

INTRODUCTION

WHAT'S IN THE BOX

- High-performance hardened metal router with integrated business-class 3G/4G modem; includes integrated mounting plate
- Quick Start Guide with warranty information
- DC GPIO/power cable

KEY FEATURES

WAN

- Dual-modem capable with MC400 modem slot for 2nd modem
- 600M: LTE Advanced 600 Mbps LTE/HSPA+ (SIM-based, Auto-carrier Selection for all North American, European, and Asia Pacific carriers; includes support for 700 MHz Band 28 in Asia Pacific)
- WiFi as WAN, with WPA2 Enterprise Authentication for WiFi as WAN²
- 3rd radio for dedicated back haul
- WiFi client mode
- Failover/Failback
- Load Balancing
- Advanced Modem Failure Check
- WAN Port Speed Control
- WAN/LAN Affinity
- IP Passthrough
- Standby
- Multi-PDN
- Smart WAN Selection
- Serial PAD mode
- DynDNS
- AutoQoS
- QoS (DSCP and Priority Queuing)

LAN

- VLAN 802.1Q
- DHCP Server, Client, Relay
- DNS and DNS Proxy
- DMZ
- Multicast/Multicast Proxy
- MAC Address Filtering
- STP2
- GPS broadcast to LAN

WIFI

- Dual-Band, Simultaneous Tri Band 2×2 2.4GHz + 2×2 5GHz + 4×4 5GHz WiFi
- 802.11 a/b/g/n/ac wave 2 MU-MIMO and 256 QAM support
- Up to 192 connected devices (64 per radio – one @ 2.4 GHz and two @ 5 GHz)
- Multiple SSIDs: 2 per radio (6 total)
- WPA2 Enterprise (WiFi)
- Hotspot/Captive Portal
- SSID-based Priority
- Client Mode for faster data offload

MANAGEMENT

- Cradlepoint NetCloud Manager¹
 - Secure remote cloud configuration²
 - Real-time diagnostics/troubleshooting²
 - Remote connect / Out-of-Band Management²
 - Geoview location services
 - Pool data alerts²
- Client and Traffic Visibility and Control²
- Web UI, API, CLI
- Active GPS support
- Data usage alerts
- Advanced troubleshooting (support)
- Device alerts
- SDK support
- SNMP
- SMS control
- Serial redirector
- Auto APN Recovery
- Syslog

VPN & ROUTING

- IPsec Tunnel – up to ten concurrent sessions
- IKEv2 support (includes MOBIKE)
- L2TP2
- GRE Tunnel
- OSPF/BGP/RIP2
- Route Filters (Access Control Lists, Prefix Filters, Route Maps, Communities for BGP)
- Per-Interface Routing
- Policy-based Routing
- NAT
- NAT-less Routing
- WAN Affinity
- Virtual Server/Port Forwarding
- NEMO/DMNR²
- IPv6
- VRRP2
- NHRP2
- VTI Tunnel support²
- OpenVPN support²

SECURITY

- NetCloud Perimeter compatible
- RADIUS and TACACS+ support*
- 802.1x authentication for Ethernet**
- Zscaler Internet Security Compatible²
- Certificate support
- Application-level gateways
- MAC Address Filtering
- Advanced Security Mode (local user management only)
- FIPS 140-2 Inside version available
- Application-aware firewall
- IP Filtering
- Content 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.

**-802.1x Authentication for Ethernet not available for FIPS SKUs.

1 – [NetCloud Manager](#) requires a subscription

2 – Requires an [Extended Enterprise License](#) and [NetCloud Manager](#)

SPECIFICATIONS

WAN:

- Dual-modem capable with MC400 slot
- Integrated 600M LTE Advanced 600 Mbps modem (with DC-HSPA+ failover)
- Five LAN/WAN switchable 10/100/1000 Ethernet ports – one default WAN (cable/DSL/T1/satellite/Metro Ethernet)
- WiFi as WAN, Metro WiFi; 2×2 MIMO “N” 2.4 GHz or 4×4 5 GHz; 802.11 a/b/g/n/ac wave 2

LAN:

- Simultaneous Tri-Band WiFi; 802.11 a/b/g/n/ac wave 2
- Five LAN/WAN switchable 10/100/1000 Ethernet ports – four default LAN

PORTS:

- Power + GPIO (1 input / ignition sense input, 1 output)
- 20-pin power + GPIO port:
 - Alternate DC power input
 - Two analog inputs
 - One input / ignition sense input
 - Four configurable input/output
 - One low current 5V output (50mA max)
- USB 2.0
- Five Ethernet LAN/WAN
- Two cellular antenna connectors (SMA)
- One active GPS antenna connector (SMA)
- Six WiFi antenna connectors (R-SMA)

