

# Data Sheet

# IBR600C Series



Cradlepoint IBR600C Series IoT routers are semi-ruggedized, cloud-managed LTE routers, built for IoT, M2M, and Work from Anywhere applications. They provide a resilient, LTE connection ideal for use in high-availability, portable, or fixed uses. The IBR600C Series is available with either IoT or SOHO NetCloud Service Plans, which provide features optimized for each unique deployment.

## Notable Features

- Define policies through centralized, cloud-based management for easy deployment at scale.
- Gain fast, reliable connectivity with an embedded Cat 4 modem with dual SIM support.
- Expand working radius and IoT connectivity with secure, enterprise class Wi-Fi.
- Provide a semi-ruggedized, portable solution capable of enduring harsh environments.
- Utilize Configurable GPIO ports and NetCloud Integrations for IoT applications.
- Customize and extend NetCloud Service functionality with NetCloud SDK and API.
- Integrate into an existing network with standards-based, VPN tunnel support and purpose-built IoT segmentation with NetCloud Perimeter.

## Semi-Ruggedized IoT Solution

When coupled with the NetCloud IoT service plan, the IBR600C router provides a compact semi-ruggedized 4G LTE router solution for connecting and protecting IoT devices at scale. It is ideal for use in high-availability portable or fixed applications such as surveillance cameras, digital signs, oil and gas monitoring, and parallel networking. With an extensive list of features, it can be confidently deployed in the field, in buildings, or in embedded systems to deliver complete visibility, security, and control of connected devices anywhere.

## Work From Anywhere Mobile Connectivity

NetCloud Service for SOHO, combined with the IBR600C router, provides a dedicated connection for remote, mission-critical workers and executives with a similar experience as the office network, with access to critical cloud and corporate data center applications. Instead of relying on uneven levels of household equipment, this Work from Anywhere (WFX) solution offers IT providers cloud-based management to define and distribute policies, set security parameters, isolate corporate assets, and fine-tune bandwidth considerations in a uniform, corporate-class offering that interoperates with existing network solutions.

## Performance

Stateful Firewall Throughput	NetCloud Perimeter Throughput	IPSec VPN Throughput	Concurrent VPN Tunnels	Concurrent Sessions (TCP)	Typical Client Count
<b>75 Mbps</b>	<b>15 Mbps</b>	<b>10 Mbps</b>	<b>2</b>	<b>16,000</b>	<b>5</b>

*Performance testing conducted based on requirements as defined in RFC2544 using fixed-frame 1518 byte packets. Throughput results reflect uni-directional UDP traffic with less than 1% packet loss as tested with wired connections.*

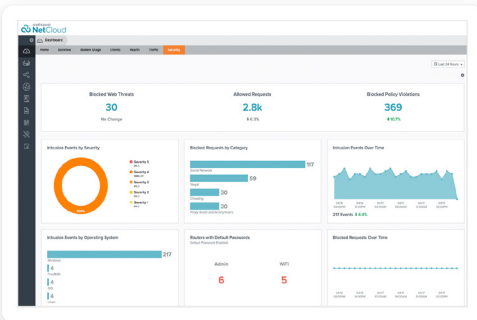
*Results do not reflect performance of the cellular wireless operator networks.*

## Key Software Capabilities

Cradlepoint NetCloud Service for the IBR600C router includes the appropriate router software with powerful cloud management features for managing IoT at scale, or specific SOHO features to connect the remote worker to their corporate applications and services they need most from virtually any location. The NetCloud Service includes cloud-based management for optimizing routing, VPN, SD-WAN, and security capabilities. The cloud capabilities include defining and applying policies, at-a-glance status insights, reports, troubleshooting, and analytics dashboards. The service includes a warranty for as long as there is an active subscription on the router, online training, live and online support, and all software and firmware updates.

## Router Services

Next generation hardware provides local processing power to handle demanding, router-delivered services, such as support for VPN tunneling encryption including DMVPN, IPsec, GRE, and other tunneling technologies.

