



NetCloud Services for Mobile



# IBR1700 Series Spec Sheet



Shown: COR IBR1700-1200M-B

Cradlepoint IBR1700 Series Router is sold as part of an all-inclusive mobile networking package.

**NetCloud Mobile Packages Include:**

- Ruggedized endpoints, purpose-built for mobile applications
- A NetCloud Service Plan tailored for mobile networking and set for a specific term
- 24x7 support and limited lifetime warranty

## What to Buy

| Description  | Part Numbers     |
|--|------------------|
| <b>North America</b> (U.S., Canada)                  |                  |
| — NetCloud Mobile Essentials with IBR1700-1200M-B    | MAx-1700120B-NNA |
| — NetCloud Mobile Essentials with IBR1700-1200M      | MAx-17001200-NNA |
| — NetCloud Mobile Essentials with IBR1700-600M       | MAx-1700600M-NNA |
| <b>Europe</b> (EU)                                   |                  |
| — NetCloud Mobile Essentials with IBR1700-1200M-B-EU | MAx-1700120B-EWA |
| — NetCloud Mobile Essentials with IBR1700-600M-EU    | MAx-1700600M-EWA |
| <b>Asia-Pacific</b>                                  |                  |
| <i>Australia, New Zealand</i>                        |                  |
| — NetCloud Mobile Essentials with IBR1700-1200M-B-AP | MAx-1700120B-PAA |
| — NetCloud Mobile Essentials with IBR1700-600M-AP    | MAx-1700600M-PWA |
| <i>Singapore, Malaysia</i>                           |                  |
| — NetCloud Mobile Essentials with IBR1700-1200M-B-AP | MAx-1700120B-PWA |
| — NetCloud Mobile Essentials with IBR1700-600M-AP    | MAx-1700600M-PWA |
| <b>All Regions</b>                                   |                  |
| — NetCloud Mobile Advanced Plan                      | MAx-NCADV        |

x = 1, 3, or 5 years

**NetCloud Mobile Essentials** packages and plans contain all the features and capabilities required for a broad range of mobile or in-vehicle 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 Mobile Advanced Plan** can be added to the NetCloud Mobile Essentials Package at any time.

See additional details of what is included in the Essential and Advanced NetCloud software: [cradlepoint.com/netcloud-service](http://cradlepoint.com/netcloud-service)

For more details on the IBR1700 Series Router, included with the NetCloud Mobile Packages, see below.

## What's in the Box

- [1] Ruggedized, high-performance router with an embedded business-class, LTE modem featuring an integrated mounting plate
- [1] 4-Wire Power/GPIO Cable (3-meters)
- [1] Safety, Regulatory, and Warranty Guide

## Required Accessories

- 3G/4G LTE cellular antennas (qty. 2 or 4)
- 2.4/5 GHz dual-band Wi-Fi antennas (qty. 6)
- An active (powered) GPS antenna

## Models

- **IBR1700-1200M-B:** LTE Advanced Pro 1.2 Gbps LTE/HSPA+ with SIM-based, auto-carrier selection
  - FirstNet Ready™
  - Supports Private LTE (includes support for CBRS OnGo Band 48)
  - Approved for use on the UK Emergency Services Network (ESN), including Critical Services
- **IBR1700-1200M:** LTE Advanced Pro 1.2 Gbps LTE/HSPA+ with SIM-based, auto-carrier selection
  - FirstNet Ready
- **IBR1700-600M:** LTE Advanced 600 Mbps LTE/HSPA+ with SIM-based, auto-carrier selection for all North American, European, and Asia Pacific carriers

## Key Features

### WAN

- Dual-modem capable with MC400 modem slot for second modular modem
- Wi-Fi-as-WAN, with WPA2 Enterprise Authentication for Wi-Fi-as-WAN
- Third radio for dedicated back haul
- Wi-Fi client mode
- Failover/Failback
- Load Balancing
- Advanced Modem Failure Check
- WAN Port Speed Control
- WAN/LAN Traffic Steering
- 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
- STP<sup>2</sup>
- GPS broadcast to LAN

## Wi-Fi

- Dual-Band, Simultaneous Tri-Band 2x2 2.4 GHz + 2x2 5 GHz + 4x4 5 GHz Wi-Fi
- 802.11 a/b/g/n/ac wave 2 MU-MIMO and 256 QAM support
- Multiple SSIDs: 2 per radio (6 total)
- WPA2 Enterprise (Wi-Fi)
- Hotspot/Captive Portal
- SSID-based Priority
- Client Mode for faster data offload

## Management

- Cradlepoint NetCloud Manager
  - Secure remote cloud configuration
  - Real-time diagnostics/troubleshooting
  - Remote Connect / Out-of-Band Management
  - Geoview location services
  - Pool data alerts
- Client and Traffic Visibility and Control
- 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)
- L2TP
- GRE Tunnel
- OSPF/BGP/RIP
- Route Filters (Access Control Lists, Prefix Filters, Route Maps, Communities for BGP)
- Per-Interface Routing
- Policy-based Routing
- NAT
- NAT-less Routing
- Traffic Steering
- Virtual Server/Port Forwarding
- NEMO/DMNR
- IPv6
- VRRP
- NHRP
- VTI Tunnel support
- OpenVPN support

## Security

- NetCloud Perimeter compatible
- RADIUS and TACACS+ support\*
- 802.1x authentication for Ethernet\*\*
- Zscaler Internet Security Compatible
- 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

## IoT Connector

- NetCloud Edge Connector for Microsoft® Azure IoT Central
- NetCloud Edge Connector for AWS IoT Greengrass

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

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

## Specifications

The following features are delivered through the hardware.

### WAN:

- Dual-modem capable with MC400 Modular Modem slot
- Embedded 1200M LTE Advanced Pro 1.2 Gbps modem (with DC-HSPA+ failover)
- Embedded 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 Wi-Fi; 2x2 MIMO "N" 2.4 GHz or 4x4 5 GHz; 802.11 a/b/g/n/ac wave 2

### LAN:

- Simultaneous Tri-Band Wi-Fi: 802.11 a/b/g/n/ac Wave 2
- Five LAN/WAN switchable 10/100/1000 Ethernet ports — (4) four default LAN
- Serial console support for Out-of-Band Management of a connected device

### 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 Wi-Fi antenna connectors (R-SMA)
- Serial DE-9 (commonly called "DB-9") connector — RS-232 (Out-of-Band Management of an external device requires a null modem adapter/cable)

**Temperature:**

- -30 °C to 70 °C (-22 °F to 158 °F) operating
- -40 °C to 85 °C (-40 °F to 185 °F) storage

**Humidity (non-condensing):**

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

**Power:**

- DC input steady state voltage range: 9–36VDC (requires 3A 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

**Wi-Fi 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

**Wi-Fi Power (Australia/New Zealand):**

- Radio 1 (2x2):
  - 2.4 GHz: 33.4 dBm EIRP
  - 5150-5250 MHz: 22.9 dBm EIRP
  - 5250-5350 MHz: 22.9 dBm EIRP
  - 5475-5725 MHz: 29.8 dBm EIRP
  - 5725-5850 MHz: 35.8 dBm EIRP
- Radio 2 (4x4)
  - 5150-5250 MHz: 22.9 dBm EIRP
  - 5250-5350 MHz: 22.9 dBm EIRP

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- 5475-5725 MHz: 29.8 dBm EIRP
- 5725-5850 MHz: 35.8 dBm EIRP

### Wi-Fi 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:

- Wi-Fi 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 IP64 (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, S5A844A
- 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



## Performance

- Max Throughput (Default Configuration\*): 940 Mbps
- Max Concurrent TCP Sessions: 32,000
- Recommended Max Client Count: 100\*\*

Performance testing based off requirements defined in RFC2544, using a mix of 64-, 256-, and 1500-byte packet sizes. Throughput is shown as bi-directional, TCP traffic with less than a 1% packet loss using four wired clients.

