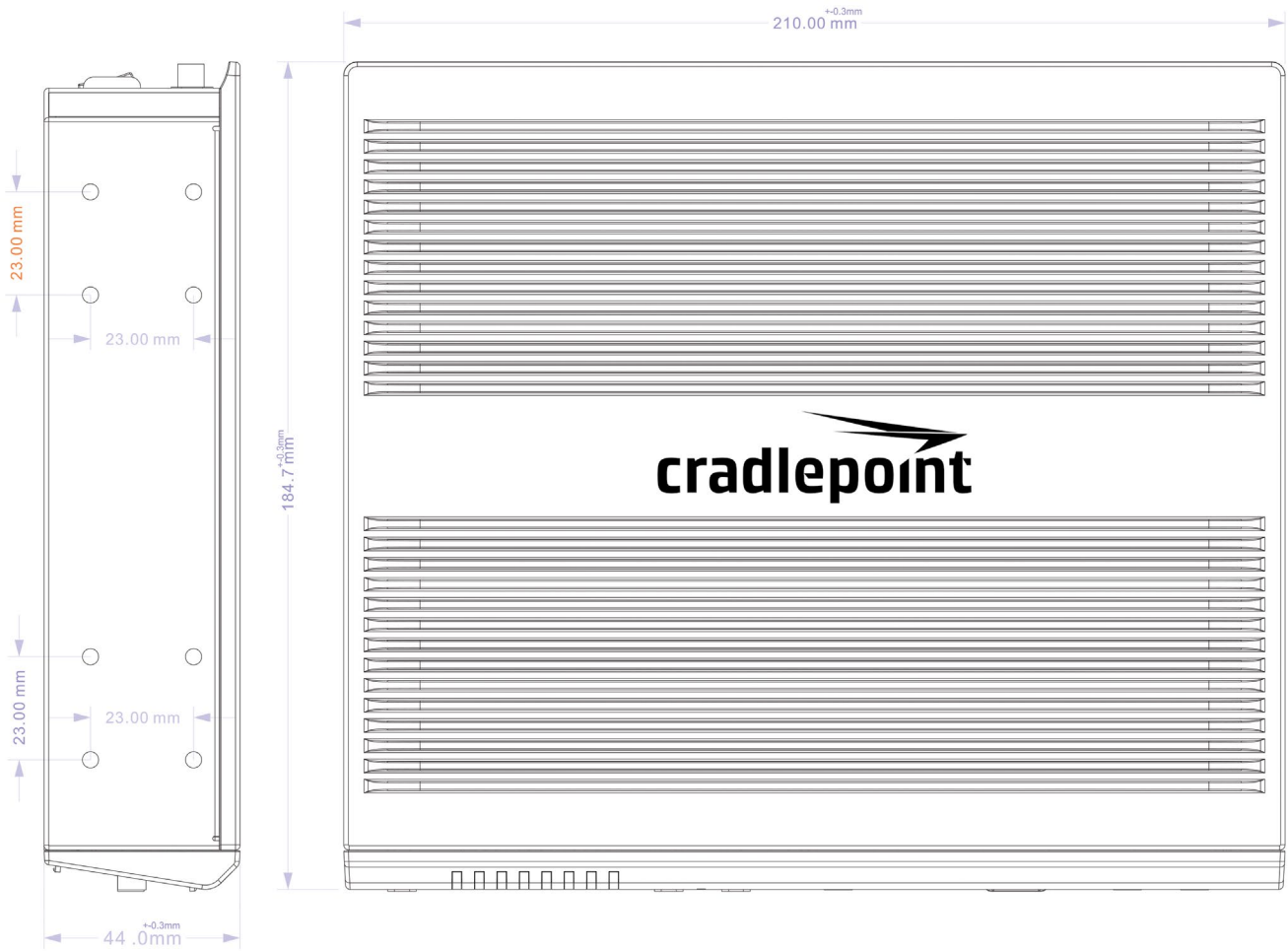
The AER2200 is only sold as a component of NetCloud Solution Packages.

- NetCloud Solution Packages include support for the full subscription term.
- All Cradlepoint hardware products are covered by a Limited Lifetime Warranty for as long as they are under a NetCloud Solution Package subscription

The AER2200 includes a minimum three-year hardware warranty when purchased from an authorized Cradlepoint Partner.





## HARDWARE







## LEDS

INDICATOR	BEHAVIOR
	<p><b>POWER:</b> The Cradlepoint AER2200 must be powered using an approved 54 V DC power source.</p> <ul style="list-style-type: none"> <li>• Green = Powered ON.</li> <li>• No Light = Not receiving power. Check the power switch and the power source connection.</li> <li>• Amber = Attention. Open the administration pages and check the router status.</li> </ul>
<p><b>VPN</b></p>	<p><b>VPN:</b> Indicates status of VPN connection.</p> <ul style="list-style-type: none"> <li>• Blue = Connected to an active VPN.</li> </ul>
	<p><b>REMOVABLE MODEM:</b> Indicates the status of removable modem(s).</p> <ul style="list-style-type: none"> <li>• Green = Modem has established an active connection.</li> <li>• Blinking Green = Modem is connecting.</li> <li>• Blinking Amber = Data connection error. No modem connection possible.</li> <li>• Blinking Red = Modem is in the process of resetting.</li> </ul>
	<p><b>INTEGRATED MODEM:</b> Indicates information about the integrated modem.</p> <ul style="list-style-type: none"> <li>• Green = Modem has established an active connection.</li> <li>• Blinking Green = Modem is connecting.</li> <li>• Amber = Modem is not active.</li> <li>• Blinking Amber = Data connection error. No modem connection possible.</li> <li>• Blinking Red = Modem is in the process of resetting.</li> <li>• Blinking Red with Signal Strength LEDs = SIM door is not installed, modem is off.</li> <li>• No Light = Modem not connected.</li> </ul>
	<p><b>SIGNAL STRENGTH:</b> Blue LED bars indicate the active modem's signal strength (only for integrated and removable modems).</p> <ul style="list-style-type: none"> <li>• 4 Solid Bars = Strongest signal.</li> <li>• 1 Blinking Bar = Weakest signal. (A blinking bar indicates half of a bar.)</li> <li>• 4 Blinking Bars = SIM door is not installed, modem is off.</li> </ul>
<p><b>2.4GHz 5GHz</b></p>	<p><b>WiFi BROADCAST:</b> These two LEDs indicate activity on the WiFi broadcast for both the 2.4 GHz and 5 GHz bands.</p> <ul style="list-style-type: none"> <li>• 2.4 GHz (green) = 2.4 GHz WiFi is on and operating normally.</li> <li>• 5 GHz (blue) = 5 GHz WiFi is on and operating normally.</li> </ul>
<p><b>Other</b></p>	<p><b>ADDITIONAL LED INDICATIONS</b></p> <ul style="list-style-type: none"> <li>• Several different LEDs blink when the factory reset button is detected.</li> <li>• Two of the modem LEDs blink red in unison for 10 seconds when there is an error during NCOS upgrade.</li> </ul>