



NetCloud Services for Branch



AER1600 Series Spec Sheet



Cradlepoint AER1600 Series branch routers are sold as part of an all-inclusive branch networking package.

NetCloud Branch Packages 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 Branch Essentials Package with AER1600LP6	BAX-1600LP6-NNN
— NetCloud Branch Essentials Package with AER1600LP4	BAX-1600LP4-NNN
— NetCloud Branch Essentials Package with AER1600 (no modem)	BAX-1600NM-0NN
— NetCloud Branch Essentials Package with AER1650LP6	BAX-1650LP6I-N0N
— NetCloud Branch Essentials Package with AER1650LP4	BAX-1650LP4-N0N
— NetCloud Branch Essentials Package with AER1650 (no modem)	BAX-1650NM-00N
Europe (EU)	
— NetCloud Branch Essentials Package with AER1600LP6-EU	BAX-1600LP6I-EWM
— NetCloud Branch Essentials Package with AER1600-EU (no modem)	BAX-1600NM-0WM
— NetCloud Branch Essentials Package with AER1650LP6-EU	BAX-1650LP6I-E0M
— NetCloud Branch Essentials Package with AER1650-EU (no modem)	BAX-1650NM-00M
Asia-Pacific (Australia, New Zealand, Singapore)	
— NetCloud Branch Essentials Package with AER1600LP5-AP	BAX-1600LP5-PWM
— NetCloud Branch Essentials Package with AER1600-AP (no modem)	BAX-1600NM-0WM
— NetCloud Branch Essentials Package with AER1650LP5-AP	BAX-1650LP5-P0M
— NetCloud Branch Essentials Package with AER1650-AP (no modem)	BAX-1650NM-00M
All Regions	
— NetCloud Branch Advanced Plan	BAX-NCADV

x = 1, 3, or 5 years

NetCloud Branch Essentials packages and plans contain all the features and capabilities required for smaller site 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 Branch Advanced Plan** can be added to the NetCloud Branch Essentials Package at any time.

See additional details of what is included in the Essential and Advanced NetCloud software: cradlepoint.com/branch-networks

For more details on the AER1600 Series branch router, included with the NetCloud Branch Packages, see below.

What's in the Box

The Cradlepoint AER1600/AER1650 is available with different modem options:

- LPE and LP4 models include an embedded modem and a slot to add an MC400 modem
- LP6, LP5, and LP3 models include a bundled MC400 modem and do not include an embedded modem

Also included:

- Two (2) external 3G/4G LTE mobile broadband modem antennas‡ (SMA)
- 12 V 3A AC/DC power adapter
- Ethernet cable
- Mounting hardware
- Modem door screw
- Safety, Regulatory, and Warranty guide

* Included with LP6, LP5, and LP3 models, optional for AER1600/AER1650, LPE, and LP4 models

‡ LPE and LP4 models only

† GPS not included on LP4 models

Key Features

WAN

- LP6 Modems: LTE Advanced LTE/HSPA+ for all North American carriers and European operators (SIM-based, auto-carrier selection)
- LP5 Modems: Cat 6 LTE Advanced for operators in Asia Pacific and Saudi Arabia (SIM-based, auto-carrier selection)
- LP4 Modems: LTE/HSPA+ for AT&T, Verizon, T-Mobile and Canadian carriers (SIM-based, auto-carrier selection, dual-modem capable)
- LPE Modems: 4G LTE/HSPA+/EVDO (multi-carrier, North America, dual-modem capable)
- LP3 Modems: 4G LTE/HSPA+ (Europe, Middle East, Africa, Australia, New Zealand)
- Dual integrated modem option (LPE and LP4 only)
- Dual SIM slot in each modem
- Most models include support for active GPS

- Five 10/100/1000 Ethernet ports (WAN/LAN switchable)
- WiFi as WAN (only on AER1600)
- Failover/Failback
- Load Balancing
- Advance Modem Failure Check
- WAN Port Speed Control
- WAN/LAN Affinity
- IP Passthrough
- Standby

