CradlePoint AER 2100 – Specifications

The All-in-One, Cloud-Managed Networking Platform for the Distributed Enterprise

The CradlePoint AER 2100 is the first in a new generation of cloud-managed 4G networking solutions that helps enterprises increase bandwidth and achieve five-nines reliability in a secure, flexible, and open-architecture platform. As a cloud-managed solution, the CradlePoint AER is designed for the distributed enterprise to intelligently manage wired and 4G wireless connectivity for a more reliable "connected experience" at the edge. Network administrators can extend applications and services to remote branches with a solution that is customizable through the real-time deployment of cloud-enabled services, applications, and analytics. This all-in-one solution combined with CradlePoint's Enterprise Class Support is defining a new standard for networking in the distributed enterprise.

Key Features

WAN

- WiFi as WAN
- 3G/4G WAN (multi-carrier)
- Failover/Failback
- Load Balancing
- Advance Modem Failure Check
- WAN Port Speed Control
- WAN/LAN Affinity
- IP Passthrough

LAN

- VLAN 802.1Q
- DHCP Server, Client, Relay
- DNS and DNS Proxy
- DynDNS

- UPnP
- DMZ
- Multicast/Multicast Proxy
- QoS (DSCP and Priority Queuing)
- MAC Address Filtering

WiFi

- Dual-Band Concurrent
- 802.11ac
- Up to 256 connected devices (128 per channel – 2.4 GHz and 5 GHz)
- WPA2 Enterprise (WiFi)
- Hotspot/Captive Portal
- SSID-based Priority

Management

- CradlePoint Enterprise Cloud Manager[2]
- Web UI, API, CLI
- GPS Location
- Data Usage Alerts (router and per client)
- Advanced Troubleshooting (support)
- Device Alerts
- SNMP
- SMS control
- Serial Redirector

VPN and Routing

- IPsec Tunnel – up to 20 concurrent sessions
- OpenVPN (SSL VPN)[1]
- L2TP[1]
- GRE Tunnel
- OSPF/BGP/RIP[1]
- Per-Interface Routing
- Routing Rules
- NAT-less Routing
- Virtual Server/Port Forwarding
- NEMO/DMNR[1]
- IPv6
- VRRP[1]
- STP[1]
- NHRP[1]

Security

- RADIUS and TACACS+
- 802.1x authentication for Ethernet
- Zscaler integration[1]
- Certificate support
- ALGs
- MAC Address Filtering
- 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 management[2]

1 – Requires an Extended Enterprise License
2 – Enterprise Cloud Manager requires a subscription

Extended Enterprise License (subscription required)

Routing

- OSPF/BGP/RIP
- VRRP
- STP
- NHRP

VPN & Tunneling

- OpenVPN (SSL VPN)
- L2TP

NEMO (Network Mobility) / DMNR (Dynamic Mobile Network Routing for Verizon)

- NEMO/DMNR Primary
- NEMO/DMNR Failover (*Pending Verizon certification*)

Cloud Security

- Seamless integration with **Zscaler's** secure web gateway. Depending on your Zscaler implementation, this could include:
  - Global Cloud Platform
  - Real-Time Reporting
  - Behavioral Analysis
  - URL Filtering
  - Advanced Threat Protection
  - Inline Anti-Virus & Anti-Spyware
  - Web 2.0 Control
  - Data Loss Prevention
  - Bandwidth Management
  - Web Access Control
  - And more…

Specifications

- **WAN**: Wireless WAN modem, 10/100/1000 Ethernet ports (cable/DSL/T1/satellite/Metro Ethernet), WiFi (as WAN; Metro WiFi) 3x3 MIMO "N" 2.4 GHz or 5 GHz (802.11 a/b/g/n/ac)
- **LAN**: Dual-band concurrent WiFi (802.11 a/b/g/n/ac), five 10/100/1000 Ethernet ports (WAN/LAN switchable), serial console support w/ USB-to-serial adapter
- **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; 16MB SPI Flash; 256 MB NAND Flash
- **SIZE**: 10.25x8.5x1.75 in (260x214x45 mm)
- **CERTIFICATIONS**: CE, WiFi Alliance, FCC
- **LAN TO WAN**: 940 Mbps
- **WAN TO LAN**: 940 Mbps
- **Stateful Throughput**: 940 Mbps
- **WIFI POWER**: FCC maximum power reported:
  - 2.4 GHz band: 24.47 dBm

