



NetCloud Services for IoT



COR IBR600C Series Spec Sheet



Cradlepoint COR IBR600C Series IoT routers are sold as part of an all-inclusive IoT networking package.

NetCloud Packages for IoT include:

- Compact routers tailored for IoT and M2M 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 Essentials for IoT Routers (Standard) with IBR600C-150M-D for NA	TAX-600C150-NNN
— NetCloud Essentials for IoT Routers (Standard) with IBR650C-150M-D for NA	TAX-650C150-N0N
Europe (EU)	
— NetCloud Essentials for IoT Routers (Standard) with IBR600C-150M-B-EU	TAX-600C150M-EWM
Asia-Pacific (Australia, New Zealand)	
— NetCloud Essentials for IoT Routers (Standard) with IBR600C-150M-C-AP	TAX-600C150M-PWM
All Regions	
— NetCloud Advanced for Mobile Routers (Enterprise)	TAX-NCADV

x = 1, 3, or 5 years

NetCloud Essentials packages and plans contain all the features and capabilities required for a broad range of IoT 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 Advanced** upgrade can be added to the NetCloud Essentials Package at any time.

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

For more details on the COR IBR600C IoT router, included with the NetCloud Packages for IoT, see below.

What's in the Box

- Ruggedized router with embedded enterprise-class LTE modem; includes integrated mounting plate
- Quick Start Guide with warranty information
- IBR600C-150M-D, IBR650C-150M-D, IBR600C-150M-B (no IBR650), IBR600C-150M-C (no IBR650). The 150M models support worldwide SIM-Based Auto-Carrier Selection.
- External LTE antennas (2 SMA), WiFi antennas (2) (reverse SMA, IBR600C only) < 5 dBi gain
- 12 V / 2 A power supply w/ locking connector; DC GPIO/power cable available
- Extra SIM door screws (2)

Key Features with NetCloud Service

WAN

- Dual-modem capable with optional COR Extensibility Dock
- 150M-B: 150/50 Mbps DL/UL FDD LTE w/HSPA+ fallback
- 150M-C: 150/50 Mbps DL/UL FDD LTE w/HSPA+ fallback
- 150M-D: 150/50 Mbps DL/UL FDD LTE w/HSPA+ fallback
- WiFi as WAN¹, with WPA2 Enterprise Authentication for WiFi as WAN
- 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 Manager
- 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 & Routing

- IPsec Tunnel – up to five concurrent sessions
- L2TP
- GRE Tunnel
- OSPF/BGP/RIP
- 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
- IPv6
- VTI Tunnel support
- OpenVPN support
- CP Secure VPN compatible

Security

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

1 – WiFi-related functions are only supported on IBR600C-XXX models (no WiFi on IBR650C-XXX models)

Specifications

WAN:

- Dual-modem capable with optional COR Extensibility Dock
- Embedded 150M-B, 150M-C, or 150M-D modem
- Two LAN/WAN switchable Ethernet ports (one 10/100/1000 and one 10/100) – one default WAN
- WiFi as WAN, Metro WiFi; 2×2 MIMO “N” 2.4 GHz; 802.11 b/g/n (IBR600C only)

LAN:

- 2×2 MIMO “N” 2.4 GHz WiFi; 802.11 b/g/n (IBR600C 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)
- One GPS connector (SMA) (150M-B, 150M-C, 150M-D only. LPE GPS is muxed on LTE)
- 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, CE, RCM
- WiFi Alliance (IBR600C 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 IBR6x0C power supply (Part # 170716-000)
- Barrel to 4-pin power adapter (Part # 170665-000)

ANTENNAS:

See the [Cradlepoint Certified Antennas for Fixed Sites](#) for more information about antennas. Also see the [Antenna Ordering and Installation Guide](#), also available in the Resources section of antenna and router product pages.

Enterprise-Class Modem Specifications

COR IBR600C-150M

COR IBR6X0-150M models include an embedded LTE Category 4 LTE modem. The 150M modems support worldwide SIM-Based Auto-Carrier Selection. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

COR IBR600C-150M-D-NA; COR IBR650C-150M-D-NA (North America):

- Technology: LTE Cat 4 (3GPP Rel 11), DC-HSPA+
- Downlink Rates: LTE 150 Mbps, HSPA+ 42.2 Mbps*
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps*
- Frequency Bands:
 - LTE: Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 12 (700 MHz), Band 13 (700 MHz), Band 14 (700 MHz), Band 66 – AWS 3 (1700/2100 MHz), Band 71 (600 MHz)
 - WCDMA/HSPA+/UMTS: Band 2, Band 4, Band 5
- Power: LTE 23 dBm \pm 1; HSPA+ 23 dBm \pm 1; (typical conducted)
- Antennas: two SMA male (plug), maximum torque spec is 4 in-lbs