LAN

- Five 10/100/1000 Ethernet ports (WAN/LAN switchable)
- LLDP support
- VLAN 802.1Q
- DHCP Server, Client, Relay
- DNS and DNS Proxy
- DynDNS
- Split DNS
- UPnP
- DMZ
- Multicast/Multicast Proxy
- Auto QoS
- QoS (DSCP and Priority Queuing)
- MAC Address Filtering

WiFi (Only on AER1600)

- Dual-Band Dual-Concurrent (2x2 MIMO; internal antennas)
- 802.11 (a/b/g/n/ac)
- Up to 128 connected devices (64 per channel – 2.4 GHz and 5 GHz)
- WEP Auto, WPA/WPA2 Personal, WPA2 Enterprise (WiFi)
- Hotspot/Captive Portal
- SSID-based Priority

Management

- OOBM (Out-of-Band Management) via USB to Serial
- Cradlepoint NetCloud Manager (NCM)
- NetCloud Perimeter gateway support
- SDK support

- Web UI, API, CLI
- GPS Location
- Data Usage Alerts (router and per client)
- Advanced Troubleshooting (support)
- Device Alerts
- SNMP
- SMS control

VPN & Routing

- IPsec Tunnel – up to 20 concurrent sessions
- IKEv2 support (includes MOBIKE)
- OpenVPN (SSL VPN)
- L2TP
- GRE Tunnel
- OSPF/BGP/RIP
- Route Filters (Access Control Lists, Prefix Filters, Route Maps, Communities for BGP)
- Per-Interface Routing
- Static Routing
- Policy-based Routing
- NAT-less Routing
- 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 Security¹
- Certificate support
- ALGs
- MAC Address Filtering
- CP Secure Threat Management²
- Advanced Security Mode (local user management only)
- Per-Client Web Filtering

- IP Filtering
- Content Filtering (basic)
- Website Filtering

Cloud Optimized IP Communications

- Automated WAN Failover/Failback support
- WAN Affinity and QoS allow prioritization of VoIP services
- Advanced VPN connectivity options to HQ
- SIP ALG and NAT to allow VoIP and UC communications to traverse firewall
- MAC Address Filtering
- 802.1p/q for LAN QoS segmentation and treatment of VoIP on LAN
- Private Network support (wired and 4G WAN)
- Cloud-based management¹

* Native support for authentication. Authorization and accounting support through hotspot/captive portal services.

¹ Requires **Zscaler** Internet Security License

² Requires an active Branch Advanced Plan

Specifications

The following features are delivered through the hardware.

WAN:

- Embedded Modem Options:
 - LP6 Category 6 LTE Advanced LTE modem (with DC-HSPA+ failover)
 - LP5 Category 6 LTE Advanced LTE modem (with DC-HSPA+ failover)
 - LP4 Category 4 LTE modem (one modem included; dual-modem option) multi-carrier, software-defined radio (includes DC-HSPA+ failover)
 - LPE 4G LTE (one modem included; dual-modem option) modem with multi-carrier, software-defined radio (includes HSPA+/ EVDO/3G and 2G failover)
 - LP3 4G LTE modem (with HSPA+ and 2G failover)
- 5 10/100/1000 ethernet ports (cable/DSL/T1/satellite/Metro Ethernet; WAN/LAN switchable)
- WiFi* (as WAN; Metro WiFi) 2x2 MIMO 2.4 GHz or 5 GHz (802.11 a/b/g/n/ac; internal antennas)

LAN:

- Dual-band, dual-concurrent WiFi* (802.11 a/b/g/n/ac)
- 5 10/100/1000 ethernet ports (WAN/LAN switchable)

*only on AER1600

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):

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

Memory: 256 MB DRAM; 16 MB SPI Flash; 256 MB NAND Flash

Size:

- 8.3 × 6.6 × 1.7 in (210 × 167 × 44 mm)
- 1U height for rack mount

Weight: 1 lb 4.4 oz (.58 kg)

Certifications: FCC, WiFi Alliance, CE, IC, carrier certifications

WiFi Power (FCC):

- 2402-2483.5 MHz (2.4 GHz band): 28.51 dBm conducted
- 5150-5250 MHz (5 GHz band 1): 26.66 dBm conducted
- 5725-5850 MHz (5 GHz band 3): 23.54 dBm conducted

WiFi Power (Europe/Rest of World):

- 2.4 GHz band: 19.95 dBm EIRP
- 5150-5250 MHz: 22.98 dBm EIRP

Power Consumption(Typical)

AER1600

- Idle: 9.5 W
- Single Modem: 13.1 W
- Dual Modem: 15.2 W

AER1650

- Idle: 7.3 W
- Single Modem: 8.6 W
- Dual Modem: 10.6 W

WARNING: Using a power adapter other than the one provided may damage the device and will void the warranty.