TEMPERATURE:

- -30 °C to 70 °C (-22 °F to 158 °F) operating

HUMIDITY (non-condensing):

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

POWER:

- DC input steady state voltage range: 9–36 VDC (requires 5.0A inline fuse for vehicle installations)
- Reverse polarity and transient voltage protection per ISO 7637-2
- Ignition sensing (automatic ON and time-delay OFF)
- Power consumption:
 - Conditions: 12V input, room temperature)
 - Sleep: 10 mW
 - Idle: 8 W
 - Typical: 14 W
 - Heavy Usage: 24 W
- Analog to Digital Converter:
 - Port 1: Selectable 0.5–36 V or 0.1–5 V ranges
 - Port 2: 0.5–36 V range
 - Accuracy: Typical $\pm 0.5\%$, Maximum $\pm 1\%$
 - Configurable low and high voltage alerts
 - Low voltage router shutoff

WIFI POWER (FCC):

- 2402–2483.5 MHz (2.4 GHz band): 29.2 dBm conducted
- 5150–5250 MHz (5 GHz band 1): 29.0 dBm conducted
- 5725–5850 MHz (5 GHz band 3): 30.0 dBm conducted

WIFI POWER (Europe/Rest of World):

- 2.4 GHz band: 19.81 dBm EIRP
- 5150–5250 MHz: 22.80 dBm EIRP

SIZE: 8.8 × 7.5 × 1.7 in (224.3 × 190 × 44 mm)

WEIGHT: 3 lb 7 oz (1.7 kg)

MATERIAL: metal

CERTIFICATIONS:

- FCC, CE, IC
- AS, NZS, SGP
- WiFi Alliance – 802.11a/b/g/n/ac wave 2 certified
- Safety: UL/CUL, CB Scheme, EN60950-1
- Shock/Vibration/Humidity: compliant with MIL STD 810G and SAEJ1455
- Ingress Protection: compliant with IP54 (includes protection from dust and splashing water)
- Materials: WEEE, RoHS, RoHS-2, California Prop 65
- Telecom: PTCRB/CTIA, GCF-CC
- Regulatory Models: S5A803A, S5A804A, S5A808A, S5A809A
- FIPS 140-2 Inside

GPS:

- GPS Protocols: NMEA 0183 V3.1
- Satellite channels: Maximum 48 channels, simultaneous tracking
- Concurrent standalone GPS, GLONASS, BeiDou, and Galileo
- 1 Hz refresh rate
- Accuracy:
 - Horizontal: < 1.7 m (50%)
 - Velocity: < 0.1 m/s
- Acquisition (measured with signal strength = -130 dBm):
 - Hot start: < 1.3 seconds
 - Warm start: < 31 seconds
 - Cold start: < 32 seconds
- Sensitivity
 - Tracking: -163 dBm (tracking sensitivity is the lowest GNSS signal level for which the device can still detect an in-view satellite 50% of the time when in sequential tracking mode)
 - Acquisition (standalone): -147 dBm (acquisition sensitivity is the lowest GNSS signal level for which the device can still detect an in-view satellite 50% of the time)
- Operational limits: altitude <18000 m and velocity <515 m/s

ACCESSORIES

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

POWER & MOUNTING:

- Two meter locking power and GPIO cable (direct wire) (Part # 170585-000)
- COR extended temperature (-30C to 70C) power supply (line cord not included) Part #: 170648-001
- US line cord Part #: 170623-001
- EU line cord Part #: 170623-002
- UK line cord Part #: 170623-003
- AU line cord Part #: 170623-004
- IBR1700 Rack-Mount Brackets Part #: 170750-000

ANTENNAS – 3G/4G Modem, WiFi, & GPS:

- 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
- 2.4/5 GHz Dual-band, Dual-concurrent WiFi Antenna Part #: 170628-000 (WiFi models only)
- Universal 3G/4G/LTE Modem Antenna Part #: 170649-000
- GPS Screw-Mount Antenna Part #: 170651-000
- GPS Mag-Mount Antenna Part #: 170652-000
- 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)

VEHICLE ANTENNAS:

- 3-in-1 GPS & Modem Screw-Mount Part #: 170653-000
- 3-in-1 Adhesive-Mount Antenna Part #: 170653-001
- 5-in-1 GPS, Modem & WiFi Screw-mount Part #: 170654-000
- Low Profile 5-in-1 MIMO LTE, MIMO WiFi (2.4/5 GHz), & GPS Screw Mount Antenna with 5M Cables Part #: 170654-001

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 IBR1700-600M models include an embedded LTE Advanced 600 Mbps 4G LTE modem. The 600M 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.

