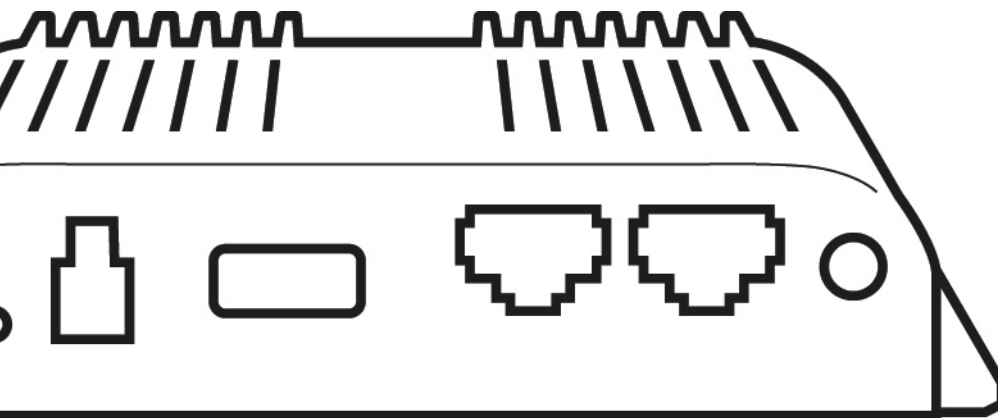




# COR Series Router

**IBR600C-LPE / IBR650C-LPE**

Spec Sheet



[cradlepoint.com](http://cradlepoint.com)

# INTRODUCTION

## WHAT'S IN THE BOX

- Ruggedized router with integrated business-class 3G/4G modem; includes integrated mounting plate
- Quick Start Guide with warranty information
- 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
- 12 V / 2 A power supply w/ locking connector; DC GPIO/power cable available
- Extra SIM door screws (2)

\*-IBR600C-LPE only

## KEY FEATURES

### WAN

- Dual-modem capable with optional COR Extensibility Dock
- LPE
- WiFi as WAN<sup>1</sup>, with WPA2 Enterprise Authentication for WiFi as WAN<sup>3</sup>
- Failover/Failback
- Load Balancing
- Advanced Modem Failure Check
- WAN Port Speed Control
- WAN/LAN Affinity
- IP Passthrough
- Standby

### LAN

- VLAN 802.1Q
- DHCP Server, Client, Relay
- DNS and DNS Proxy
- DynDNS
- DMZ
- Multicast/Multicast Proxy
- QoS (DSCP and Priority Queuing)
- MAC Address Filtering

### WIFI<sup>1</sup>

- 802.11 b/g/n
- Up to 64 connected devices
- Multiple SSIDs
- WPA2 Enterprise (WiFi)
- Hotspot/Captive Portal

- SSID-based Priority
- Client Mode for faster data offload

## MANAGEMENT

- Cradlepoint NetCloud Manager<sup>2</sup>
- Web UI, API, CLI
- Data Usage Alerts (router and per client)
- Advanced Troubleshooting (support)
- Device Alerts
- SNMP
- SMS control
- Serial Redirector
- Auto APN Recovery
- Syslog

## VPN AND ROUTING

- IPsec Tunnel – up to five concurrent sessions
- L2TP<sup>3</sup>
- GRE Tunnel
- OSPF/BGP/RIP<sup>3</sup>
- Route Filters (Access Control Lists, Prefix Filters, Route Maps, Communities for BGP)
- Per-Interface Routing
- Routing Rules
- Policy-based Routing
- NAT-less Routing
- Virtual Server/Port Forwarding
- NEMO/DMNR<sup>3</sup>
- IPv6
- VRRP<sup>3</sup>
- STP<sup>3</sup>
- NHRP<sup>3</sup>
- VTI Tunnel support<sup>3</sup>
- OpenVPN support<sup>3</sup>
- CP Secure VPN compatible

## SECURITY

- RADIUS and TACACS+ support\*
- 802.1x authentication for Ethernet
- Zscaler integration<sup>3</sup>
- 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.