Accessories

- Second modular 4G LTE modem (Refer to the [Cradlepoint MC400 Modular Modem](#) webpage for additional details)
 - MC400-1200M-B
 - 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
- 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 (WiFi models only)
- 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

Enterprise-Class Modem Specifications

AER1600/AER1650 LP6 and LP5 models do not include an embedded 4G LTE modem and do not support dual-modem capability.

AER1600/AER1650 LP6 models include an embedded LTE Advanced Category 6 4G LTE modem. The LP6 modems support SIM-based, auto-carrier selection. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

AER1600LP6-NA-M, AER1650LP6-NA-M, AER1600LP6-EU-M, AER1650LP6-EU-M:

- Technology: LTE Advanced, DC-HSPA+
- Downlink Rates: LTE 300 Mbps, DC-HSPA+ 42.2 Mbps
- Uplink Rates: LTE 50 Mbps, DC-HSPA+ 5.76 Mbps
- Frequency Bands:
 - LTE Bands 1-5, 7, 8, 12, 13, 20, 25, 26, 29, 30, 41
 - Verizon: 2, 4, 5, 13 (XLTE support w/carrier aggregation)
 - AT&T: 2, 4, 5, 12, 29, 30
 - Sprint: 25, 26, 41 (LTE Plus Support)

- T-Mobile: 2, 4, 12 (T-Mobile Wideband LTE Support)
- Generic: all
- Carrier Aggregation:
 - 1+ 8, 2+ 2/5/12/13/29, 3+ 7/20, 4+ 4/5/12/13/29, 5+ 2/4/30, 7+ 3/7/20, 8+ 1, 12+ 2/4/30, 13+ 2/4, 20+ 3/7, 30+ 5/12, 41+ 41
- Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 2, 3, 4, 5, 8
- Power: LTE 23 dBm ± 1; DC-HSPA+ 23 dBm ± 1
- Antennas: Two SMA male (plug), maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- SMS: SMS support
- Industry Standards & Certs: CE, FCC, GCF-CC, IC, PTCRB, AT&T, Sprint, Verizon
- Modem Part # MC400LP6

AER1600/AER1650LP5 Models include an embedded LTE Advanced Category 6 4G LTE modem, and support Asia Pacific and Saudi Arabia. The LP5 modems support SIM-based, auto-carrier selection. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

AER1600LP5-AU, AER1650LP5-AU, AER1600LP5-AP-M:

- Technology: FDD/TDD (Category 6) LTE Advanced, DC-HSPA+
- Downlink Rates: LTE 300 Mbps, DC-HSPA+ 42.2 Mbps
- Uplink Rates: LTE 50 Mbps, DC-HSPA+ 5.76 Mbps
- Frequency Bands:
 - LTE Bands: 1, 3, 5, 7, 8, 11, 18, 19, 21, 28, 38, 39, 40, 41
 - TD-SCDMA: 39
- Carrier Aggregation:
 - 1+ 8/18/19/21, 3+ 5/7/19/28, 7+ 5/7/28, 19+ 21, 38+ 38, 39+ 39, 40+ 40, 41+ 41
- Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 5, 6, 8, 9, 19
- Power: LTE: 23 dBm ± 1; DC-HSPA+: 23 dBm ± 1
- Antennas: Two SMA male (plug), maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- SMS: SMS support
- Industry Standards & Certs: CE, GCF-CC, RC Australia, others pending
- Modem Part # MC400LP5

AER1600/AER1650 LP4 Models include an embedded LTE Advanced Category 4, 4G LTE modem. The LP4 modems support SIM-based, auto-carrier selection. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

AER1600LP4, AER1650LP4:

- Technology: Category 4 LTE, DC-HSPA+
- Downlink Rates: LTE 150 Mbps, DC-HSPA+ 42.2 Mbps
- Uplink Rates: LTE 50 Mbps, DC-HSPA+ 5.76 Mbps
- Frequency Bands:
 - LTE: Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz)
 - DC-HSPA+/UMTS Rel. 9, Cat 24: Bands 5 and 2 (850/1900 MHz)
- Power: LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1
- Antennas: Two SMA male (plug), maximum torque not to exceed 4 in-lbs
- Industry Standards & Certs: FCC, WiFi Alliance (AER1600 only), Verizon, AT&T, PTCRB, carrier Private Networks, IC
- SIM: Two 2FF slots (secured)
- Modem Part # MC400LP4

AER1600LPE-VZ – 4G LTE/HSPA+/EVDO for Verizon:

- Technology: LTE, HSPA+, EVDO Rev A
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)
 - HSPA+/UMTS (850/900/1900/2100 MHz, AWS)
 - GSM/GPRS/EDGE (850/900/1800/1900 MHz)
 - CDMA EVDO Rev A/1xRTT (800/1900 MHz)
- Power: LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1; EVDO 24 dBm +0.5/-1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: FCC, Verizon

AER1650LPE-VZ – 4G LTE/HSPA+/EVDO for Verizon:

- Technology: LTE, HSPA+, EVDO Rev A
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)
 - HSPA+/UMTS (850/900/1900/2100 MHz, AWS)
 - GSM/GPRS/EDGE (850/900/1800/1900 MHz)
 - CDMA EVDO Rev A/1xRTT (800/1900 MHz)

- Power: LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1; EVDO 24 dBm +0.5/–1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: FCC, Verizon

AER1600LPE-AT – 4G LTE/HSPA+/EVDO for AT&T:

- Technology: LTE, HSPA+, EVDO Rev A
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)
 - HSPA+/UMTS (850/900/1900/2100 MHz, AWS)
 - GSM/GPRS/EDGE (850/900/1800/1900 MHz)
 - CDMA EVDO Rev A/1xRTT (800/1900 MHz)
- Power: LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1; EVDO 24 dBm +0.5/–1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: PTCRB, FCC, IC, AT&T

AER1650LPE-AT – 4G LTE/HSPA+/EVDO for AT&T:

- Technology: LTE, HSPA+, EVDO Rev A
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)
 - HSPA+/UMTS (850/900/1900/2100 MHz, AWS)
 - GSM/GPRS/EDGE (850/900/1800/1900 MHz)
 - CDMA EVDO Rev A/1xRTT (800/1900 MHz)
- Power: LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1; EVDO 24 dBm +0.5/–1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: PTCRB, FCC, IC, AT&T

AER1600LPE-SP – 4G LTE/HSPA+/EVDO for Sprint:

- Technology: LTE, HSPA+, EVDO Rev A
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)

- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)
 - HSPA+/UMTS (850/900/1900/2100 MHz, AWS)
 - GSM/GPRS/EDGE (850/900/1800/1900 MHz)
 - CDMA EVDO Rev A/1xRTT (800/1900 MHz)
- Power: LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1; EVDO 24 dBm +0.5/–1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: FCC, Sprint

AER1650LPE-SP – 4G LTE/HSPA+/EVDO for Sprint:

- Technology: LTE, HSPA+, EVDO Rev A
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)
 - HSPA+/UMTS (850/900/1900/2100 MHz, AWS)
 - GSM/GPRS/EDGE (850/900/1800/1900 MHz)
 - CDMA EVDO Rev A/1xRTT (800/1900 MHz)
- Power: LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1; EVDO 24 dBm +0.5/–1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: FCC, Sprint

AER1600LP3-EU – 4G LTE/HSPA+ for Europe:

- Technology: LTE, HSPA+
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 1 (2100 MHz), Band 3 (1800 MHz), Band 7 (2600 MHz), Band 8 (900 MHz), Band 20 (800 MHz)
 - HSPA+/UMTS (800/850/900/1900/2100 MHz)
 - GSM/GPRS/EDGE Quad-Band (850/900/1800/1900 MHz)
- Power: LTE Band 1/3/8/20 – 23 dBm ± 1; LTE Band 7 – 22 dBm ± 1, HSPA+ 23 dBm ± 1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support