The LTE bands certified for each carrier are listed below.

COR IBR1700-600M

- Technology: LTE Advanced, HSPA+
- Downlink Rates: LTE 600 Mbps, HSPA+ 42.2 Mbps
- Uplink Rates: LTE 75 Mbps, HSPA+ 5.76 Mbps
- Frequency Bands:
 - LTE Bands
 - LTE FDD: 1–5, 7–8, 12–13, 17, 20, 25–26, 28–30, 66
 - LTE TDD: 38, 40–41
 - HSPA+: 1–2, 4–5, 8
- LTE 2DL Carrier Aggregation Combinations:
 - B2+B2, B2+B4, B2+B5, B2+B12, B2+B13, B2+B17, B2+B29, B2+B30, B4+B4, B4+B5, B4+B7, B4+B12, B4+B13, B4+B17, B4+B29, B4+B30, B5+B30, B12+B12, B12+B30, B25+B25, B25+B26, B25+B41, B26+B41, B29+B30, B41+B41, B1+B20, B3+B3, B3+B7, B3+B20, B3+B38, B7+B7, B7+B8, B7+B20, B38+B38, B1+B3, B1+B7, B1+B28, B3+B8, B3+B28, B5+B7, B5+B40, B7+B8, B7+B20
- LTE 3DL Carrier Aggregation Combinations:
 - B2+B2+B12/17, B2+B2+B13, B2+B2+B4, B2+B4+B5, B2+B4+B12, B2+B4+B13, B2+B4+B29, B2+B5+B30, B2+B12+B12, B2+B12+B30, B2+B29+B30, B4+B4+B5, B4+B4+B7, B4+B4+B12, B4+B4+B13, B4+B5+B30, B4+B12+B12, B4+B12+B30, B4+B29+B30, B25+B26+B41, B25+B41+B41, B26+B41+B41, B41+B41+B41, B1+B3+B20, B1+B7+B20, B3+B3+B7, B3+B3+B20, B3+B7+B20, B3+B7+B7, B3+B20+B38, B3+B38+B38, B3+B3+B5, B3+B3+B8, B3+B7+B7, B3+B7+B28, B7+B7+B28, B28+B40+B40, B40+B40+B40
- Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 2, 4, 5, 8
- Power: LTE 23 dBm ± 1, HSPA+ 23 dBm ± 1
- Antennas: two SMA male (plug), finger tighten only (maximum torque spec is 7 kgf/cm2)
- GPS: active GPS support
- SMS: SMS support
- Industry Standards & Certs: CE, FCC, GCF-CC, IC, PTCRB, AT&T, Sprint (pending), Verizon, Verizon NEMO/DMNR for Primary Wireless Access