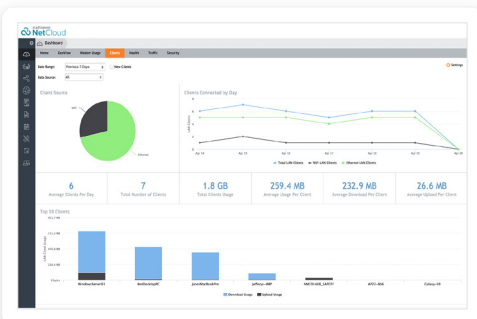


## Security Services

NetCloud Service includes security features and options to optimize the IBR600C router to meet the evolving security needs of IoT and work from home environments. The service includes a stateful zone-based firewall, an authenticated wireless connection that is fully isolated from the surrounding networks, and the ability to add content filtering with Zscaler.

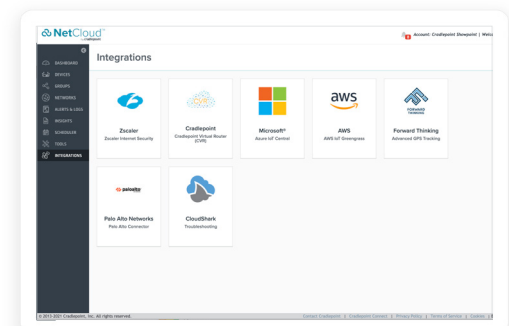
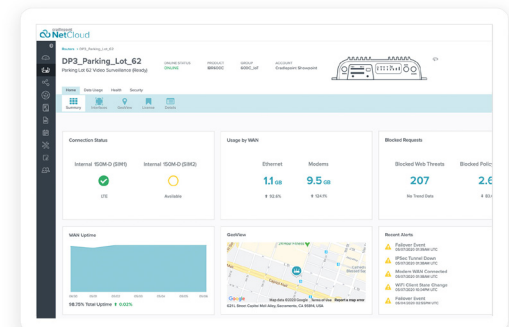
## Extensibility and Integrations

NetCloud Service and the IBR600C router can access network data that third-party applications need to provide higher levels of insights and control. Leverage pre-built connections to partner applications or create custom connections across a variety of use cases using the NetCloud Container Orchestrator, NetCloud SDK, or NetCloud API.



## Cloud Services

NetCloud Manager delivers true, zero-touch deployment with the ability to define and deliver policy across entire groups of endpoints. Users can create a cloud-orchestrated hub and spoke VPN network and gain insights and analytics required for rapid troubleshooting and diagnostic workflows.



## Hardware Specifications

The following features are delivered through the hardware.

INTERFACES	
<b>Modem:</b>	Embedded 150M modem <ul style="list-style-type: none"> <li>— 2 x SMA cellular antenna connectors</li> </ul> Optional dual modem (requires the the COR Extensibility Dock): <ul style="list-style-type: none"> <li>— Modular MC400 Modem</li> </ul>
<b>Ethernet:</b>	1 x GbE (LAN/WAN switchable) 1 x FE (LAN/WAN switchable)
<b>Wi-Fi:</b>	Single-radio, single-band (2.4 GHz) <ul style="list-style-type: none"> <li>— 2x2 MIMO 802.11b/g/n Wi-Fi 4</li> <li>— 300 Mbps (2.4 GHz)</li> <li>— Two (2) Wi-Fi SSIDs</li> <li>— WPA/WPA2 Personal, WPA2 Enterprise, Open</li> </ul>
<b>Expansion:</b>	1 x USB 2.0 Type A (output: 5V, 500mA, 2.5W) 1 x Extensibility Port <ul style="list-style-type: none"> <li>— Extensibility Dock</li> <li>— 9-Wire Power and GPIO Cable</li> <li>— Serial Port Adapter</li> </ul>
<b>GNSS/GPS:</b>	1 x SMA GNSS antenna connector
ENVIRONMENTAL	
<b>Temperature:</b>	Operating: -20 °C to 60 °C (-4 °F to 140 °F) Storage: -20 °C to 70 °C (-4 °F to 158 °F)
<b>Humidity:</b>	Operating: 5% to 95% Storage: 5% to 95%