## 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
- 802.1p/q for LAN QoS segmentation and treatment of VoIP on LAN
- Private Network support (wired and 4G WAN)
- Cloud-based management<sup>2</sup>

1 – WiFi-related functions are only supported on IBR600C-LPE models

2 – **NetCloud Manager** requires a subscription

3 – Requires an **Extended Enterprise License** or **NetCloud Manager PRIME**

## SPECIFICATIONS

### WAN:

- Dual-modem capable with optional COR Extensibility Dock
- Integrated LPE modem
- Two LAN/WAN switchable Ethernet ports (one 10/100/1000 and one 10/100) – one default WAN (cable/DSL/T1/satellite/Metro Ethernet)
- WiFi as WAN, Metro WiFi; 2×2 MIMO “N” 2.4 GHz; 802.11 b/g/n (IBR600C-LPE only)

### LAN:

- 2×2 MIMO “N” 2.4 GHz WiFi; 802.11 b/g/n (IBR600C-LPE only)
- Two LAN/WAN switchable Ethernet ports (one 10/100/1000 and one 10/100) – one default LAN
- Serial console support for Out-of-Band Management of a connected device

### PORTS:

- Power
- 2-wire GPIO
- Add more GPIO ports with optional 9-wire GPIO cable or COR Extensibility Dock (see Accessories section below)
- USB 2.0
- Two Ethernet LAN/WAN
- Two cellular antenna connectors (SMA)
- Two WiFi antenna connectors (R-SMA; IBR600C only)
- 15-pin dock port for COR Extensibility Dock or 9-wire GPIO cable

**TEMPERATURE:**

- -20 °C to 60 °C (-4 °F to 140 °F) operating

**HUMIDITY (non-condensing):**

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

**POWER:**

- DC input steady state voltage range: 9–33 VDC (requires inline fuse for vehicle installations)
  - For 9–24 VDC installations, use a 3 A fuse
  - For > 24 VDC installations, use a 2.5 A fuse
- Reverse polarity and transient voltage protection per ISO 7637-2
- Ignition sensing (automatic ON and time-delay OFF)
- Power consumption:
  - Idle: 4 W
  - WiFi Tx/Rx: 9 W
  - LTE Tx/Tx: 6.25 W
  - 12 VDC / 2 A adapter recommended

**WIFI POWER:**

- 2.4 GHz: 18 dBm conducted

**SIZE:** 4.6 × 4.5 × 1.2 in (118 × 113.5 × 29.3 mm)

**WEIGHT:** 14 oz (400 g)

**CERTIFICATIONS:**

- FCC, IC
- WiFi Alliance (IBR600C-LPE only) – 802.11 b/g/n certified
- Safety: UL/CUL, CB Scheme, EN60950-1
- Shock/Vibration/Humidity: compliant with MIL STD 810G and SAEJ1455
- Materials: WEEE, RoHS, RoHS-2, California Prop 65
- Telecom: PTCRB/CTIA

## ACCESSORIES

Cradlepoint offers several accessory options for extensibility, power and antennas:

**EXTENSIBILITY**

- COR Extensibility Dock (Part # 170675-000)
- 9-wire power & GPIO cable (Part #170680-000)

**POWER****Vehicle options**

- Vehicle locking power adapter for COR (Part # 170635-000)
- Two meter locking power and GPIO cable (direct wire) (Part # 170585-000)

**Power Supplies/Adapters**

- North America COR IBR600C-LPE/IBR650C-LPE power supply (Part # 170716-000)
- Barrel to 4-pin power adapter (Part # 170665-000)

**ANTENNAS – 3G/4G Modem, WiFi**

- 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
- Universal 3G/4G/LTE Modem Antenna Part #: 170649-000
- Multi-Band Omni-Directional Antenna Part #: 170668-000
- Indoor/Outdoor Panel Patch Part #: 170669-000
- Universal LTE/4G/3G / 2dBi/3dBi antenna with SMA connector for all AER, ARC, COR, and MC400 products (Part # 170704-001)

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.