- Industry Standards & Certs: CE, GCF-CC
- Modem Part # MC400LP3

AER1650LP3-EU – 4G LTE/HSPA+ for Europe:

- Technology: LTE, HSPA+
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 1 (2100 MHz), Band 3 (1800 MHz), Band 7 (2600 MHz), Band 8 (900 MHz), Band 20 (800 MHz)
 - HSPA+/UMTS (800/850/900/1900/2100 MHz)
 - GSM/GPRS/EDGE Quad-Band (850/900/1800/1900 MHz)
- Power: LTE Band 1/3/8/20 – 23 dBm ± 1; LTE Band 7 – 22 dBm ± 1, HSPA+ 23 dBm ± 1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: CE, GCF-CC
- Modem Part # MC400LP3

AER1600LPE-GN – 4G LTE/HSPA+/EVDO (generic – for use on T-Mobile and US Cellular in the U.S. and Rogers, Bell, & TELUS in Canada):

- Technology: LTE, HSPA+, EVDO Rev A
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- Frequency Bands:
 - LTE Band 2 (1900 MHz), Band 4 (AWS), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)
 - HSPA+/UMTS (850/900/1900/2100 MHz, AWS)
 - GSM/GPRS/EDGE (850/900/1800/1900 MHz)
 - CDMA EVDO Rev A/1xRTT (800/1900 MHz)
- Power: LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1; EVDO 24 dBm +0.5/–1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: PTCRB, FCC, IC

AER1650LPE-GN – 4G LTE/HSPA+/EVDO (generic – for use on T-Mobile and US Cellular in the U.S. and Rogers, Bell, and TELUS in Canada)

- Technology: LTE, HSPA+, EVDO Rev A
- Downlink Rates: LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)

- Frequency Bands:
 - LTE Band 2 (1900 MHz), Band 4 (AWS), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)
 - HSPA+/UMTS (850/900/1900/2100 MHz, AWS)
 - GSM/GPRS/EDGE (850/900/1800/1900 MHz)
 - CDMA EVDO Rev A/1xRTT (800/1900 MHz)
- Power: LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1; EVDO 24 dBm +0.5/-1 (typical conducted)
- Antennas: Two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- Industry Standards & Certs: PTCRB, FCC, IC