POWER	
<b>Required:</b>	One of the following: <ul style="list-style-type: none"> <li>— 9-33 VDC steady state input</li> <li>— External DC power supply, 100-240 VAC input, 12 VDC 3A output (included)</li> </ul>
<b>Features:</b>	<ul style="list-style-type: none"> <li>— Reverse polarity and transient voltage protection (ISO 7637-2)</li> <li>— Ignition sensing (automatic ON and time-delay OFF)</li> </ul>
<b>Consumption:</b>	<ul style="list-style-type: none"> <li>— Idle: 4 W</li> <li>— Wi-Fi TX/RX: 9 W</li> <li>— LTE TX/RX: 6.25 W</li> </ul>
PHYSICAL	
<b>Size:</b>	4.6 x 4.5 x 1.2 in (118 x 113.5 x 29.3 mm)
<b>Weight:</b>	14 oz (400 g)
CERTIFICATIONS	
<b>Safety:</b>	UL/cUL, CB Scheme, EN 60950-1, EN 62368-1, MIL-STD 810G, SEA J1455
<b>Materials:</b>	WEEE, RoHS, REACH, California Prop 65
WI-FI POWER:	
<b>FCC:</b>	2.4 GHz band: 28.1 dBm Conducted
<b>Rest of World:</b>	2.4 GHz band: 15 dBm Conducted 2.4 GHz band: 20 dBm EIRP
LEDs	
Refer to the <a href="#">IBR600C Series IoT Router Quick Start Guide</a> .	

# Enterprise-Class Modem Specifications

SPECIFICATION	150M-D (NORTH AMERICA)	150M-B (EUROPE)
<b>Technology:</b>	LTE Cat 4 (3GPP Rel. 11), DC-HSPA+ — Dual SIM slots, 2FF form factor — SIM-based auto-carrier selection	Cat 4 LTE (3GPP Rel. 11), DC-HSPA+ — Dual SIM slots, 2FF form factor — SIM-based auto-carrier selection
<b>Fallback:</b>	WCDMA/UMTS/HSPA+	WCDMA/UMTS/HSPA+
<b>Carrier Aggregation:</b>	N/A	N/A
<b>Peak Downlink Rates:</b>	LTE: 150 Mbps WCDMA: 42.2 Mbps	LTE: 150 Mbps WCDMA: 42.2 Mbps
<b>Peak Uplink Rates:</b>	LTE 50 Mbps WCDMA: 5.76 Mbps	LTE 50 Mbps WCDMA: 5.76 Mbps
<b>MIMO:</b>	2x2 MIMO	2x2 MIMO
<b>QAM:</b>	Up to 64	Up to 64
<b>LTE Bands:</b>	LTE FDD — B2, B4, B5, B12, B13, B14, B66, B71	LTE TDD — B38, B40, B41 LTE FDD — B1, B3, B5, B7, B8, B20
<b>WCDMA Bands:</b>	— B2, B4, B5	LTE FDD — B1, B5, B8
<b>Power:</b>	LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1 (typical conducted)	LTE 23 dBm ± 1; HSPA+ 23 dBm ± 1 (typical conducted)
<b>Antennas:</b>	SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 2, included)	SMA female connectors, external 600 MHz - 6 GHz cellular paddle antennas (Qty 2, included)
<b>GNSS/GPS:</b>	Passive GNSS — GPS, GLONASS, BeiDou, Galileo	Passive GNSS — GPS, GLONASS, BeiDou, Galileo
<b>SMS:</b>	Yes	Yes
<b>Regulatory:</b>	FCC (U.S.), IC (Canada)	CE (European Union)
<b>Network Operator Standards:</b>	PTCRB (U.S., Canada)	GCF (Worldwide)
<b>Network Operator Certifications:</b>	AT&T, Verizon†	See note†
<b>Public Safety Network Certifications:</b>	FirstNet Ready™	N/A
<b>Private Cellular Network:</b>	N/A	N/A

