



NetCloud Services for Branch



AER2200 Spec Sheet



Shown: AER2200-1200M

Cradlepoint AER2200 branch routers are sold as part of an all-inclusive branch networking packages.

NetCloud Solution Packages for Branch Routers Include:

- LTE routers, purpose built for branch applications
- A NetCloud Service Plan tailored for branch networking and set for a specific term
- 24x7 support and limited lifetime warranty

What to Buy

Description	Part Numbers
North America (U.S., Canada)	
— NetCloud Essentials for Branch Routers with AER2200-1200M	BAX-22001200-NNN
— NetCloud Essentials for Branch Routers with AER2200-600M	BAX-2200600M-NNN
Europe (EU)	
— NetCloud Essentials for Branch Routers with AER2200-600M-EU	BAX-2200600M-EWE
— NetCloud Essentials for Branch Routers with AER2200-600M-UK	BAX-2200600M-EWU
Asia-Pacific (Australia, New Zealand, Singapore)	
— NetCloud Essentials for Branch Routers with AER2200-600M-AU	BAX-2200600M-PWP
All Regions	
— NetCloud Advanced Upgrade for Branch Routers	BAX-NCADV

x = 1, 3, or 5 years

NetCloud Essentials packages and plans contain all the features and capabilities required for small to mid-sized branch 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/netcloud-manager

For more details on the AER2200 branch routers, included with the NetCloud Packages for branch, see below.

What's in the Box

- AER2200 with embedded LTE Advanced or LTE Advanced Pro modem
- Universal 3G/4G/LTE antennas with dedicated active GPS antenna port; 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
- Warranty information
- Rubber feet (4) for desk mounting

Key Features

Models

- AER2200-1200M: LTE Advanced Pro 1.2 Gbps LTE/HSPA+ (SIM-based, Auto-carrier Selection)
 - The AER2200-1200M is FirstNet Ready™; includes support for Band 14
- AER2200-600M: LTE Advanced 600 Mbps LTE/HSPA+ (SIM-based, Auto-carrier Selection for all North American, European, and Asia Pacific carriers; includes support for 700 MHz Band 28 in Asia Pacific)

WAN

- 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
- STP¹
- Multicast/Multicast Proxy

WiFi

- Dual-Band Dual-Concurrent (2x2 2.4 GHz MU-MIMO and 4x4 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 Perimeter 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)
- L2TP1
- 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 Security²
- Certificate support
- Application-level gateways
- MAC Address Filtering
- CP Secure Threat Management¹
- 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

The following features are delivered through the NetCloud Service.

WAN:

- Embedded 1200M LTE Advanced Pro modem or embedded 600M LTE Advanced modem (both 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) 2x2 MIMO 2.4 GHz and 4x4 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

Humidity (non-condensing):

- 5% to 95% operating
- 5% to 95% 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

Performance

- Max Throughput (Default Configuration*): 950 Mbps
- Max Concurrent TCP Sessions: 32,000
- Recommended Max Client Count: 100**
- Performance testing was conducted based off requirements as defined in RFC2544 using a mix of 64, 256, and 1500-byte packet sizes. Throughput is shown as bi-directional TCP traffic with less than a 1% packet loss using four wired clients.
- Specifications and information in this datasheet are subject to change without notice

* Default configuration shipped with hardware including NAT and basic stateful/zone firewall configuration.

** Cradlepoint defines client as any network connected device utilizing resources, such as bandwidth, on the local network.

