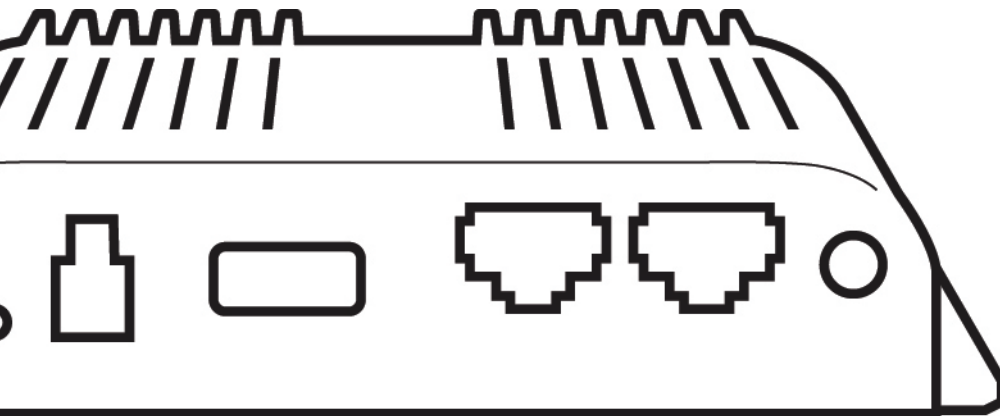


COR Series Router

IBR600C-LPE / IBR650C-LPE

Spec Sheet



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 WAN¹, with WPA2 Enterprise Authentication for WiFi as WAN³
- 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

WIFI¹

- 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 Manager²
- 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
- L2TP³
- GRE Tunnel
- OSPF/BGP/RIP³
- 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/DMNR³
- IPv6
- VRRP³
- STP³
- NHRP³
- VTI Tunnel support³
- OpenVPN support³
- CP Secure VPN compatible

SECURITY

- RADIUS and TACACS+ support*
- 802.1x authentication for Ethernet
- Zscaler integration³
- 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 management²

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.