† Cellular carriers and operators throughout the world may only require telecom industry certifications, like PTCRB or GCF, to operate on their network. Some carriers require additional testing and approval, beyond telecom certifications. A carrier listed in the approvals section means Cradlepoint completed additional testing and acquired technical approval for that given carrier. Any carrier not listed may not require additional testing or approval beyond telecom industry certifications to operate on their network.

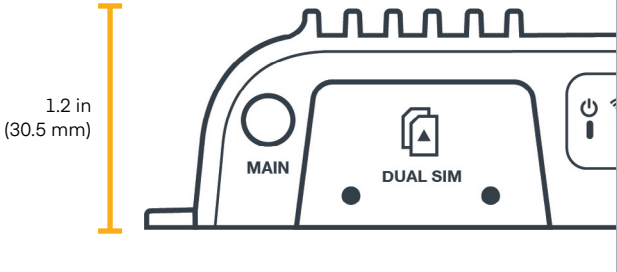
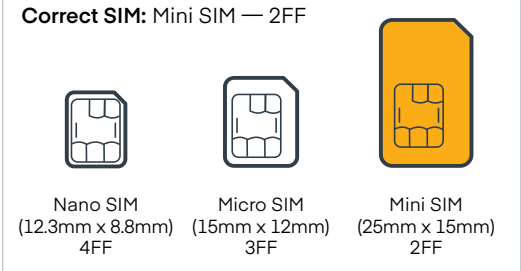
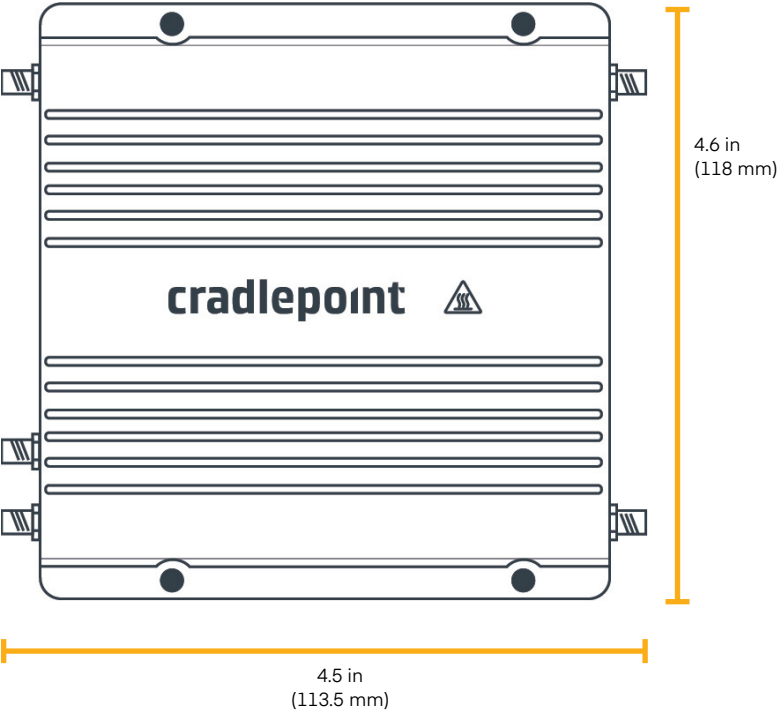
## Enterprise-Class Modem Specifications