Accessories

- Second integrated 4G LTE modem
 - MC400-1200M
 - 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
- Cradlepoint Certified Antennas for Fixed Sites

Enterprise-Class Modem Specifications

AER2200-1200M-NA

AER2200-1200M models include an embedded LTE Advanced Pro 1.2 Gbps 4G LTE modem. The 1200M modems supports SIM-based, Auto-carrier selection. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

- Technology: Category 18 LTE Advanced Pro, DC-HSPA+
- Downlink Rates: LTE 1.2 Gbps, DC-HSPA+ 42.2 Mbps*
- Uplink Rates: LTE 150 Mbps, DC-HSPA+ 5.76 Mbps*
- MIMO: 2x2 or 4x4 MIMO
- 256 QAM support
- Frequency Bands:
 - LTE Bands
 - LTE FDD 1, 2(25), 3, 4(66), 5(26/18/19), 7, 8, 12(17), 13, 14, 20, 28, 29, 30, 32, 71
 - LTE TDD 38, 39, 40, 41, 42, 43, 46(LAA 5GHz), 48**(CBR5 3.5GHz)
- Carrier Aggregation: Up to 5CA. [] indicates 4x4 MIMO
 - AT&T: 2,4,5,12,14,29,30,66,46; 3G 2, 5
 - 2CA DL carrier aggregation combinations:
CA_[2A]-[2A], CA_[2A]-[4A], CA_2A-5A, CA_2A-12A, CA_2A-14A, CA_2A29A, CA_2A-30A, CA_[2A]-46A, CA_[2A]-[66A], CA_2C, CA_[4A]-[4A], CA_4A-5A, CA_4A-12A, CA_4A-29A, CA_4A-30A, CA_[4A]-46A, CA_5A30A , CA_5A-66A, CA_5B, CA_12A-30A, CA_12A-66A, CA_12B, CA_14A30A, CA_14A-66A, CA_29A-30A, CA_29A-66A, CA_30A-66A, CA_[66A][66A], CA_66B, CA_66C
 - 3CA DL carrier aggregation combinations:
CA_2A-2A-5A, CA_[2A]-2A-12A, CA_2A-2A-14A, CA_2A-2A-30A, CA_2A2A-66A, CA_[2A]-4A-4A, CA_2A-[4A]-[4A], CA_[2A]-4A-5A, CA_2A-[4A]-5A, CA_[2A]-4A-12A, CA_2A-[4A]-12A, CA_2A-4A-30A, CA_2A-5A-30A, CA_[2A]-5A-66A, CA_2A-5A-[66A], CA_2A-12A-30A, CA_[2A]-12A-66A, CA_2A-12A-[66A], CA_2A-14A-30A, CA_2A-14A-66A, CA_2A-29A-30A, CA_2A-30A-66A, CA_2A-46C, CA_2A-66A-66A, CA_[4A]-4A-5A, CA_[4A]4A-12A, CA_4A-4A-30A, CA_4A-5A-30A, CA_4A-12A-30A, CA_4A-12B, CA_4A-29A-30A, CA_5A-30A-66A, CA_5A-66A-66A, CA_5A-66C, CA_12A30A-66A, CA_12A-[66A]-66A, CA_14A-30A-66A, CA_14A-66A-66A, CA_29A-30A-66A, CA_29A-66A-66A, CA_30A-66A-66A

- 4CA DL carrier aggregation combinations:
CA_2A-2A-5A-30A, CA_2A-2A-5A-66A, CA_2A-2A-12A-30A, CA_2A-2A12A-66A, CA_2A-2A-14A-66A, CA_2A-2A-29A-30A, CA_2A-2A-66A-66A, CA_2A-4A-4A-12A, CA_2A-4A-5A-30A, CA_2A-4A-12A-30A, CA_2A-5A30A-66A, CA_2A-5A-66A-66A, CA_2A-5B-30A, CA_2A-5B-66A, CA_2A12A-30A-66A, CA_2A-12A-66A-66A, CA_2A-14A-30A-66A, CA_2A-14A66A-66A, CA_2A-29A-30A-66A, CA_[2A]-46D, CA_[4A]-46D, CA_4A-4A12A-30A, CA_5A-30A-66A-66A, CA_5B-30A-66A, CA_5B-66A-66A, CA_12A-30A-66A-66A, , CA_14A-30A-66A-66A, CA_29A-30A-66A-66A, CA_46D-[66A]
 - 5CA DL carrier aggregation combinations:
CA_2A-2A-46D, CA_2A-5B-30A-66A, CA_2A-5B-66A-66A, CA_2A-46D66A, CA_5B-30A-66A-66A, CA_46D-66A-66A
 - 2CA UL carrier aggregation combinations:
CA_2A-12A, CA_2A-5A, CA_4A-12A, CA_5A-66A, CA_5B, CA_12A-66A
 - Verizon (Pending): 2,4,5,13,66,48
 - Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 2, 4, 5(19), 8
 - Power: LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1
 - Antennas: four SMA male (plug), finger tighten only (maximum torque spec is 7 kgf/cm2)
 - GPS: active GPS support
 - SMS: SMS support
 - Industry Standards & Certs: FCC, PTCRB, AT&T, FirstNet, Verizon.
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AER2200-600M-NA, -EU, -AP