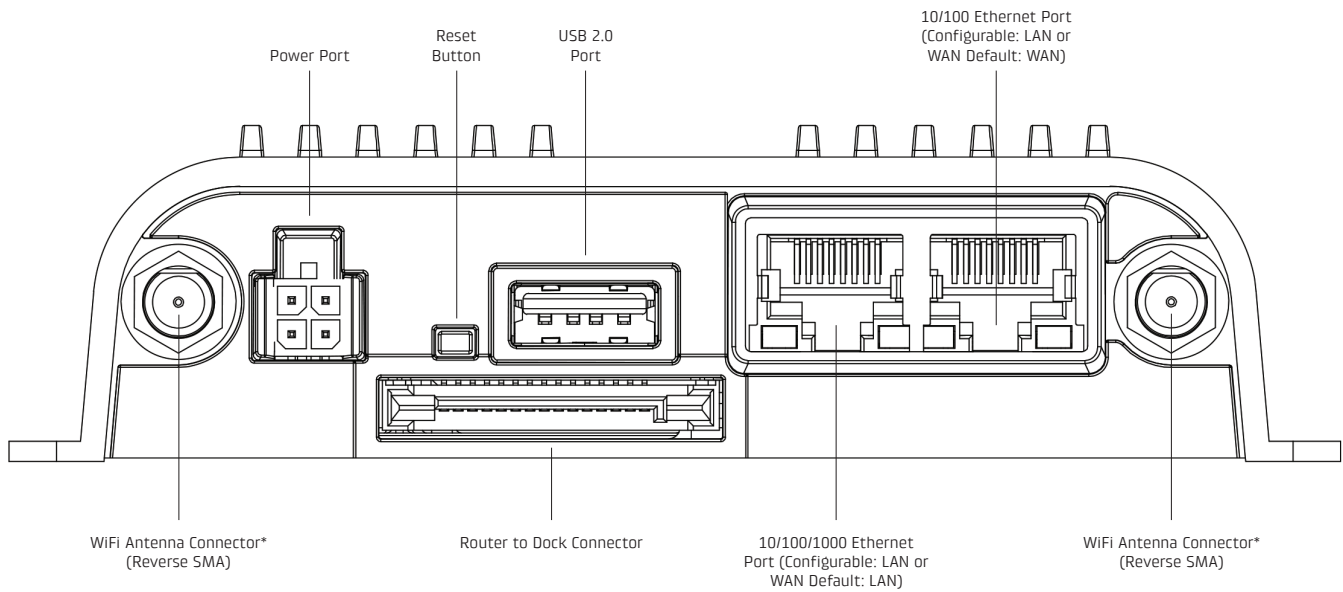
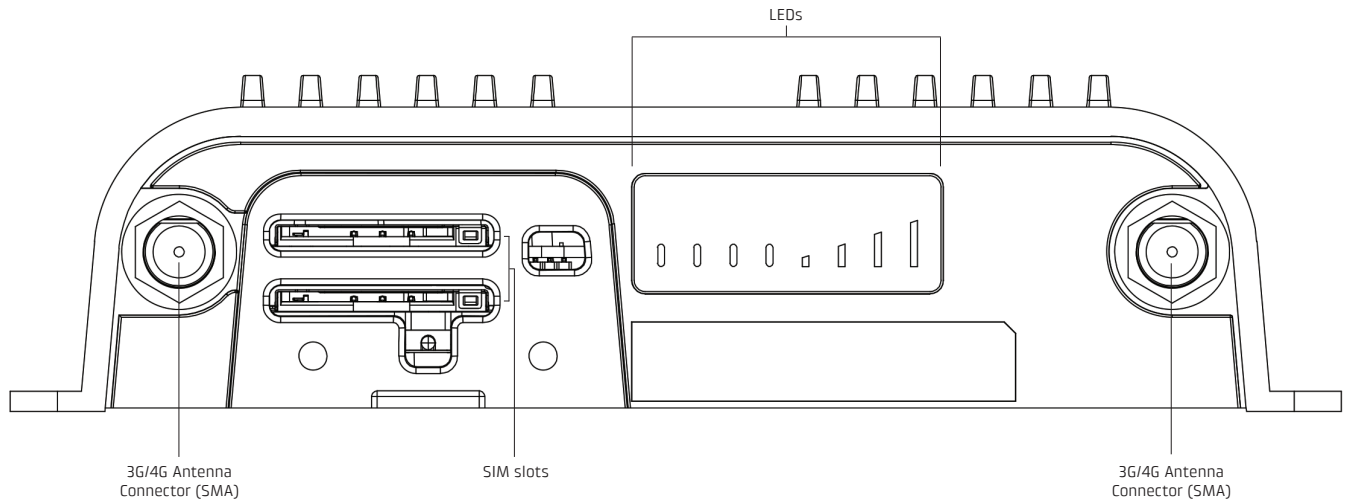
BUSINESS-GRADE MODEM SPECIFICATIONS

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/cm²)
- **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

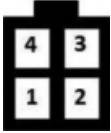


* - only on IBR600C-LPE

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

INDICATOR	BEHAVIOR
	<p>POWER The Cradlepoint IBR600C-LPE/IBR650C-LPE must be powered using an approved 12 V DC power source.</p> <ul style="list-style-type: none"> Blue = Powered ON. No Light = Not receiving power. Check the power switch and the power source connection.
	<p>WiFi BROADCAST Indicates WiFi activity (IBR600C-LPE only).</p> <ul style="list-style-type: none"> Green = WiFi is on and operating normally. Amber = Attention. Open the administration pages and check the router status.
	<p>INTEGRATED OR USB MODEM Indicates information about the integrated modem or attached USB 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.
	<p>SIGNAL STRENGTH Blue LED bars indicate the active modem's signal strength.</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.)

INDICATOR	BEHAVIOR
Other	ADDITIONAL LED INDICATIONS <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.

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.