Specifications and information in this datasheet are subject to change without notice.

\*Cradlepoint defines client as any network connected device utilizing resources, such as bandwidth, on the local network.

\*\*Default configuration shipped with hardware including NAT and basic stateful/zone firewall configuration.

## Accessories

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

### Second external (modular) LTE modem with MC400:

- MC400-1200M-B
- MC400LP6 (North America or EU)
- MC400LP5 (Asia Pacific or Saudi Arabia)
- MC400LP4 (AT&T, Verizon, T-Mobile, and Canada)

### Power & Mounting:

- GPIO & Power Cable, 2x2, 3 meter (direct wire), Part # 170585-001
- Power Supply, 12V, 5.5A, Extended Temperature, Part # 170648-001 (line cord not included)
  - U.S. 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, Part # 170750-001

### Adapters:

- 2x10 GPIO Cable, Part # 170712-000
- OBD-II Adapter Kit, Part # 170758-000

### Antennas

Compatible antennas are available through Cradlepoint Approved Antenna Vendors. Refer to the [Antenna page](#) on Cradlepoint.com for more information.

# Enterprise-Class Modem Specifications

## IBR1700-1200M-B

- IBR1700-1200M-B LTE Advanced Pro/HSPA+
- Technology: Category 18 LTE Advanced Pro, DC-HSPA+ with SIM-based, auto-carrier selection
- Downlink Rates: LTE 1.2 Gbps, DC-HSPA+ 42.2 Mbps\*
- Uplink Rates: LTE 150 Mbps, DC-HSPA+ 5.76 Mbps\*
- MIMO: 2x2 or 4x4 MIMO
- 256 QAM support
- Frequency Bands:
  - LTE Bands
    - LTE FDD: 1, 2(25), 3, 4(66), 5(26/18/19), 7, 8, 12(17), 13, 14, 20, 28, 29, 30, 32, 71
    - LTE TDD: 38, 39, 40, 41, 42, 43, 46, 48
- 1200M-B Antenna Mapping:
  - Main/Aux 0: 1, 2(25), 3, 4(66), 5(26, 18, 19), 8, 12(17), 13, 14, 20, 28, 29, 39, 71, [41] for 4x4MIMO
  - Main/Aux1: 7, 30, 32, 38, 40, 41, 42, 43, 46, 48, [2(25)] for 4x4MIMO, [4(66)] for 4x4 MIMO.
  - If Main/Aux 1 are not connected, these bands are not supported: 7, 30, 32, 38, 40, 41, 42, 43, 46, 48
- Carrier Aggregation: Up to 5CA. [ ] indicates 4x4 MIMO
  - AT&T:
    - LTE FDD: 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 29 (DL), 30, 66, 71 (FDD)
    - LTE TDD: 41, 46 (DL), 48
    - 3G DC-HSPA+: 1, 2, 4, 5, 8
    - 2CA DL carrier aggregation combinations:
      - CA\_[2A]-[4A], CA\_[2A]-5A, CA\_2A-7A, CA\_[2A]-12A, CA\_[2A]-14A, CA\_[2A]-29A, CA\_2A-30A, CA\_[2A]-46A, CA\_[2A]-48A, CA\_[2A]-[66A], CA\_[2A]-71A, CA\_[4A]-5A, CA\_4A-7A, CA\_[4A]-12A, CA\_[4A]-29A, CA\_4A-30A, CA\_[4A]-46A, CA\_[4A]-71A, CA\_5A-30A, CA\_5A-[66A], CA\_7A-12A, CA\_12A-30A, CA\_12A-[66A], CA\_14A-30A, CA\_14A-[66A], CA\_[25A]-26A, CA\_25A-41A, CA\_26A-[41A], CA\_29A-30A, CA\_29A-[66A], CA\_30A-66A, CA\_46A-[66A], CA\_48A-[66A], CA\_[66A]-71A, CA\_[2A]-[2A], CA\_[4A]-[4A], CA\_[25A]-[25A], CA\_[41A]-[41A], CA\_48A-48A, CA\_[66A]-[66A], CA\_[2C], CA\_5B, CA\_7C, CA\_12B, CA\_[41C], CA\_48C, CA\_[66B], CA\_[66C]
    - 3CA DL carrier aggregation combinations:
      - CA\_[2A]-2A-5A, CA\_2A-[2A]-5A, CA\_[2A]-2A-12A, CA\_2A-[2A]-12A, CA\_2A-2A-30A, CA\_[2A]-2A-66A, CA\_2A-[2A]-66A, CA\_2A-2A-[66A], CA\_[2A]-2A-71A, CA\_2A-[2A]-71A, CA\_[2A]-4A-4A, CA\_2A-[4A]-4A, CA\_2A-4A-[4A], CA\_[2A]-4A-5A, CA\_2A-[4A]-5A, CA\_[2A]-4A-12A, CA\_2A-[4A]-12A, CA\_[2A]-4A-29A, CA\_2A-[4A]-29A, CA\_2A-4A-30A, CA\_[2A]-4A-71A, CA\_2A-[4A]-71A, CA\_2A-5A-30A, CA\_[2A]-5A-66A, CA\_2A-5A-[66A], CA\_2A-7A-12A, CA\_2A-12A-30A, CA\_[2A]-12A-66A, CA\_2A-12A-[66A], CA\_[2A]-12B, CA\_2A-14A-30A, CA\_[2A]-14A-66A, CA\_2A-14A-[66A], CA\_2A-29A-30A, CA\_2A-30A-66A, CA\_[2A]-46A-46A, CA\_[2A]-46A-66A, CA\_2A-46A-[66A], CA\_[2A]-46C, CA\_[2A]-48A-48A, CA\_[2A]-48C, CA\_[2A]-48A-66A, CA\_2A-48A-[66A], CA\_[2A]-66A-66A, CA\_2A-[66A]-66A, CA\_2A-66A-[66A], CA\_[2A]-66A-71A, CA\_2A-[66A]-71A, CA\_[2A]-[66C], CA\_[2A]-66C, CA\_2A-[66C], CA\_[4A]-4A-5A, CA\_4A-[4A]-5A, CA\_4A-4A-7A, CA\_[4A]-4A-12A, CA\_4A-[4A]-12A, CA\_4A-4A-30A, CA\_[4A]-4A-71A, CA\_4A-[4A]-71A, CA\_4A-5A-30A, CA\_4A-7A-12A, CA\_4A-12A-30A, CA\_[4A]-12B, CA\_4A-29A-30A, CA\_[4A]-46A-46A, CA\_[4A]-46C, CA\_5A-30A-66A, CA\_5A-[66A]-66A, CA\_5A-66A-[66A], CA\_5A-[66C], CA\_12A-30A-66A, CA\_12A-[66A]-66A, CA\_12A-66A-[66A], CA\_12A-[66C], CA\_14A-30A-66A, CA\_14A-[66A]-66A, CA\_14A-66A-[66A], CA\_[25A]-25A-26A, CA\_25A-[25A]-26A, CA\_25A-41C, CA\_26A-[41C], CA\_29A-30A-66A, CA\_29A-[66A]-66A, CA\_29A-66A-[66A], CA\_30A-66A-66A, CA\_[41A]-[41C], CA\_[41A]-41C,