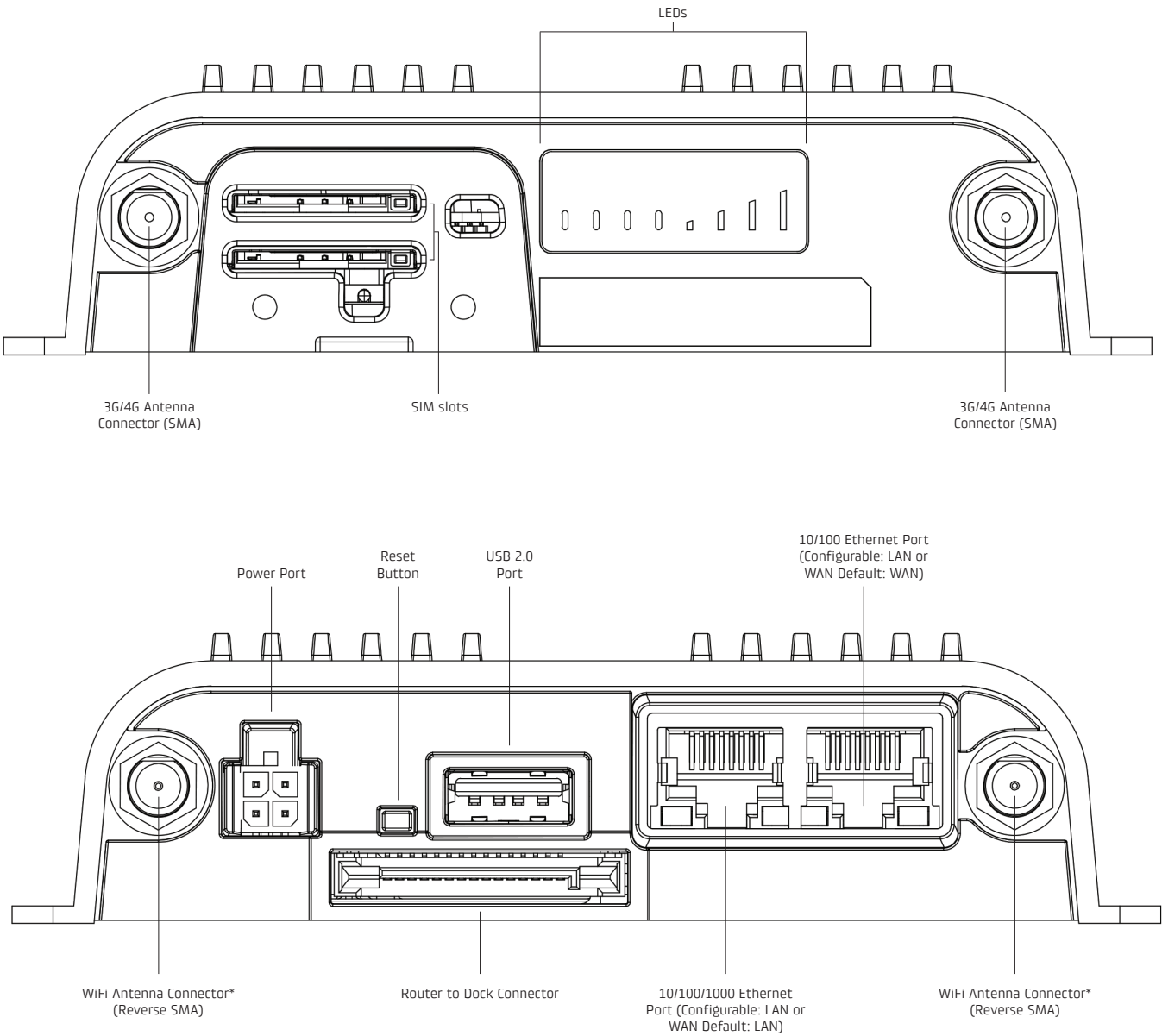
**BUSINESS-GRADE MODEM SPECIFICATIONS**

**COR IBR600C-LPE/IBR650C-LPE models** include an integrated 4G LTE/HSPA+/EVDO modem – specific model names include a specific modem (e.g., the COR IBR650C-LPE-VZ includes a Verizon LTE modem).

**COR IBR600C-LPE-AT/GN/SP/VZ; COR IBR650C-LPE-AT/GN/SP/VZ (North America)**

- **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  $\pm$  1; HSPA+ 23 dBm  $\pm$  1; EVDO 24 dBm  $\pm$  1 (typical conducted)
- **Antennas:** two SMA male (plug), finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **GPS:** passive, muxed on aux port
- **Industry Standards & Certs:** FCC, WiFi Alliance (IBR600C only), AT&T, Sprint, Verizon, Verizon NEMO/DMNR for Primary Wireless Access
- **SIM:** two 2FF slots

HARDWARE

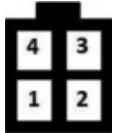


\* - only on IBR600C-LPE

## POWER/GPIO CONNECTOR

This connector has four pin slots: power, ground, input, and output.

Connector pinout – view into router (rear view of cable connector):



Pin	Definition	Details	Wire Color
1	Ground	-	Black
2	Power	9-33 V DC	Red
3	Input	3.4 V input high threshold (33 V tolerant)	Orange
4	Output	capable of sinking 250 mA	Blue

## LEDS



**POWER** The Cradlepoint IBR600C-LPE/IBR650C-LPE must be powered using an approved 9-33 VDC power source.

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



**WiFi BROADCAST** Indicates WiFi activity.

- Green = On and operating normally.



**INTEGRATED MODEM** Indicates information about the integrated modem.

- Green = Modem has established active WAN connection.
- Blinking Green = Modem is connecting.
- Yellow = Modem not active.
- Blinking Yellow = Data connection error.
- Blinking Red = In process of resetting.
- No Light = Modem not connected.



**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 NCOS upgrade.

**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 IBR600C-LPE/IBR650C-LPE series products when purchased from an approved Cradlepoint Partner or Distributor — extend warranty to five years.