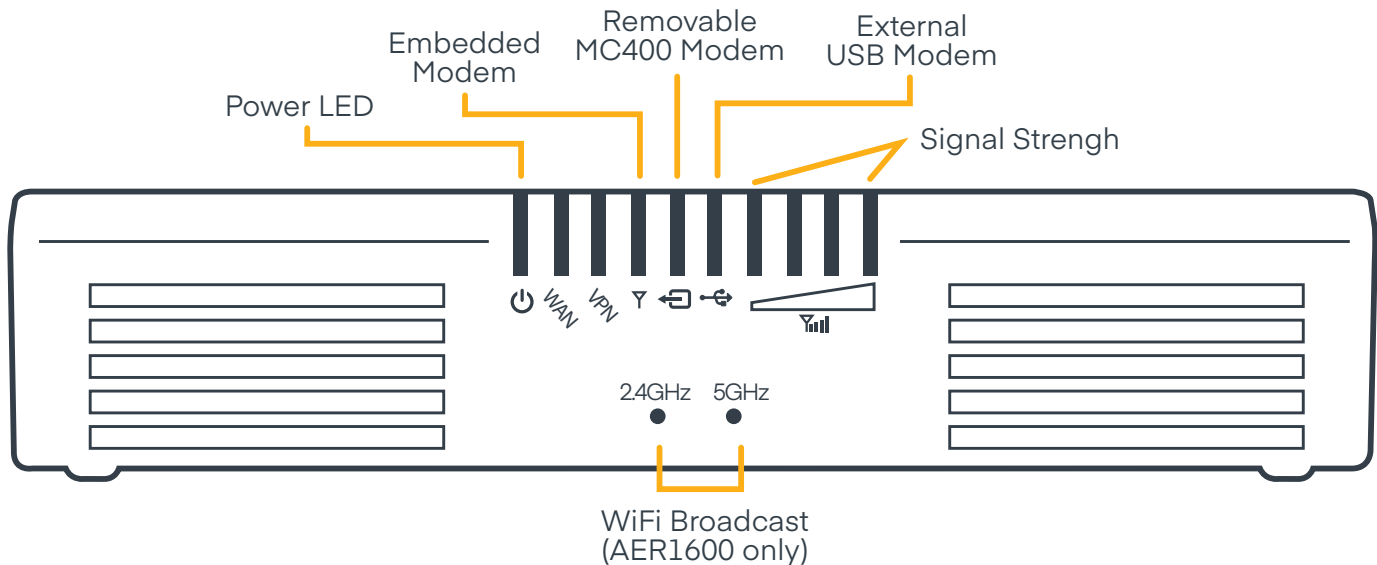
Support & Warranty

The AER1600 series endpoints are only sold as components of NetCloud Packages.

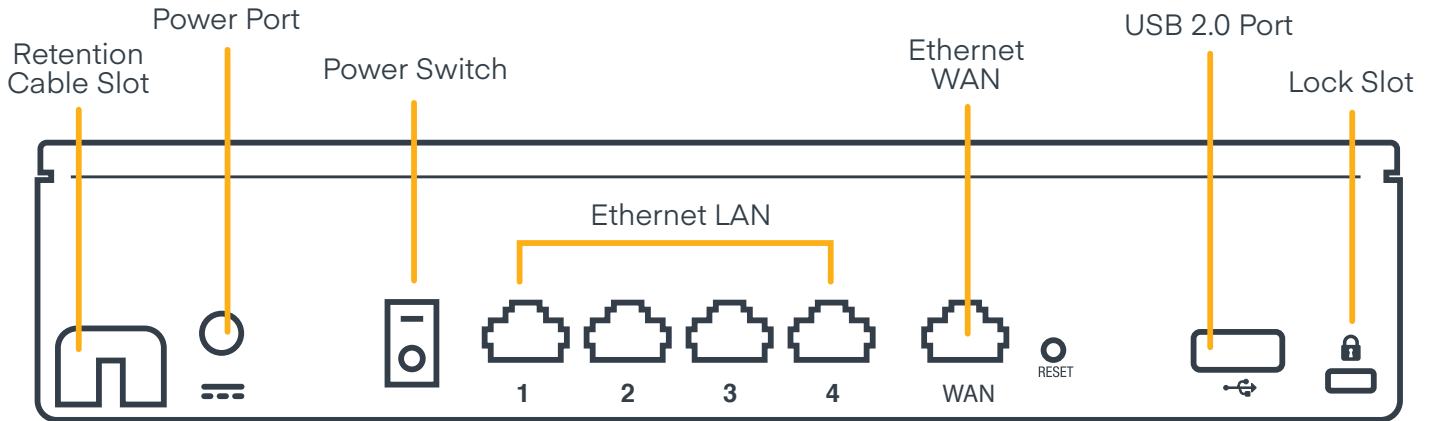
- NetCloud Packages include support for the full subscription term.
- All Cradlepoint hardware products are covered by a limited lifetime warranty for as long as they have a subscription license to an active NetCloud Service Plan.

Hardware

Front





Back



LEDs

Indicator	Behavior
	<p>Power: The Cradlepoint AER1600/AER1650 must be powered using an approved 12 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
WAN	<p>Ethernet WAN: Indicates status of WAN connection.</p> <ul style="list-style-type: none"> Blue = Connected to an active Ethernet WAN interface
VPN	<p>VPN: Indicates status of VPN connection.</p> <ul style="list-style-type: none"> Blue = Connected to an active VPN
	<p>Embedded Modem: Indicates information about the embedded modem.</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>Removable MC400 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

Indicator	Behavior
	<p>External USB Modem: Indicates the status of external USB modem. Both internal and external USB modems have the following LED indicators:</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>Signal Strength: Blue LED bars indicate the active modem’s signal strength (only for embedded and removable modular 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)
<p>2.4GHz 5GHz</p>	<p>WiFi Broadcast: 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"> — 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 modem LEDs blink red in unison for 10 seconds when there is an error during NCOS upgrade. — WAN Ethernet LED: Only right LED will light up and/or blink with data.