CA\_41A-[41C], CA\_[41D], CA\_46C-[66A], CA\_48A-48C, CA\_48D, CA\_48A-48A-[66A], CA\_48C-[66A], CA\_[66A]-66A-71A, CA\_66A-[66A]-71A

— 4CA DL carrier aggregation combinations:

CA\_2A-2A-5A-30A, CA\_2A-2A-5A-66A, CA\_2A-2A-12A-30A, CA\_2A-2A-12A-66A, CA\_2A-2A-29A-30A, CA\_2A-2A-66A-66A, CA\_2A-2A-66A-71A, CA\_[2A]-2A-66C, CA\_2A-[2A]-66C, CA\_2A-2A-[66C], CA\_2A-4A-4A-12A, CA\_2A-4A-5A-30A, CA\_2A-4A-7A-12A, CA\_2A-4A-12A-30A, CA\_2A-5A-30A-66A, CA\_2A-5A-66A-66A, CA\_2A-5B-30A, CA\_[2A]-5B-66A, CA\_2A-5B-[66A], CA\_2A-12A-30A-66A, CA\_2A-12A-66A-66A, CA\_2A-29A-30A-66A, CA\_2A-46A-46A-66A, CA\_[2A]-46A-46C, CA\_[2A]-46C-66A, CA\_2A-46C-[66A], CA\_[2A]-46D, CA\_2A-66A-66A-71A, CA\_2A-66C-71A, CA\_[2C]-66A-66A, CA\_2C-[66A]-66A, CA\_2C-66A-[66A], CA\_4A-4A-12A-30A, CA\_[4A]-46A-46C, CA\_[4A]-46D, CA\_5A-30A-66A-66A, CA\_5B-30A-66A, CA\_5B-66A-66A, CA\_12A-30A-66A-66A, CA\_25A-41D, CA\_29A-30A-66A-66A, CA\_[41A]-41D, CA\_[41C]-41C, CA\_41C-[41C], CA\_41E, CA\_46A-46C-[66A], CA\_46D-[66A], CA\_48D-[66A], CA\_48E

— 5CA DL carrier aggregation combinations:

CA\_2A-2A-46D, CA\_2A-5B-30A-66A, CA\_2A-5B-66A-66A, CA\_2A-46A-46C-66A, CA\_2A-46D-66A, CA\_5B-30A-66A-66A, CA\_46D-66A-66A

— 2CA UL carrier aggregation combinations:

UL\_2A-5A, UL\_2A-12A, UL\_4A-12A, UL\_5A-66A, UL\_5B, UL\_41C

— Verizon:

— LTE FDD: 2, 4, 5, 13, 66 (FDD)

— LTE TDD: 48

— 3G DC-HSPA+: 1, 2, 4, 5, 8 (roaming)

— 2CA DL carrier aggregation combinations:

CA\_[2A]-[2A], CA\_[2A]-[4A], CA\_[2A]-5A, CA\_[2A]-13A, CA\_[2A]-[66A], CA\_[4A]-[4A], CA\_[4A]-5A, CA\_[4A]-13A, CA\_5A-[66A], CA\_5B, CA\_13A[66A], CA\_[66A]-[66A], CA\_[66B], CA\_[66C], CA\_[2A]-48A, CA\_13A-48A, CA\_48A-[66A]

— 3CA DL carrier aggregation combinations:

CA\_[2A]-2A-5A, CA\_[2A]-2A-13A, CA\_[2A]-2A-66A, CA\_2A-2A-[66A], CA\_[2A]-4A-5A, CA\_2A-[4A]-5A, CA\_[2A]-4A13A, CA\_2A-[4A]-13A, CA\_[2A]-5A-66A, CA\_2A-5A-[66A], CA\_[2A]-13A-66A, CA\_2A-13A-[66A], CA\_[2A]-66A-66A, CA\_2A-[66A]-66A, CA\_[2A]-[66B], CA\_[2A]-[66C], CA\_[4A]-4A-5A, CA\_[4A]-4A-13A, CA\_5A-[66A]-66A, CA\_5A-[66B], CA\_5A[66C], CA\_13A-[66A]-66A, CA\_13A-[66B], CA\_13A-[66C], CA\_[66A]-[66C], CA\_[66D], CA\_[2A]-48A-48A, CA\_[2A]-48A-66A, CA\_2A-48A-[66A], CA\_[2A]-48C, CA\_13A-48A-48A, CA\_13A-48A-[66A], CA\_13A-48C, CA\_48A-48A-[66A], CA\_48A-[66A]66A, CA\_48A-[66B], CA\_48C-[66A]

— 4CA DL carrier aggregation combinations:

CA\_2A-48A-48A-66A, CA\_[2A]-48D, CA\_13A-48A-48A-66A, CA\_13A-48A-48C, CA\_13A-48C-[66A], CA\_13A-48D, CA\_48A-48A-66A-66A, CA\_48A-48A-[66B], CA\_48A-48A-[66C], CA\_48A-48C-[66A], CA\_48D-[66A]

— 5CA DL carrier aggregation combinations:

CA\_2A-48E, CA\_13A-48A-48C-66A, CA\_13A-48C-48C, CA\_13A-48D-66A, CA\_13A-48E, CA\_48A-48C-66B, CA\_48A48C-66C, CA\_48C-48C-66A, CA\_48E-66A

— 2CA UL carrier aggregation combinations: CA\_2A-13A, CA\_4A-13A

— North America Generic:

— LTE FDD: 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 29 (DL), 30, 66, 71 (FDD)

— LTE TDD: 41, 46 (DL), 48

— 3G DC-HSPA+: 1, 2, 4, 5, 8

— 2CA DL carrier aggregation combinations:

CA\_[2A]-[4A], CA\_[2A]-5A, CA\_2A-7A, CA\_[2A]-12A, CA\_[2A]-14A, CA\_[2A]-29A, CA\_2A-30A, CA\_[2A]-46A, CA\_[2A]-48A, CA\_[2A]-[66A], CA\_[2A]-71A, CA\_[4A]-5A, CA\_4A-7A, CA\_[4A]-12A, CA\_[4A]-29A, CA\_4A-30A, CA\_[4A]-46A, CA\_[4A]-71A, CA\_5A-30A, CA\_5A-[66A], CA\_7A-12A, CA\_12A-30A, CA\_12A-[66A], CA\_14A-30A, CA\_14A-[66A], CA\_[25A]-26A, CA\_25A-41A, CA\_26A-[41A], CA\_29A-30A, CA\_29A-[66A], CA\_30A-66A, CA\_46A-[66A], CA\_48A-[66A], CA\_[66A]-71A, CA\_[2A]-[2A], CA\_[4A]-[4A], CA\_[25A]-[25A], CA\_[41A]-[41A], CA\_48A-48A, CA\_[66A]-[66A], CA\_[2C], CA\_5B, CA\_7C, CA\_12B, CA\_[41C], CA\_48C, CA\_[66B], CA\_[66C]