SUPPORT & WARRANTY

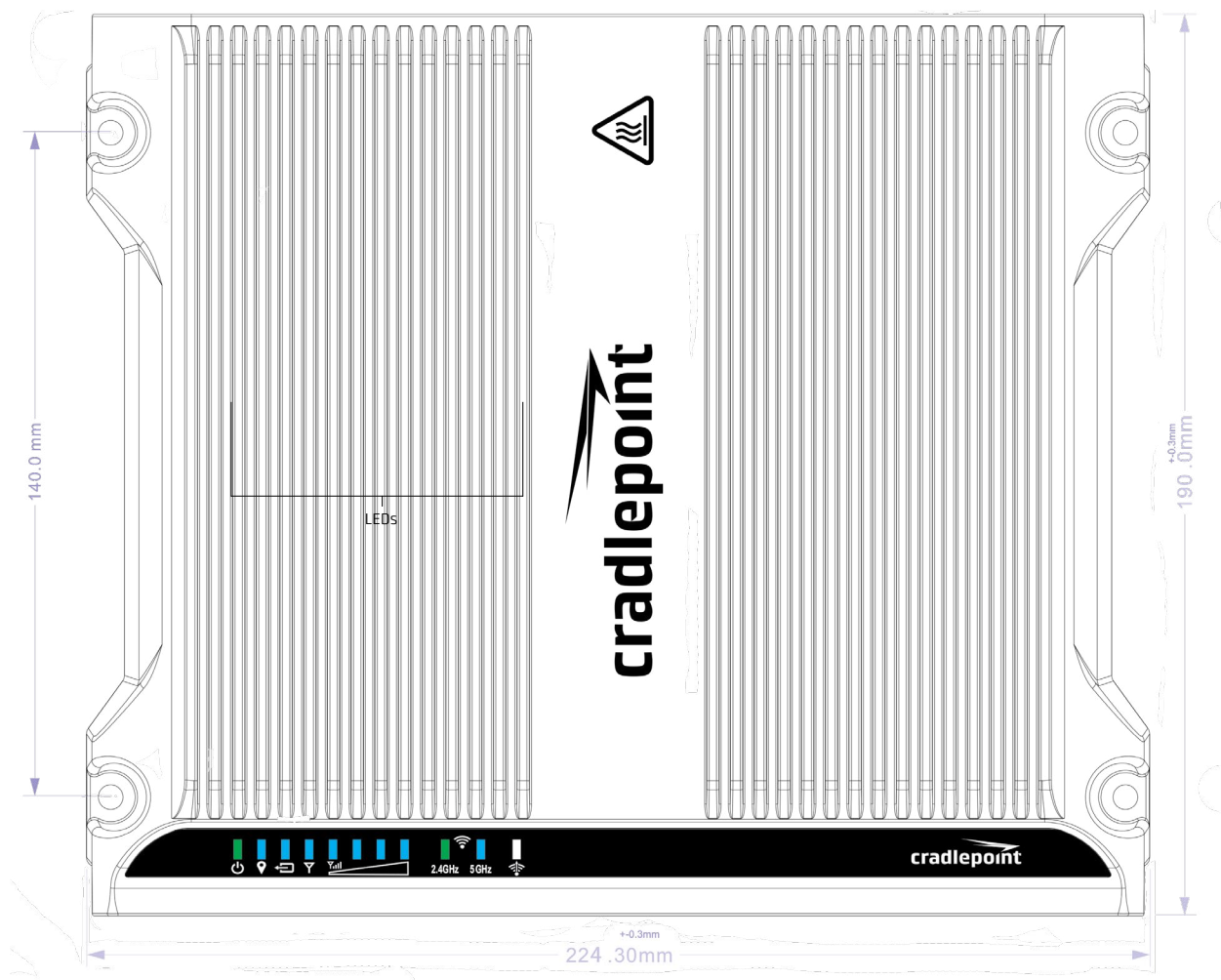
The COR IBR1700 is only sold as a component of NetCloud Solution Packages.

- NetCloud Solution Packages include support for the full subscription term.
- All Cradlepoint hardware products are covered by a Limited Lifetime Warranty for as long as they are under a NetCloud Solution Package subscription.

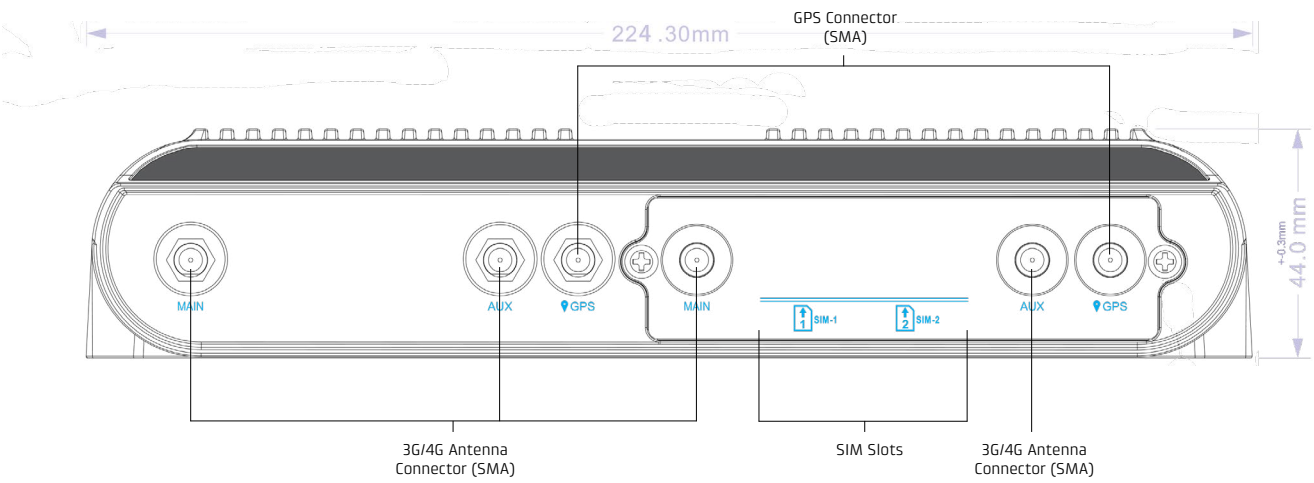
The COR IBR1700 includes a minimum three-year hardware warranty when purchased from an authorized Cradlepoint Partner.