- GPS/GNSS: passive, dedicated SMA port (multi-constellation - GPS, GLONASS)
- Industry Standards & Certs: FCC, IC, PTCRB, WiFi Alliance (IBR600C only), AT&T, FirstNet Ready, Verizon, Verizon NEMO/DMNR for Primary Wireless Access
- SIM: two 2FF slots

COR IBR600C-150M-B-EU (Europe):

- Technology: LTE, DC-HSPA+
- Downlink Rates: LTE 150 Mbps, HSPA+ 42 Mbps*
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps*
- Frequency Bands: LTE FDD: B1/ B3/ B5/ B7/ B8/ B20
- LTE TDD: B38/ B40 /B41
- DC-HSPA+/UMTS: B1/ B5/ B8
- GSM/EDGE: B3/ B8
- Power: LTE 23 dBm \pm 2; HSPA+ 23 dBm \pm 1; (typical conducted)
- Antennas: two SMA male (plug), (maximum torque spec is 7 kgf/cm²)
- GPS: passive standalone (dedicated SMA port)
- Industry Standards & Certs: CE, WiFi Alliance
- SIM: two 2FF slots

COR IBR600C-150M-C-AU (Australia):

- Technology: LTE, DC-HSPA+
- Downlink Rates: LTE 150 Mbps, HSPA+ 42 Mbps*
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps*
- Frequency Bands: LTE FDD:B1/ B3/ B5/ B7/ B28
- DC-HSPA+/UMTS: B1/ B5
- Power: LTE 23 dBm \pm 2; HSPA+ 23 dBm \pm 1; (typical conducted)
- Antennas: two SMA male (plug), (maximum torque spec is 7 kgf/cm²)
- GPS: passive standalone (dedicated SMA port)
- Industry Standards & Certs: RCM, WiFi Alliance
- SIM: two 2FF slots

COR IBR600C-LPE*

**LPE versions no longer available*

COR IBR600C-LPE/IBR650C-LPE models include an embedded 4G LTE/HSPA+/EVDO modem – specific model names include a specific modem (e.g., the COR IBR650C-LPE-VZ includes a Verizon LTE modem) but is software configurable for Sprint, AT&T, T-Mobile or Canada.

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*
- Uplink Rates: LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 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), 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 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

**Theoretical Speeds*

Support & Warranty

The COR IBR600C Series is sold as a component of NetCloud Packages.

Cradlepoint's all-inclusive NetCloud Service Plan includes limited lifetime hardware warranty and global 24x7 enterprise-class support (phone support: 24-hour weekdays with emergency response on weekends; web: 24x7, chat: 24x5).

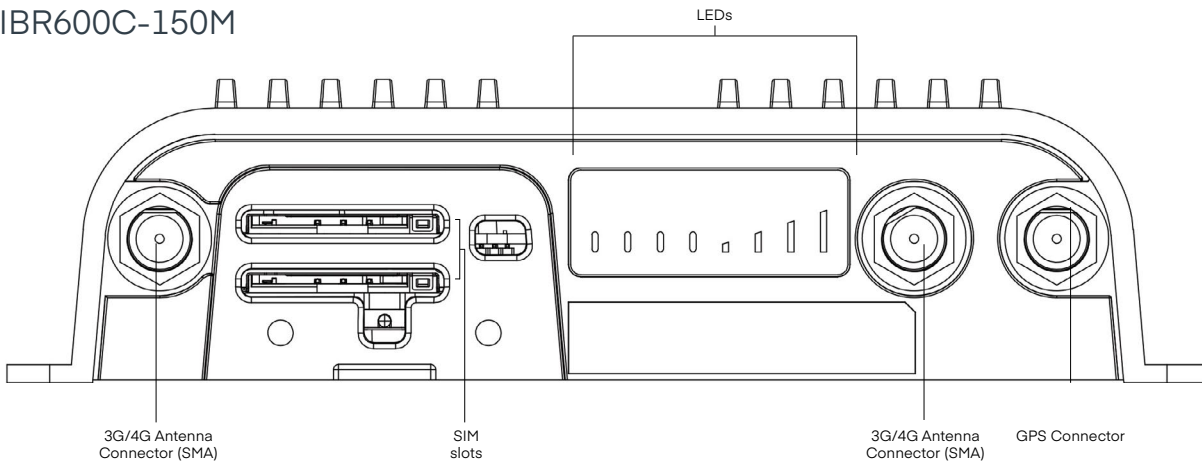
Learn more at [cradlepoint.com/support-services](https://customer.cradlepoint.com/support-services)