— 3CA DL carrier aggregation combinations:

CA\_[2A]-2A-5A, CA\_2A-[2A]-5A, CA\_[2A]-2A-12A, CA\_2A-[2A]-12A, CA\_2A-2A-30A, CA\_[2A]-2A-66A, CA\_2A-[2A]-66A, CA\_2A-2A-[66A], CA\_[2A]-2A-71A, CA\_2A-[2A]-71A, CA\_[2A]-4A-4A, CA\_2A-[4A]-4A, CA\_2A-4A-[4A], CA\_[2A]-4A-5A, CA\_2A-[4A]-5A, CA\_[2A]-4A-12A, CA\_2A-[4A]-12A, CA\_[2A]-4A-29A, CA\_2A-[4A]-29A, CA\_2A-4A-30A, CA\_[2A]-4A-71A, CA\_2A-[4A]-71A, CA\_2A-5A-30A, CA\_[2A]-5A-66A, CA\_2A-5A-[66A], CA\_2A-7A-12A, CA\_2A-12A-30A, CA\_[2A]-12A-66A, CA\_2A-12A-[66A], CA\_[2A]-12B, CA\_2A-14A-30A, CA\_[2A]-14A-66A, CA\_2A-14A-[66A], CA\_2A-29A-30A, CA\_2A-30A-66A, CA\_[2A]-46A-46A, CA\_[2A]-46A-66A, CA\_2A-46A-[66A], CA\_[2A]-46C, CA\_[2A]-48A-48A, CA\_[2A]-48C, CA\_[2A]-48A-66A, CA\_2A-48A-[66A], CA\_[2A]-66A-66A, CA\_2A-[66A]-66A, CA\_2A-66A-[66A], CA\_[2A]-66A-71A, CA\_2A-[66A]-71A, CA\_[2A]-[66C], CA\_[2A]-66C, CA\_2A-[66C], CA\_[4A]-4A-5A, CA\_4A-[4A]-5A, CA\_4A-4A-7A, CA\_[4A]-4A-12A, CA\_4A-[4A]-12A, CA\_4A-4A-30A, CA\_[4A]-4A-71A, CA\_4A-[4A]-71A, CA\_4A-5A-30A, CA\_4A-7A-12A, CA\_4A-12A-30A, CA\_[4A]-12B, CA\_4A-29A-30A, CA\_[4A]-46A-46A, CA\_[4A]-46C, CA\_5A-30A-66A, CA\_5A-[66A]-66A, CA\_5A-66A-[66A], CA\_5A-[66C], CA\_12A-30A-66A, CA\_12A-[66A]-66A, CA\_12A-66A-[66A], CA\_12A-[66C], CA\_14A-30A-66A, CA\_14A-[66A]-66A, CA\_14A-66A-[66A], CA\_[25A]-25A-26A, CA\_25A-[25A]-26A, CA\_25A-41C, CA\_26A-[41C], CA\_29A-30A-66A, CA\_29A-[66A]-66A, CA\_29A-66A-[66A], CA\_30A-66A-66A, CA\_[41A]-[41C], CA\_[41A]-41C, CA\_41A-[41C], CA\_[41D], CA\_46C-[66A], CA\_48A-48C, CA\_48D, CA\_48A-48A-[66A], CA\_48C-[66A], CA\_[66A]-66A-71A, CA\_66A-[66A]-71A

— 4CA DL carrier aggregation combinations:

CA\_2A-2A-5A-30A, CA\_2A-2A-5A-66A, CA\_2A-2A-12A-30A, CA\_2A-2A-12A-66A, CA\_2A-2A-29A-30A, CA\_2A-2A-66A-66A, CA\_2A-2A-66A-71A, CA\_[2A]-2A-66C, CA\_2A-[2A]-66C, CA\_2A-2A-[66C], CA\_2A-4A-4A-12A, CA\_2A-4A-5A-30A, CA\_2A-4A-7A-12A, CA\_2A-4A-12A-30A, CA\_2A-5A-30A-66A, CA\_2A-5A-66A-66A, CA\_2A-5B-30A, CA\_[2A]-5B-66A, CA\_2A-5B-[66A], CA\_2A-12A-30A-66A, CA\_2A-12A-66A-66A, CA\_2A-29A-30A-66A, CA\_2A-46A-46A-66A, CA\_[2A]-46A-46C, CA\_[2A]-46C-66A, CA\_2A-46C-[66A], CA\_[2A]-46D, CA\_2A-66A-66A-71A, CA\_2A-66C-71A, CA\_[2C]-66A-66A, CA\_2C-[66A]-66A, CA\_2C-66A-[66A], CA\_4A-4A-12A-30A, CA\_[4A]-46A-46C, CA\_[4A]-46D, CA\_5A-30A-66A-66A, CA\_5B-30A-66A, CA\_5B-66A-66A, CA\_12A-30A-66A-66A, CA\_25A-41D, CA\_29A-30A-66A-66A, CA\_[41A]-41D, CA\_[41C]-41C, CA\_41C-[41C], CA\_41E, CA\_46A-46C-[66A], CA\_46D-[66A], CA\_48D-[66A], CA\_48E

— 5CA DL carrier aggregation combinations:

CA\_2A-2A-46D, CA\_2A-5B-30A-66A, CA\_2A-5B-66A-66A, CA\_2A-46A-46C-66A, CA\_2A-46D-66A, CA\_5B-30A-66A-66A, CA\_46D-66A-66A

— 2CA UL carrier aggregation combinations:

UL\_2A-5A, UL\_2A-12A, UL\_4A-12A, UL\_5A-66A, UL\_5B, UL\_41C

— EU/APAC Generic:

— LTE FDD: 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29 (DL), 30, 32, 66, 71

— LTE TDD: 38, 39, 40, 41, 42, 43, 46 (DL), 48

— 3G DC-HSPA+: 1, 2, 4, 5, 8, 9, 19

— 2CA DL carrier aggregation combinations:

CA\_1A-3A, CA\_1A-5A, CA\_1A-7A, CA\_1A-8A, CA\_1A-18A, CA\_1A-19A, CA\_1A-20A, CA\_1A-26A, CA\_1A-28A, CA\_1A-32A, CA\_1A-38A, CA\_1A-40A, CA\_1A-41A, CA\_1A-42A, CA\_[2A]-[4A], CA\_[2A]-5A, CA\_[2A]-7A, CA\_[2A]-12A, CA\_[2A]-28A, CA\_[2A]-46A, CA\_[2A]-48A, CA\_[2A]-[66A], CA\_[2A]-71A, CA\_3A-5A, CA\_3A-7A, CA\_3A-8A, CA\_3A-19A, CA\_3A-20A, CA\_3A-26A, CA\_3A-28A, CA\_3A-32A, CA\_3A-38A, CA\_3A-40A, CA\_3A-42A, CA\_[4A]-5A, CA\_4A-7A,