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.

- 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, Verizon, Verizon NEMO/DMNR for Primary Wireless Access

* Theoretical

** To be enabled with a future modem software update.

FirstNet and FirstNet Ready are registered trademarks and service marks of the First Responder Network Authority, an independent authority within the U.S. Department of Commerce.

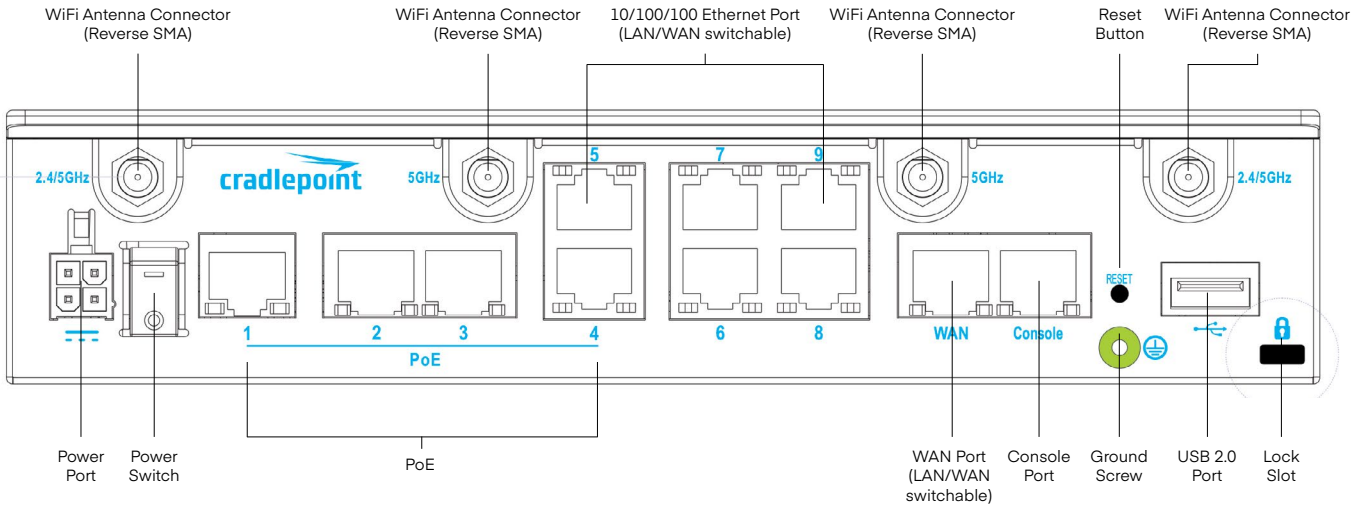
Support & Warranty

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

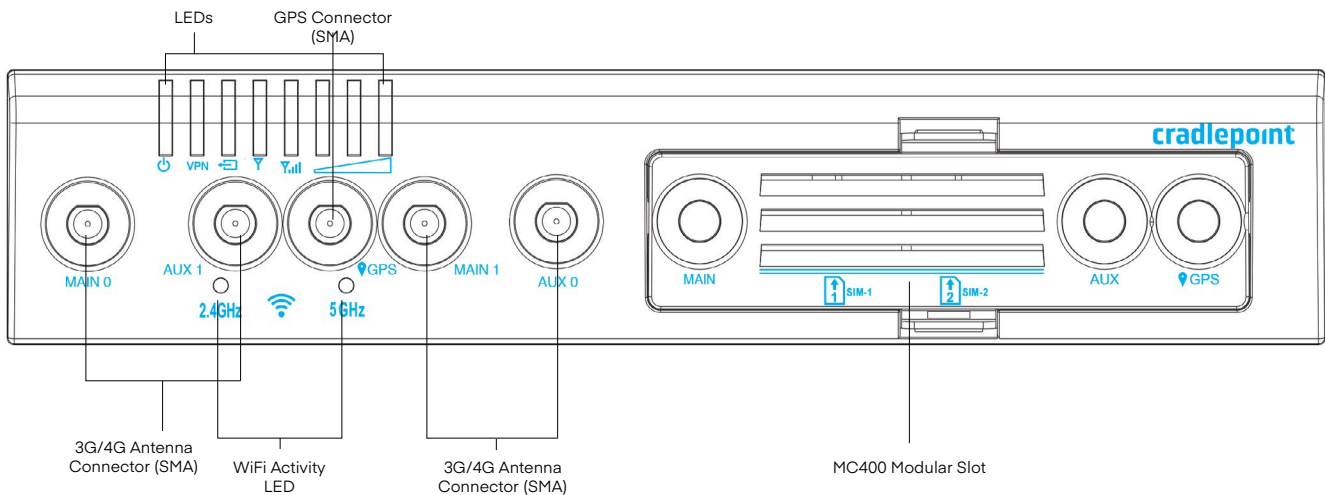
- NetCloud Packages include support for the full subscription term.
- All Cradlepoint hardware products are covered by a limited lifetime warranty for as long as they are under a NetCloud Service Plan.