Safety, Regulatory & Warranty Guide

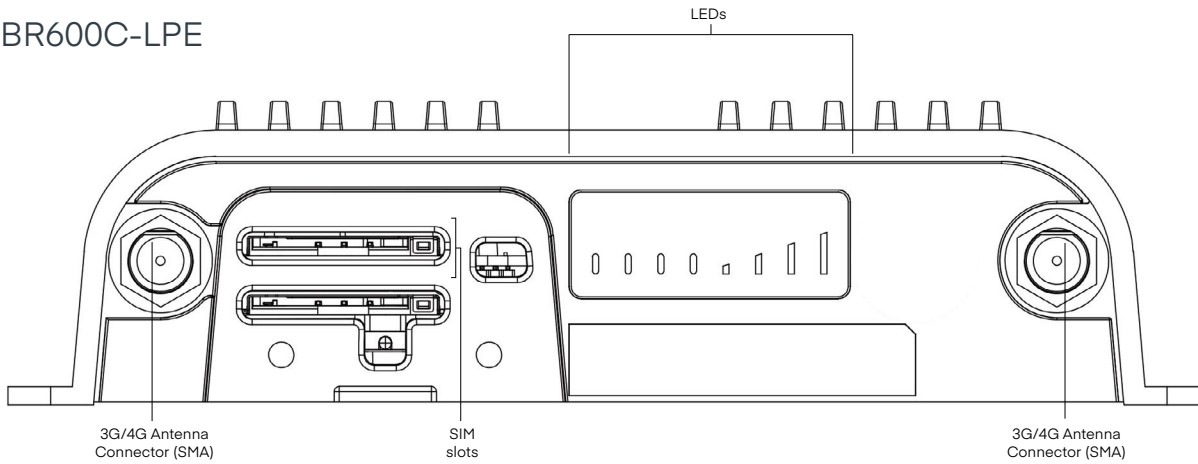
<https://customer.cradlepoint.com/s/article/Safety-Regulatory-and-Warranty-Guide-for-COR-IBR600C-Series-Routers>

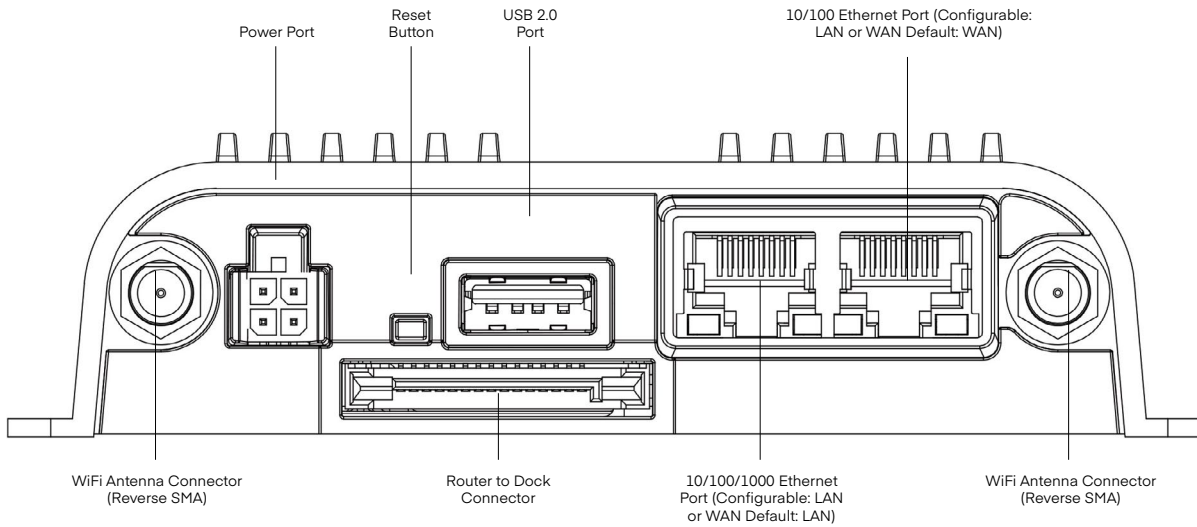
Hardware

IBR600C-150M



IBR600C-LPE

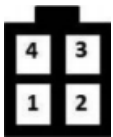




Power/GPIO Connector





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 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.)
<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 of the modem LEDs blink red in unison for 10 seconds when there is an error during NCOS upgrade.