CA\_[4A]-12A, CA\_[4A]-28A, CA\_[4A]-46A, CA\_5A-7A, CA\_7A-8A, CA\_7A-12A, CA\_7A-20A, CA\_7A-28A, CA\_7A-42A, CA\_8A-38A, CA\_8A-40A, CA\_8A-42A, CA\_12A-[66A], CA\_20A-32A, CA\_20A-38A, CA\_20A-40A, CA\_20A-42A, CA\_26A-[41A], CA\_28A-40A, CA\_28A-42A, CA\_39A-41A, CA\_40A-42A, CA\_46A-[66A], CA\_48A-[66A], CA\_[66A]-71A, CA\_1A-1A, CA\_[2A]-[2A], CA\_3A-3A, CA\_[4A]-[4A], CA\_7A-7A, CA\_40A-40A, CA\_42A-42A, CA\_48A-48A, CA\_[66A]-[66A], CA\_[2C], CA\_3C, CA\_7B, CA\_7C, CA\_8B, CA\_12B, CA\_38C, CA\_39C, CA\_40C, CA\_[41C], CA\_42C, CA\_48C, CA\_[66B], CA\_[66C]

— 3CA DL carrier aggregation combinations:

CA\_1A-1A-3A, CA\_1A-3A-3A, CA\_1A-3A-7A, CA\_1A-3A-8A, CA\_1A-3A-19A, CA\_1A-3A-20A, CA\_1A-3A-28A, CA\_1A-3A-32A, CA\_1A-3A-38A, CA\_1A-3A-40A, CA\_1A-3A-41A, CA\_1A-3A-42A, CA\_1A-3C, CA\_1A-7A-7A, CA\_1A-7A-8A, CA\_1A-7A-20A, CA\_1A-7A-28A, CA\_1A-7A-42A, CA\_1A-7C, CA\_1A-8A-40A, CA\_1A-20A-32A, CA\_1A-20A-42A, CA\_1A-28A-42A, CA\_1A-40C, CA\_1A-41C, CA\_1A-42C, CA\_1A-46C, CA\_1C-3A, CA\_[2A]-2A-12A, CA\_2A-[2A]-12A, CA\_[2A]-2A-66A, CA\_2A-[2A]-66A, CA\_2A-2A-[66A], CA\_[2A]-2A-71A, CA\_2A-[2A]-71A, CA\_[2A]-4A-4A, CA\_2A-[4A]-4AC, CA\_2A-4A-[4A], CA\_[2A]-4A-5A, CA\_2A-[4A]-5A, CA\_[2A]-4A-12A, CA\_2A-[4A]-12A, CA\_[2A]-4A-29A, CA\_2A-[4A]-29A, CA\_[2A]-4A-71A, CA\_2A-[4A]-71A, CA\_2A-7A-12A, CA\_[2A]-12A-66A, CA\_2A-12A-[66A], CA\_[2A]-12B, CA\_[2A]-46A-46A, CA\_[2A]-46A-66A, CA\_2A-46A-[66A], CA\_[2A]-46C, CA\_[2A]-48A-48A, CA\_[2A]-48C, CA\_[2A]-48A-66A, CA\_2A-48A-[66A], CA\_[2A]-66A-66A, CA\_2A-[66A]-66A, CA\_2A-66A-[66A], CA\_[2A]-66A-71A, CA\_2A-[66A]-71A, CA\_[2A]-[66C], CA\_[2A]-66C, CA\_2A-[66C], CA\_3A-3A-7A, CA\_3A-3A-8A, CA\_3A-3A-20A, CA\_3A-3A-28A, CA\_3C-5A, CA\_3A-7A-7A, CA\_3A-7A-8A, CA\_3A-7A-20A, CA\_3A-7A-28A, CA\_3A-7A-42A, CA\_3A-7B, CA\_3A-7C, CA\_3C-7A, CA\_3A-8A-38A, CA\_3A-8A-40A, CA\_3C-8A, CA\_3A-20A-32A, CA\_3A-20A-42A, CA\_3A-28A-40A, CA\_3A-28A-42A, CA\_3C-20A, CA\_3C-28A, CA\_3A-40A-40A, CA\_3A-40C, CA\_3A-42A-42A, CA\_3A-42C, CA\_3A-46C, CA\_3C-32A, CA\_3C-38A, CA\_3C-40A, CA\_4A-4A-7A, CA\_[4A]-4A-12A, CA\_4A-[4A]-12A, CA\_[4A]-4A-71A, CA\_4A-[4A]-71A, CA\_4A-7A-12A, CA\_[4A]-12B, CA\_[4A]-46A-46A, CA\_[4A]-46C, CA\_7A-7A-8A, CA\_7A-20A-42A, CA\_7C-20A, CA\_7B-28A, CA\_7C-28A, CA\_7A-46C, CA\_8A-40C, CA\_8A-42C, CA\_12A-[66A]-66A, CA\_12A-66A-[66A], CA\_12A-[66C], CA\_19A-42C, CA\_20A-38C, CA\_28A-40C, CA\_28A-42C, CA\_40A-40C, CA\_40D, CA\_40A-42C, CA\_40C-42A, CA\_42A-42C, CA\_42D, CA\_46C-[66A], CA\_48A-48C, CA\_48D, CA\_48A-48A-[66A], CA\_48C-[66A], CA\_[66A]-66A-71A, CA\_66A-[66A]-71A

— 4CA DL carrier aggregation combinations:

CA\_1A-1A-3A-28A, CA\_1A-3A-3A-28A, CA\_1A-3A-7A-7A, CA\_1A-3A-7C, CA\_1A-3A-7A-8A, CA\_1A-3A-7A-20A, CA\_1A-3A-7A-28A, CA\_1A-3A-8A-40A, CA\_1A-3A-3A-8A, CA\_1A-3A-40C, CA\_1A-3A-42C, CA\_1A-3C-5A, CA\_1A-3C-7A, CA\_1A-3C-8A, CA\_1A-3C-28A, CA\_1A-7C-28A, CA\_1A-42D, CA\_1A-46D, CA\_2A-2A-12A-66A, CA\_2A-2A-66A-66A, CA\_2A-2A-66A-71A, CA\_[2A]-2A-66C, CA\_2A-[2A]-66C, CA\_2A-2A-[66C], CA\_2A-4A-7A-12A, CA\_2A-12A-66A-66A, CA\_2A-46A-46A-66A, CA\_[2A]-46A-46C, CA\_[2A]-46C-66A, CA\_2A-46C-[66A], CA\_[2A]-46D, CA\_[2C]-66A-66A, CA\_2C-[66A]-66A, CA\_2C-66A-[66A], CA\_3A-3A-7A-7A, CA\_3A-3A-7A-8A, CA\_3A-3A-7A-20A, CA\_3A-3A-7A-28A, CA\_3A-5A-7A-7A, CA\_3A-7A-7A-8A, CA\_3A-7C-20A, CA\_3A-7C-28A, CA\_3A-28A-40C, CA\_3A-28A-42C, CA\_3A-40D, CA\_3A-46D, CA\_3C-7A-20A, CA\_3C-7A-28A, CA\_3C-7C, CA\_3C-40C, CA\_[4A]-46A-46C, CA\_[4A]-46D, CA\_7A-46D, CA\_28A-40D, CA\_28A-46D, CA\_40C-40C, CA\_40C-42C, CA\_40E, CA\_[41C]-42C, CA\_42C-42C, CA\_42E, CA\_46A-46C-[66A], CA\_46D-[66A], CA\_48D-[66A], CA\_48E

— 5CA DL carrier aggregation combinations:

CA\_1A-3A-7C-28A, CA\_1A-3C-7C, CA\_1A-3C-40C, CA\_2A-46A-46C-66A, CA\_2A-46D-66A, CA\_3A-28A-40D, CA\_3C-7C-28A, CA\_3A-40E