SPECIFICATION	150M-C (APAC)
<b>Technology:</b>	LTE Cat 4 (3GPP release 11), DC-HSPA+ <ul style="list-style-type: none"> <li>— Dual SIM slots, 2FF form factor</li> <li>— SIM based auto carrier select</li> </ul>
<b>Fallback:</b>	WCDMA/UMTS/HSPA+
<b>Carrier Aggregation:</b>	N/A
<b>Peak Downlink Rates:</b>	LTE: 150 Mbps WCDMA: 42.2 Mbps
<b>Peak Uplink Rates:</b>	LTE: 50 Mbps WCDMA: 5.76 Mbps
<b>MIMO:</b>	2x2 MIMO
<b>QAM:</b>	Up to 64
<b>LTE Bands:</b>	LTE FDD <ul style="list-style-type: none"> <li>— B1, B3, B5, B7, B28</li> </ul>
<b>WCDMA Bands:</b>	LTE FDD <ul style="list-style-type: none"> <li>— B1, B5</li> </ul>
<b>Power:</b>	LTE 23 dBm ± 2; HSPA+ 23 dBm ± 1; (typical conducted)
<b>Antennas:</b>	SMA female connectors , External 600 MHz – 6 GHz cellular Paddle Antennas (Qty 2, included)
<b>GNSS/GPS:</b>	Passive GNSS <ul style="list-style-type: none"> <li>— GPS, GLONASS, BeiDou, Galileo</li> </ul>
<b>SMS:</b>	Yes
<b>Regulatory:</b>	RCM (AU/NZ)
<b>Network Operator Standards:</b>	GCF (Worldwide)
<b>Network Operator Certifications:</b>	See note <sup>†</sup>
<b>Public Safety Network Certifications:</b>	N/A
<b>Private Cellular Network:</b>	N/A

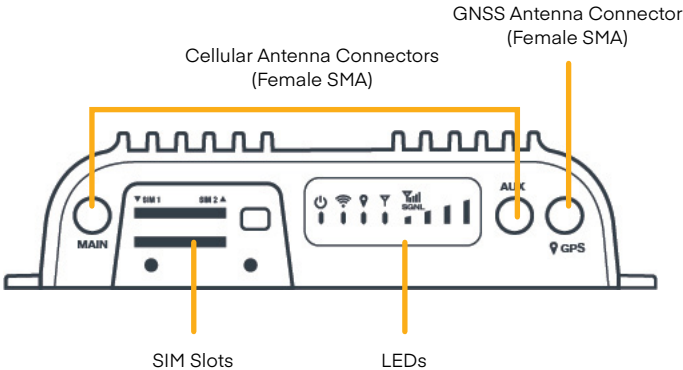
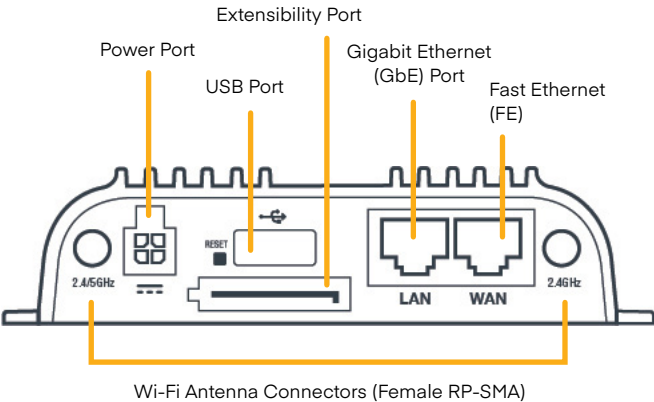
<sup>†</sup> Cellular carriers and operators throughout the world may only require telecom industry certifications, like PTCRB or GCF, to operate on their network. Some carriers require additional testing and approval, beyond telecom certifications. A carrier listed in the approvals section means Cradlepoint completed additional testing and acquired technical approval for that given carrier. Any carrier not listed may not require additional testing or approval beyond telecom industry certifications to operate on their network.

# Hardware

## Physical Measurements



## Sides



## Ordering Guide

**NetCloud IoT Essentials** and **NetCloud SOHO Ruggedized Branch 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 IoT Advanced Plan** or a **NetCloud SOHO Ruggedized Branch Advanced Plan** 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/netcloud-service](https://cradlepoint.com/netcloud-service)

For more details on the IBR600C router, included with the NetCloud IoT or SOHO Ruggedized Branch packages, see below.