HARDWARE

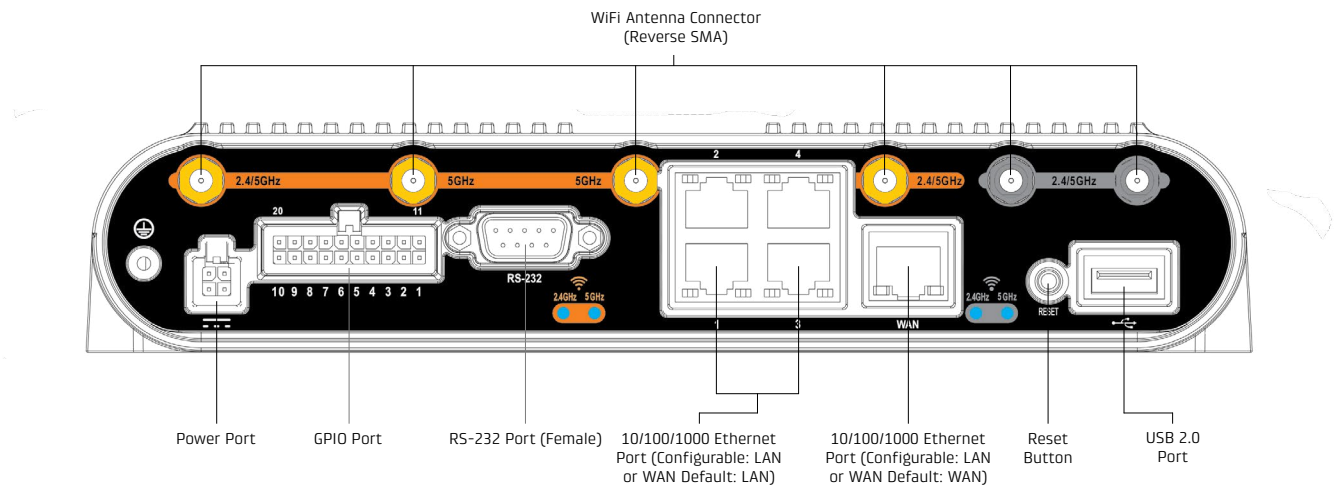
TOP



FRONT









BACK



IBR1700 2x10 Connector			
PIN	Bottom Row	6	GPIO1
1	Router Voltage Input	7	GPIO1
2	Router Voltage Input	8	GPIO1
3	ADC Channel 1	9	GPIO1
4	ADC Channel 2	10	Low Current 5V Output (50mA max)
5	GPI / Ignition Sense	11-20	GND

LEDS

INDICATOR	BEHAVIOR
	POWER: The Cradlepoint IBR1700 must be powered using an approved 9–36 V DC power source. <ul style="list-style-type: none"> Green = Powered ON. Yellow = Attention is required. No Light = Not receiving power. Check the power switch and the power source connection.
	GPS: Indicates the status of GPS connection. <ul style="list-style-type: none"> Blue = GPS locked. Blinking Blue = Obtaining lock. No Light = Off/no lock.
	MC400 MODEM: Indicates information about the optional MC400 modem. <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. No Light = Modem not connected.
	INTEGRATED MODEM: Indicates information about the integrated modem. <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. Blinking Red with Signal Strength LEDs = SIM door is not installed, modem is off. No Light = Modem not connected.
	SIGNAL STRENGTH: Blue LED bars indicate the active modem's signal strength. <ul style="list-style-type: none"> 4 Solid Bars = Strongest signal. 1 Blinking Bar = Weakest signal. (A blinking bar indicates half of a bar.) 4 Blinking Bars = SIM door is not installed, modem is off
2.4GHz 5GHz	WIFI STATUS: Indicates information about WiFi channels. <ul style="list-style-type: none"> 2.4 GHz Green = Activity on 2.4 GHz WiFi band. 5 GHz Blue = Activity on 5 GHz WiFi band.
	WIFI AS WAN: Indicates WiFi as WAN status. <ul style="list-style-type: none"> White = WiFi as WAN active.
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. When an external USB modem is plugged in, only the Signal Strength LEDs will light up.