— 2CA UL carrier aggregation combinations:

CA\_1A-7A, CA\_1A-8A, CA\_1A-28A, CA\_3A-7A, CA\_3A-8A, CA\_3A-20A, CA\_3A-28A, CA\_4A-7A, CA\_3C, CA\_7C, CA\_38C, CA\_39C, CA\_40C, CA\_41C, CA\_42C

- Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 2, 4, 5, 8, 9, 19
- Power: LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1
- Antennas: SMA & RP-SMA male plugs, torque not to exceed 4 in-lbs
- GPS: Active GPS support

- SMS: SMS support
- Industry Standards & Certs: FCC (includes Part 96), IC, CE, PTCRB, GCF-CC, ESN, AT&T, FirstNet Ready, Verizon, Pending: (South Africa)

**IBR1700-1200M**

IBR1700-1200M models include an embedded LTE Advanced Pro 1.2 Gbps 4G LTE modem. The 1200M modems supports SIM-based, auto-carrier selection for AT&T, FirstNet, and Verizon. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

- Technology: Category 18 LTE Advanced Pro, DC-HSPA+
- Downlink Rates: LTE 1.2 Gbps, DC-HSPA+ 42.2 Mbps\*
- Uplink Rates: LTE 150 Mbps, DC-HSPA+ 5.76 Mbps\*
- MIMO: 2x2 or 4x4 MIMO
- 256 QAM support
- Frequency Bands:
  - LTE Bands
    - LTE FDD: 2, 4(66), 5, 12, 13, 14, 29, 30
    - LTE TDD: 46, 48
- Carrier Aggregation: Up to 5CA. [ ] indicates 4x4 MIMO
  - AT&T: 2,4,5,12,14,29,30,66,46; 3G 2, 5
    - 2CA DL carrier aggregation combinations:  
 CA\_[2A]-[2A], CA\_[2A]-[4A], CA\_2A-5A, CA\_2A-12A, CA\_2A-14A, CA\_2A29A, CA\_2A-30A, CA\_[2A]-46A, CA\_[2A]-[66A], CA\_2C, CA\_[4A]-[4A], CA\_4A-5A, CA\_4A-12A, CA\_4A-29A, CA\_4A-30A, CA\_[4A]-46A, CA\_5A30A, CA\_5A-66A, CA\_5B, CA\_12A-30A, CA\_12A-66A, CA\_12B, CA\_14A30A, CA\_14A-66A, CA\_29A-30A, CA\_29A-66A, CA\_30A-66A, CA\_[66A]-[66A], CA\_66B, CA\_66C
    - 3CA DL carrier aggregation combinations:  
 CA\_2A-2A-5A, CA\_[2A]-2A-12A, CA\_2A-2A-14A, CA\_2A-2A-30A, CA\_2A2A-66A, CA\_[2A]-4A-4A, CA\_2A-[4A]-[4A], CA\_[2A]-4A-5A, CA\_2A-[4A]-5A, CA\_[2A]-4A-12A, CA\_2A-[4A]-12A, CA\_2A-4A-30A, CA\_2A-5A-30A, CA\_[2A]-5A-66A, CA\_2A-5A-[66A], CA\_2A-12A-30A, CA\_[2A]-12A-66A, CA\_2A-12A-[66A], CA\_2A-14A-30A, CA\_2A-14A-66A, CA\_2A-29A-30A, CA\_2A-30A-66A, CA\_2A-46C, CA\_2A-66A-66A, CA\_[4A]-4A-5A, CA\_[4A]4A-12A, CA\_4A-4A-30A, CA\_4A-5A-30A, CA\_4A-12A-30A, CA\_4A-12B, CA\_4A-29A-30A, CA\_5A-30A-66A, CA\_5A-66A-66A, CA\_5A-66C, CA\_12A30A-66A, CA\_12A-[66A]-66A, CA\_14A-30A-66A, CA\_14A-66A-66A, CA\_29A-30A-66A, CA\_29A-66A-66A, CA\_30A-66A-66A
    - 4CA DL carrier aggregation combinations:  
 CA\_2A-2A-5A-30A, CA\_2A-2A-5A-66A, CA\_2A-2A-12A-30A, CA\_2A-2A12A-66A, CA\_2A-2A-14A-66A, CA\_2A-2A-29A-30A, CA\_2A-2A-66A-66A, CA\_2A-4A-4A-12A, CA\_2A-4A-5A-30A, CA\_2A-4A-12A-30A, CA\_2A-5A30A-66A, CA\_2A-5A-66A-66A, CA\_2A-5B-30A, CA\_2A-5B-66A, CA\_2A12A-30A-66A, CA\_2A-12A-66A-66A, CA\_2A-14A-30A-66A, CA\_2A-14A66A-66A, CA\_2A-29A-30A-66A, CA\_[2A]-46D, CA\_[4A]-46D, CA\_4A-4A12A-30A, CA\_5A-30A-66A-66A, CA\_5B-30A-66A, CA\_5B-66A-66A, CA\_12A-30A-66A-66A, , CA\_14A-30A-66A-66A, CA\_29A-30A-66A-66A, CA\_46D-[66A]
    - 5CA DL carrier aggregation combinations:  
 CA\_2A-2A-46D, CA\_2A-5B-30A-66A, CA\_2A-5B-66A-66A, CA\_2A-46D66A, CA\_5B-30A-66A-66A, CA\_46D-66A-66A
    - 2CA UL carrier aggregation combinations:  
 CA\_2A-12A, CA\_2A-5A, CA\_4A-12A, CA\_5A-66A, CA\_5B, CA\_12A-66A

- Verizon: 2, 4, 5, 13, 66, 48; 3G (roaming): 1, 2, 4, 5, 8
  - 2CA DL carrier aggregation combinations:  
CA\_[2A]-[2A], CA\_[2A]-[4A], CA\_[2A]-5A, CA\_[2A]-13A, CA\_[2A]-[66A], CA\_[4A]-[4A], CA\_[4A]-5A, CA\_[4A]-13A, CA\_5A-[66A], CA\_5B, CA\_13A[66A], CA\_[66A]-[66A], CA\_[66B], CA\_[66C], CA\_[2A]-48A, CA\_13A-48A, CA\_48A-[66A]
  - 3CA DL carrier aggregation combinations:  
CA\_[2A]-2A-5A, CA\_[2A]-2A-13A, CA\_[2A]-2A-66A, CA\_2A-2A-[66A], CA\_[2A]-4A-5A, CA\_2A-[4A]-5A, CA\_[2A]-4A-13A, CA\_2A-[4A]-13A, CA\_[2A]-5A-66A, CA\_2A-5A-[66A], CA\_[2A]-13A-66A, CA\_2A-13A-[66A], CA\_[2A]-66A-66A, CA\_2A-[66A]-66A, CA\_[2A]-[66B], CA\_[2A]-[66C], CA\_[4A]-4A-5A, CA\_[4A]-4A-13A, CA\_5A-[66A]-66A, CA\_5A-[66B], CA\_5A[66C], CA\_13A-[66A]-66A, CA\_13A-[66B], CA\_13A-[66C], CA\_[66A]-[66C], CA\_[66D], CA\_[2A]-48A-48A, CA\_[2A]-48A-66A, CA\_2A-48A-[66A], CA\_[2A]-48C, CA\_13A-48A-48A, CA\_13A-48A-[66A], CA\_13A-48C, CA\_48A-48A-[66A], CA\_48A-[66A]66A, CA\_48A-[66B], CA\_48C-[66A]
  - 4CA DL carrier aggregation combinations:  
CA\_2A-48A-48A-66A, CA\_[2A]-48D, CA\_13A-48A-48A-66A, CA\_13A-48A-48C, CA\_13A-48C-[66A], CA\_13A-48D, CA\_48A-48A-66A-66A, CA\_48A-48A-[66B], CA\_48A-48A-[66C], CA\_48A-48C-[66A], CA\_48D-[66A]
  - 5CA DL carrier aggregation combinations:  
CA\_2A-48E, CA\_13A-48A-48C-66A, CA\_13A-48C-48C, CA\_13A-48D-66A, CA\_13A-48E, CA\_48A-48C-66B, CA\_48A-48C-66C, CA\_48C-48C-66A, CA\_48E-66A
  - 2CA UL carrier aggregation combinations:  
CA\_2A-13A, CA\_4A-13A
- Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 2, 4, 5, 8
- Power: LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1
- Antennas: SMA & RP-SMA male plugs, maximum torque not to exceed 4 in-lbs
- GPS: Active GPS support
- SMS: SMS support
- Industry Standards & Certs: FCC, PTCRB, AT&T, FirstNet, Verizon