## NetCloud Package and Plans

REGION	DESCRIPTION	PART NUMBER
<b>North America:</b> U.S. & Canada	NetCloud IoT Essentials and Advanced Plans with IBR600C-150M-D	TBAy-600C150M-NN
	NetCloud IoT Essentials and Advanced Plans with IBR650C-150M-D	TBAy-650C150M-NN
	NetCloud IoT Essentials Plan with IBR600C-150M-D	TBy-600C150M-NNN
	NetCloud IoT Essentials Plan with IBR650C-150M-D	TBy-650C150M-N0N
	NetCloud SOHO Ruggedized Branch Essentials and Advanced Plans with IBR600C-150M-D	BHCy-600C150M-NN
	NetCloud SOHO Ruggedized Branch Essentials and Advanced Plans with IBR600C-150M-D and an inserted Verizon SIM	BHDy-600C150M-VN
	NetCloud SOHO Ruggedized Branch Essentials and Advanced Plans with IBR600C-150M-D and an inserted AT&T SIM	BHDy-600C150M-AN
	NetCloud SOHO Ruggedized Branch Essentials and Advanced Plans with IBR600C-150M-D and an inserted Sprint SIM	BHDy-600C150M-TN
<b>Worldwide:</b> European Union (EU) & United Kingdom (UK)	NetCloud IoT Essentials and Advanced Plans with IBR600C-150M-B	TBAy-600C150M-EM
	NetCloud IoT Essentials Plan with IBR600C-150M-B	TBy-600C150M-EWM
<b>Asia Pacific:</b> Australia & New Zealand	NetCloud IoT Essentials and Advanced Plans with IBR600C-150M-C	TBAy-600C150M-PM
	NetCloud IoT Essentials Plan with IBR600C-150M-C	TBy-600C150M-PWM
<b>All Regions</b>	NetCloud IoT Advanced Plan (Requires an Essentials Plan)	TBx-NCADV
	Renewal NetCloud IoT Essentials Plan	TAx-NCESS-R
	Renewal NetCloud IoT Advanced Plan	TBx-NCADV-R
	Renewal NetCloud IoT Essentials and Advanced Plans	TBAx-NCEA-R
	Renewal NetCloud SOHO Ruggedized Branch Essentials and Advanced Plans	BHCx-NCEA-R

x = 1, 3, or 5 years  
y = 3 or 5 years

## Accessories

INCLUDED	PART NUMBER
One of the following power supplies:	
— Power Supply, 12V Small 2x2 1.5M (North America Type A)	170716-000
— Power Supply, 12V Small 2x2 1.5M (North America-United Kingdom-Europe-Australia Types A-G-C-I)	170717-000
Cellular Antenna, 600 MHz - 6 GHz, SMA Black Mini (Qty 2)	170704-002
Wi-Fi Antenna, Charcoal, Dual-Band 2.4/5GHz, RPSMA (Qty 2)	170836-000
OPTIONAL	PART NUMBER
GPIO Cable, DB9, Black, 3M	170680-001
Power Supply, Vehicle, 12V, 2x2	170635-000
GPIO Cable, Small, 2x2, Black, 3M 22AWG	170585-001
COR Extensibility Dock	170700-000
Second MC400 Modular Modem (for use with the COR Extensibility Dock) <sup>†</sup> :	MA-MC400-1200M-B
	MC400LP6
	MC400LP5

<sup>†</sup> Refer to the [Cradlepoint MC400 Modular Modem](#) webpage for more information about modular modems.

## Support & Warranty

The IBR600C router is only sold as a component of NetCloud IoT Essentials/NetCloud SOHO Ruggedized Branch Essentials or Essentials + Advanced 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.

**Find the most up-to-date information  
at [cradlepoint.com/ibr600c](https://cradlepoint.com/ibr600c)**