- Lower 5 GHz band: 16.9 dBm
- Upper 5 GHz band: 27.77 dBm

What's In The Box

- AER 2100 with integrated business-class 3G/4G modem
- External 3G/4G mobile broadband modem antennas (2) (SMA) w/ multiplexing for GPS; finger tighten only
- External dual-band high-gain WiFi antennas (3) reverse SMA (5 dBi, 2.4 GHz, 5 dBi 5 GHz, VSWR <= 2); finger tighten only
- 12V 3A AC/DC power adapter
- Multipurpose Retaining Tool
- Ethernet cable
- Quick Start Guide with warranty information

Feature Details

- **WAN Security** – IDS/IPS & UTM with AV (future), NAT, SPI, ALG, inbound filtering of IP addresses, port blocking, service filtering (FTP, SMTP, HTTP, RPL, SNMP, DNS, ICMP, NNTP, POP3, SSH), protocol filtering, WAN ping (allow/ignore)
- **Redundancy and Load Balancing** – Failover/failback with 4G, 3G, Ethernet with rule selection, advanced load balancing options (round robin, spillover, data usage, rate), WAN failure detection, VRRP
- **Intelligent Routing** – UPnP, DMZ, virtual server/port forwarding, routing rules, NAT-less routing, wired or wireless WAN-to-LAN IP passthrough, route management, per-interface routing, content filtering, IP filtering, website filtering, per-client Web filtering, local DHCP server, DHCP client, DHCP relay, DNS, DNS proxy; ALGs: PPTP, L2TP, PPPoE passthrough, IPsec passthrough, FTP (passive), FTP (active), SIP, TFTP, IRC, MAC address filtering, Dynamic DNS, LAN/WAN affinity, VLAN support (802.1Q), STP, enterprise routing protocols: BGP/OSPF/RIP, multicast proxy support, IP setting overrides, IPv6 support
- **Management** – Enterprise Cloud Manager: cloud-enabled management and application platform (subscription-based); web-based GUI (local management), optional RADIUS or TACACS+ username/password; remote WAN web-based management w/ access control (HTTP, HTTPS); SNMP v1, v2c, & v3; CLI over SSH, SSH to serial, SSH to telnet; API; one-button firmware upgrade; modem configuration, update, and management; modem data usage w/ alerts, per-client data usage; custom AT scripting to modems
- **Performance & Health Monitoring** – WiPipe™ advanced QoS with traffic shaping, with DSCP/DiffServe QoS, Modem Health Management (MHM) improves connectivity of modem, SSID-based priority, WAN port speed control, several levels of basic and advanced logging for troubleshooting
- **VPN** (IPsec) – Tunnel, NAT-T, and transport modes; connect to CradlePoint, Cisco/Linksys, Check-Point, Watchguard, Juniper, SonicWall, Adtran and others; certificate support; Hash (MD5, SHA128, SHA256, SHA384, SHA512), Cipher (AES, 3DES, DES); support for 20 concurrent connections, GRE tunneling, L2TP support, multiple networks supported in a single tunnel, site-to-site dynamic VPN with NHRP

- **GPS** – Standalone GPS supported on most models (see attached); GUI mapping as well as local (LAN) or remote (WAN) server logging

Support and Warranty

- CradleCare Support Agreement available with technical support, software upgrades, and advanced hardware exchange – 1, 3, and 5 year options
- One-year limited hardware warranty available in the US and Canada; two-year limited hardware warranty for integrated EU products when purchased from an authorized EU distributor – 3 and 5 year warranty extensions available

Accessories

- Standard rack mount with modem and WiFi cables (Part # 170629-000)
- 12V 3A wall power adapter (Part # 170623-000)
- 12V 4A wall power adapter (Part # 170624-000)
- Directional Patch antennas for external (outside) mounting (Part # 170587-000)
- Directional Yagi (Log-Periodic) antennas for external (outside) mounting (Part # 170588-000)
- Omni-directional antennas for external (outside) mounting (Part # 170586-000)
- 12” Mag-mount antenna (Part # 170605-000)
- 4” Mini mag-mount antenna (Part # 170606-000)

Business-Grade Modem Specifications

AER 2100LP2-EUF (2100LP2-UKF*) – 4G LTE/HSPA+ for Europe (United Kingdom)

- **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 Band 1 (2100 MHz), Band 8 (900 MHz)
  - GSM/GPRS/EDGE Quad-Band
- **Power**: LTE 23 +/– 1 dBm, UMTS 23 +/– 1 dBm (typical conducted)
- **Module**: Sierra Wireless MC7710
- **Antennas**: two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain; finger tighten only; support for GPS on aux connection
- **GPS**: standalone GPS support
- **Industry Standards & Certs**: CE, GCF-CC
- **Modem Part Number**: MC300LP2

*The 2100LP2-EUF and 2100LP2-UKF models are equivalent except for the line cord.