### **IBR1700-600M**

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.

- Technology: Category 11 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: SMA & RP-SMA male plugs, torque not to exceed 4 in-lbs

— GPS: Active GPS support

— SMS: SMS support

— Industry Standards & Certs: CE, FCC, GCF-CC, IC, PTCRB, AT&T, Sprint, Sprint Curiosity™ IoT, Verizon, Verizon NEMO/DMNR for Primary Wireless Access

\* Theoretical

\*\* To be enabled with a future modem software update.

FirstNet™ and FirstNet Ready™ are registered trademarks and service marks of the First Responder Network Authority, an independent authority within the U.S. Department of Commerce.

## Support & Warranty

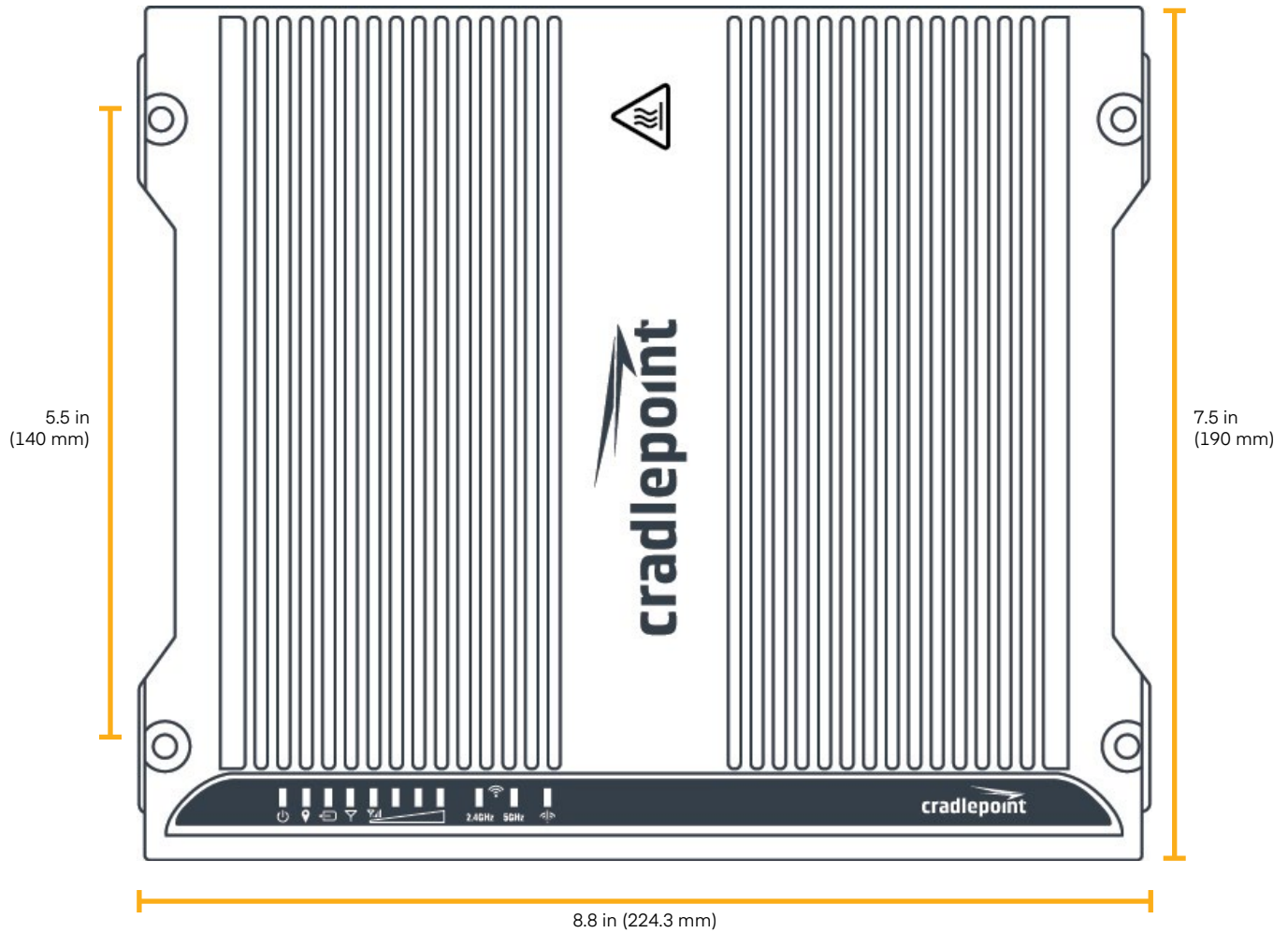
The IBR1700 Series is only sold as a component of NetCloud Packages.

- NetCloud Packages include support for the full subscription term.
- All Cradlepoint hardware products are covered by a limited lifetime warranty for as long as they have a subscription license to an active NetCloud Service Plan.



