cradlepoint

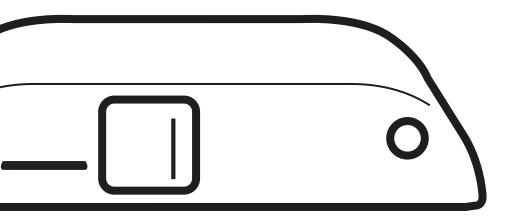*Global Leader in 4G LTE Network Solutions*

COR Series Router

IBR600 / IBR650

Spec Sheet

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INTRODUCTION

WHAT'S IN THE BOX

- COR IBR600/IBR650 Integrated Broadband Router w/ metal mounting bracket
- External 3G/4G mobile broadband modem antennas (2) (SMA) w/ support for GPS on auxiliary connection (some models), finger tighten only
- External WiFi antennas (2) reverse SMA*, 5 dBi gain, finger tighten only
- 12V / 1.5A power supply w/ locking connector; GPIO/power cable available
- Quick Start Guide with warranty information

KEY FEATURES

WAN
- LTE-only, HSPA+, or LTE/HSPA+/EVDO
- Advanced Modem Failure Check
- Standby

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

MANAGEMENT
- Cradlepoint Enterprise Cloud Manager[1]
- Web UI, API, CLI
- Data Usage Alerts (router and per client)
- Advanced Troubleshooting (support)
- Device Alerts
- SNMP
- SMS control

VPN AND ROUTING
- IPsec Tunnel – up to two concurrent sessions
- GRE Tunnel
- Route Filters (Access Control Lists, Prefix Filters, Route Maps, Communities for BGP)
- Routing Rules
- Policy-based Routing
- NAT-less Routing
- Virtual Server/Port Forwarding
- IPv6

- CP Secure VPN compatible*

*-Cradlepoint Secure VPN-NAT configuration only

SECURITY
- RADIUS and TACACS+ support*
- 802.1x authentication for Ethernet
- Certificate support
- ALGs
- MAC Address Filtering
- Advanced Security Mode (local user management only)
- Per-Client Web Filtering
- IP Filtering
- Content Filtering (basic)
- Website Filtering
- Zone-Based Object Firewall with host address (IP or FQDN), port, and mac address

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

1 – **Enterprise Cloud Manager** requires a subscription

SPECIFICATIONS
WAN:
- Integrated LTE-only, HSPA+, or LTE/HSPA+/EVDO modem
- Two 10/100 Ethernet ports (WAN or LAN)

LAN: Two 10/100 Ethernet ports (WAN or LAN)

PORTS:
- Power
- Two Ethernet LAN or WAN
- Two cellular antenna connectors (SMA)
- Two WiFi connectors* (reverse SMA)

TEMPERATURE:
- –20 °C to 60 °C (–4 °F to 140 °F) operating modem as WAN
- –20 °C to 50 °C (–4 °F to 122 °F) operating Ethernet as WAN
- –30 °C to 70 °C (–22 °F to 158 °F) storage

HUMIDITY (non-condensing):
- 10% to 85% operating
- 5% to 90% storage

POWER:
- DC input steady state voltage range: 9 – 18VDC
- Recommended inline fuse for vehicle installations: 1.5A fast-blow
- **IDLE:**
    - typical=350mA@12V(4.2W)

- worst case=700mA@12V(8.4W)
- **TX/RX**:
  - typical=600mA@12V(7.2W)
  - worst case=1200mA@12V(14.4W)

SIZE: 3.3 x 4.0 x 0.9 in (85 x 102 x 22 mm)

CERTIFICATIONS:
- FCC
- WiFi Alliance*
- Shock/Vibration (MIL STD 810G and SAEJ1455)
- Carrier certifications (see individual SKUs for additional certifications)

*-IBR600 only

ACCESSORIES
- Universal 3G/4G/LTE antenna w/ SMA connector (2dBi/3dBi) (Part # 170649-000)
- Directional Patch antenna for external (outside) mounting (Part # 170587-000)
- Directional Yagi (Log-Periodic) antenna for external (outside) mounting (Part # 170588-000)
- Omni-directional antenna for external (outside) mounting (Part # 170586-000)
- 12" Mag-mount antenna (Part # 170605-000)
- 4" Mini mag-mount antenna (Part # 170606-000)
- COR 2 meter power & GPIO cable (direct wire) (Part # 170585-000)
- COR 2 meter power & GPIO cable (direct wire) with filter (required for E-mark compliant vehicle installations) (Part # 170635-100)
- COR vehicle power adapter (Part # 170635-000)
- COR wall power adapter (Part # 170584-000)
- COR international wall power adapter (Part # 170446-002)
- COR mounting bracket (Part # 170593-000)

See the Cradlepoint **antenna accessories page** for more information about antennas. Also see the Antenna Ordering and Installation Guide, available as a PDF in the Resources section of antenna and router product pages.

BUSINESS-GRADE MODEM SPECIFICATIONS
COR IBR600/IBR650 models include an integrated 4G LTE or HSPA+ or LTE/HSPA+/EVDO modem – specific model names include a specific modem (e.g., the COR IBR650LPE-VZ includes a Verizon LTE modem).