Hardware

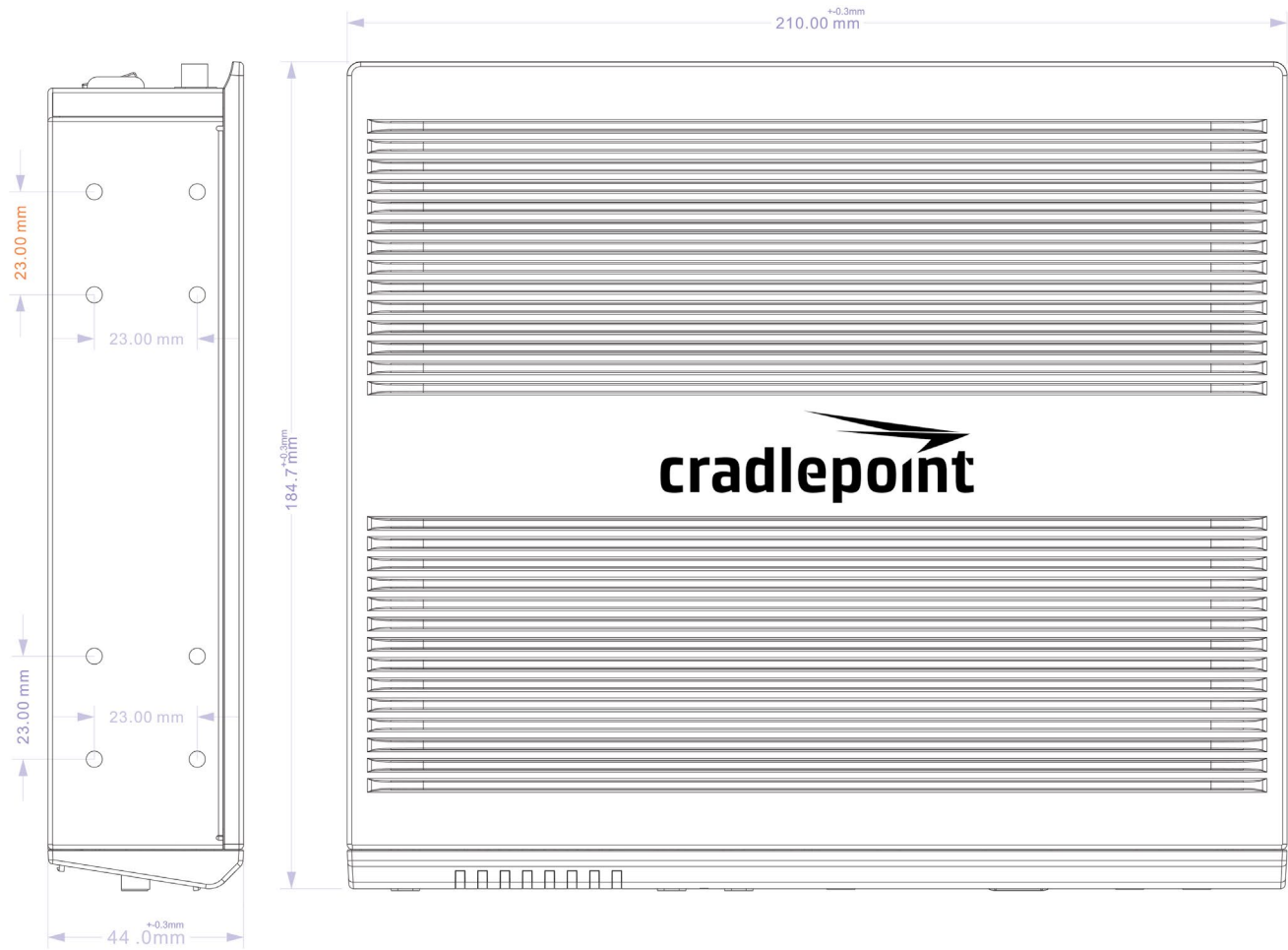
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


Front: AER2200-1200M Shown



1200M model = 2 MAIN, 2 AUX | 600M model = 1 MAIN, 1 AUX



LEDs

Indicator	Behavior
	<p>Power: The Cradlepoint AER2200 must be powered using an approved 54 V DC power source.</p> <ul style="list-style-type: none"> — Green = Powered ON. — No Light = Not receiving power. Check the power switch and the power source connection. — Amber = Attention. Open the administration pages and check the router status.
<p>VPN</p>	<p>VPN: Indicates status of VPN connection.</p> <ul style="list-style-type: none"> — Blue = Connected to an active VPN.
	<p>Removable Modem: Indicates the status of removable modem(s).</p> <ul style="list-style-type: none"> — Green = Modem has established an active connection. — Blinking Green = Modem is connecting. — Blinking Amber = Data connection error. No modem connection possible. — Blinking Red = Modem is in the process of resetting.
	<p>Integrated Modem: Indicates information about the integrated modem.</p> <ul style="list-style-type: none"> — 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. — Blinking Red with Signal Strength LEDs = SIM door is not installed, modem is off. — No Light = Modem not connected.
	<p>Signal Strength: Blue LED bars indicate the active modem’s signal strength (only for integrated and removable modems).</p> <ul style="list-style-type: none"> — 4 Solid Bars = Strongest signal. — 1 Blinking Bar = Weakest signal. (A blinking bar indicates half of a bar.) — 4 Blinking Bars = SIM door is not installed, modem is off.
<p>2.4GHz 5GHz</p>	<p>WiFi Broadcast: 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"> — 2.4 GHz (green) = 2.4 GHz WiFi is on and operating normally. — 5 GHz (blue) = 5 GHz WiFi is on and operating normally.
<p>Other</p>	<p>Additional LED Indications</p> <ul style="list-style-type: none"> — Several different LEDs blink 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 NCOS upgrade.