# Hardware

Top

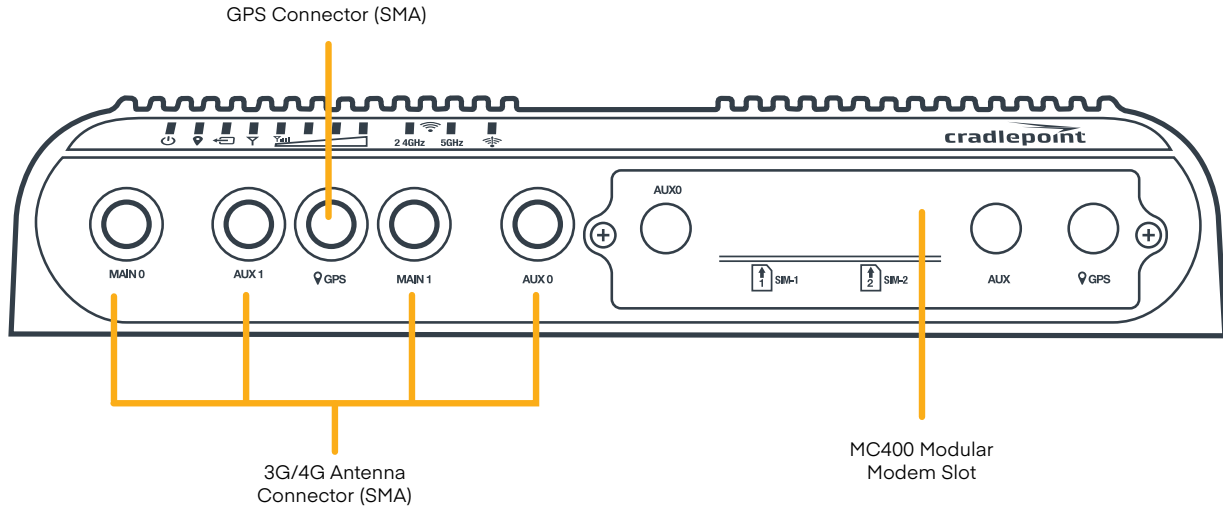


| IBR1700 2x10 Connector |                      |       |                                  |
|------------------------|----------------------|-------|----------------------------------|
| PIN                    | Bottom Row           | 6     | GPIO1                            |
| 1                      | Router Voltage Input | 7     | GPIO2                            |
| 2                      | Router Voltage Input | 8     | GPIO3                            |
| 3                      | ADC Channel 1        | 9     | GPIO4                            |
| 4                      | ADC Channel 2        | 10    | Low Current 5V Output (50mA max) |
| 5                      | GPI / Ignition Sense | 11-20 | GND Top Row                      |

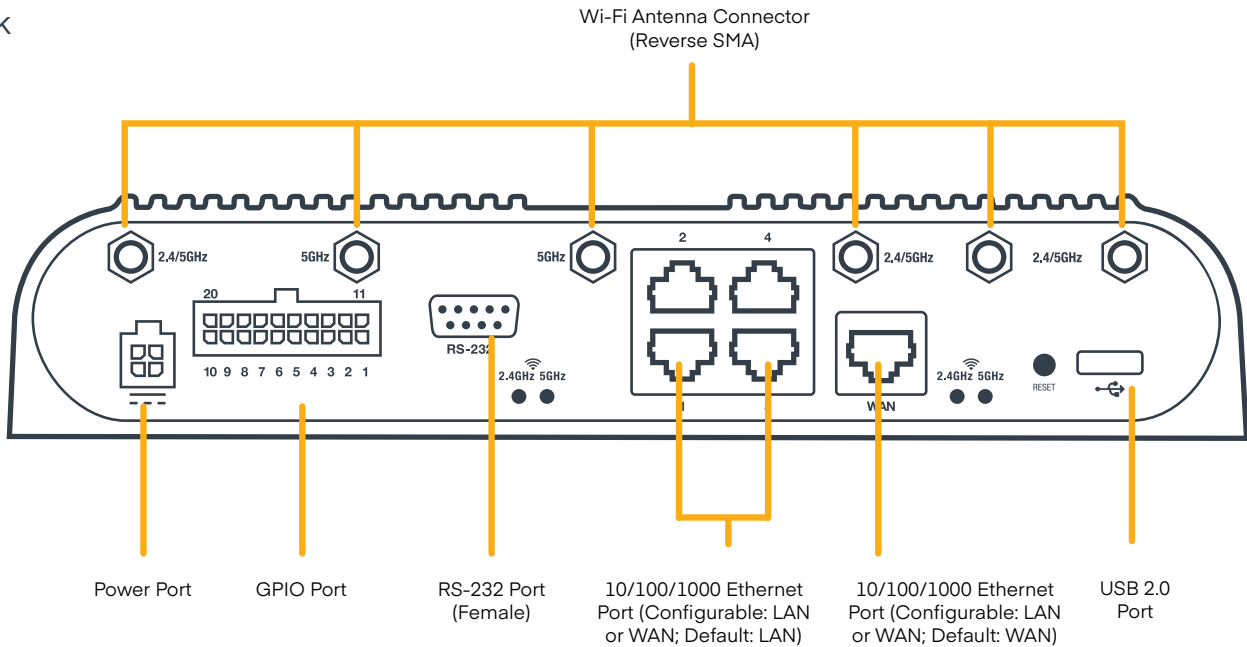
Front

(IBR1700-1200M-B shown)







1200M-B model = 2 MAIN, 2 AUX  
600M model = 1 MAIN, 1 AUX



Back



## LEDs

| Indicator   | Behavior   |
|---|--|
|    | <p><b>Power:</b> The Cradlepoint IBR1700 must be powered using an approved 9–36 VDC power source.</p> <ul style="list-style-type: none"> <li>Green = Powered ON</li> <li>Yellow = Attention is required</li> <li>No Light = Not receiving power. Check the power source connection</li> </ul>  |
|    | <p><b>GPS:</b> Indicates the status of GPS connection.</p> <ul style="list-style-type: none"> <li>Blue = GPS locked</li> <li>Blinking Blue = Obtaining lock</li> <li>No Light = Off/no lock</li> </ul>   |
|    | <p><b>MC400 Modem:</b> Indicates information about the optional MC400 modem.</p> <ul style="list-style-type: none"> <li>Green = Modem has established an active connection</li> <li>Blinking Green = Modem is connecting</li> <li>Amber = Modem is not active</li> <li>Blinking Amber = Data connection error; no modem connection possible</li> <li>Blinking Red = Modem is in the process of resetting</li> <li>No Light = Modem not connected</li> </ul>  |
|  | <p><b>Embedded Modem:</b> Indicates information about the embedded modem.</p> <ul style="list-style-type: none"> <li>Green = Modem has established an active connection</li> <li>Blinking Green = Modem is connecting</li> <li>Amber = Modem is not active</li> <li>Blinking Amber = Data connection error; no modem connection possible</li> <li>Blinking Red = Modem is in the process of resetting</li> <li>Blinking Red with Signal Strength LEDs = SIM door is not installed, modem is off</li> <li>No Light = Modem not connected</li> </ul> |
|  | <p><b>Signal Strength:</b> Blue LED bars indicate the active modem’s signal strength.</p> <ul style="list-style-type: none"> <li>4 Solid Bars = Strongest signal</li> <li>1 Blinking Bar = Weakest signal (A blinking bar indicates half of a bar)</li> <li>4 Blinking Bars = SIM door is not installed, modem is off</li> </ul>   |
| <b>2.4GHz<br/>5GHz</b>  | <p><b>Wi-Fi Status:</b> Indicates information about Wi-Fi channels.</p> <ul style="list-style-type: none"> <li>2.4 GHz Green = Activity on 2.4 GHz Wi-Fi band</li> <li>5 GHz Blue = Activity on 5 GHz Wi-Fi band</li> </ul>  |
|  | <p><b>WiFi-as-WAN:</b> Indicates WiFi-as-WAN status</p> <ul style="list-style-type: none"> <li>White = WiFi-as-WAN active</li> </ul>   |
| <b>Other</b>  | <p><b>Additional LED Indications:</b></p> <ul style="list-style-type: none"> <li>Several different LEDs blink when the factory reset button is detected</li> <li>Two of the modem LEDs blink red in unison for 10 seconds when there is an error during NCOS upgrade</li> <li>When an external USB modem is plugged in, only the Signal Strength LEDs will light up</li> </ul>   |