COR IBR600LPE-VZ, COR IBR650LPE-VZ – 4G LTE/HSPA+/EVDO for Verizon
- **Technology:** LTE, HSPA+, EVDO Rev A
- **Downlink Rates:** LTE 50 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 +/– 1 (typical conducted)
- **Antennas**: two SMA male (plug), finger tighten only (maximum torque spec is 7 kgfcm)
- **Industry Standards & Certs**: FCC, WiFi Alliance (IBR600 only), Verizon, Verizon NEMO/DMNR for Primary Wireless Access
- **SIM**: one 2FF slot
- **GPS**: passive GPS support

COR IBR600LPE-AT, COR IBR650LPE-AT – 4G LTE/HSPA+/EVDO for AT&T
- **Technology**: LTE, HSPA+, EVDO Rev A
- **Downlink Rates**: LTE 50 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 +/– 1 (typical conducted)
- **Antennas**: two SMA male (plug), finger tighten only (maximum torque spec is 7 kgfcm)
- **Industry Standards & Certs**: PTCRB, FCC, WiFi Alliance (IBR600 only), AT&T
- **SIM**: one 2FF slot
- **GPS**: passive GPS support

COR IBR600LPE-SP, COR IBR650LPE-SP – 4G LTE/HSPA+/EVDO for Sprint
- **Technology**: LTE, HSPA+, EVDO Rev A
- **Downlink Rates**: LTE 50 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 +/– 1 (typical conducted)
- **Antennas**: two SMA male (plug), finger tighten only (maximum torque spec is 7 kgfcm)
- **Industry Standards & Certs**: FCC, WiFi Alliance (IBR600 only), Sprint
- **SIM**: one 2FF slot
- **GPS**: passive GPS support

COR IBR600LPE-GN, COR IBR650LPE-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 50 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 +/− 1 (typical conducted)
- **Antennas**: two SMA male (plug), finger tighten only (maximum torque spec is 7 kgfcm)
- **Industry Standards & Certs**: CE, WiFi Alliance (IBR600 only), GCF-CC
- **SIM**: one 2FF slot
- **GPS**: passive GPS support

COR IBR600LP3-EU, COR IBR650LP3-EU
- **Technology**: LTE, HSPA+
- **Downlink Rates**: LTE 50 Mbps, HSPA+ 21 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: (850/900/1800/1900 MHz)
- **Module Power**: LTE 23 dBm +/- 1, UMTS 23dBm +/- 1 (typical conducted)
- **Module Antennas**: two SMA male (plug), 2 dBi gain; finger tighten only; maximum torque spec is 7 kgf-cm
- **Industry Standards & Certs**: CE, WiFi Alliance (IBR600 only), GCF-CC
- **SIM**: one 2FF slot
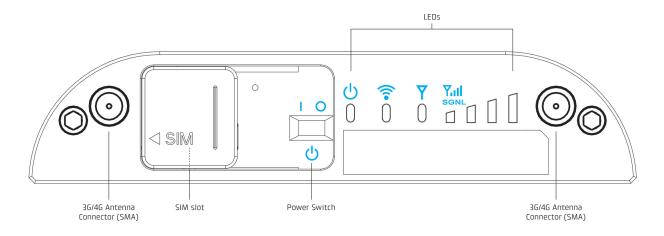- **GPS**: passive GPS support

COR IBR600P-INTL, COR IBR650P-INTL
- **Technology**: HSPA+
- **Downlink Rates**: HSPA+ 21 Mbps (theoretical)
- **Uplink Rates**: HSPA+ 5.76 Mbps (theoretical)
- **Frequency Bands**:
    - · HSPA+/UMTS: (800/850/900/1900/2100 MHz)
    - · GSM/GPRS/EDGE: (850/900/1800/1900 MHz)
- **Module Power**: LTE 23 dBm +/- 1, UMTS 23dBm +/- 1 (typical conducted)
- **Module Antennas**: two SMA male (plug), 2 dBi gain; finger tighten only; maximum torque spec is 7 kgf-cm
- **Industry Standards & Certs**: PTCRB, GCF-CC, FCC, IC, CE, WiFi Alliance (IBR600 only)
- **SIM**: one 2FF slot
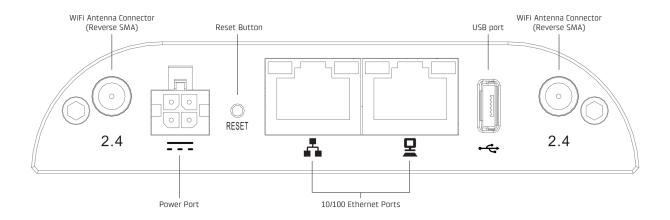- **GPS**: passive GPS support

Cradlepoint products with the -EU and -INTL SKUs enable and disable WiFi channels to comply with EU law. The -EU and -INTL SKUs are not legal for use in North America.

The -EU and -INTL versions come with an adapter kit for non-USA/Canada power outlets (includes US, EU, and UK options).

HARDWARE

LEDs

3G/4G Antenna
Connector (SMA)

SIM slot

Power Switch

3G/4G Antenna
Connector (SMA)

SGNL

WiFi Antenna Connector
(Reverse SMA)

Reset Button

USB port

WiFi Antenna Connector
(Reverse SMA)

2.4

RESET

2.4

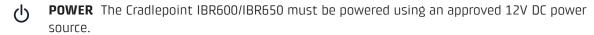Power Port

10/100 Ethernet Ports

SUPPORT AND WARRANTY

CradleCare Support available in the US and Canada with technical support, software upgrades, and advanced hardware exchange – 1-, 3-, and 5-year options.

Three-year limited hardware warranty available world-wide on IBR600/IBR650 series products when purchased from an approved Cradlepoint Partner or Distributor – extend warranty to 5 years.

LEDS

POWER The Cradlepoint IBR600/IBR650 must be powered using an approved 12V DC power source.

- Blue = Powered ON.
- No Light = Not receiving power. Check the power switch and the power source connection.
- Flashing Amber = Attention. Open the administration pages and check the router status.

WiFi BROADCAST Indicates WiFi activity.

- Green = WiFi is on and operating normally.
- Flashing Amber = Attention. Open the administration pages and check the router status.

INTEGRATED MODEM Indicates information about the integrated modem.

- Green = Connected to integrated modem.

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.)

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.