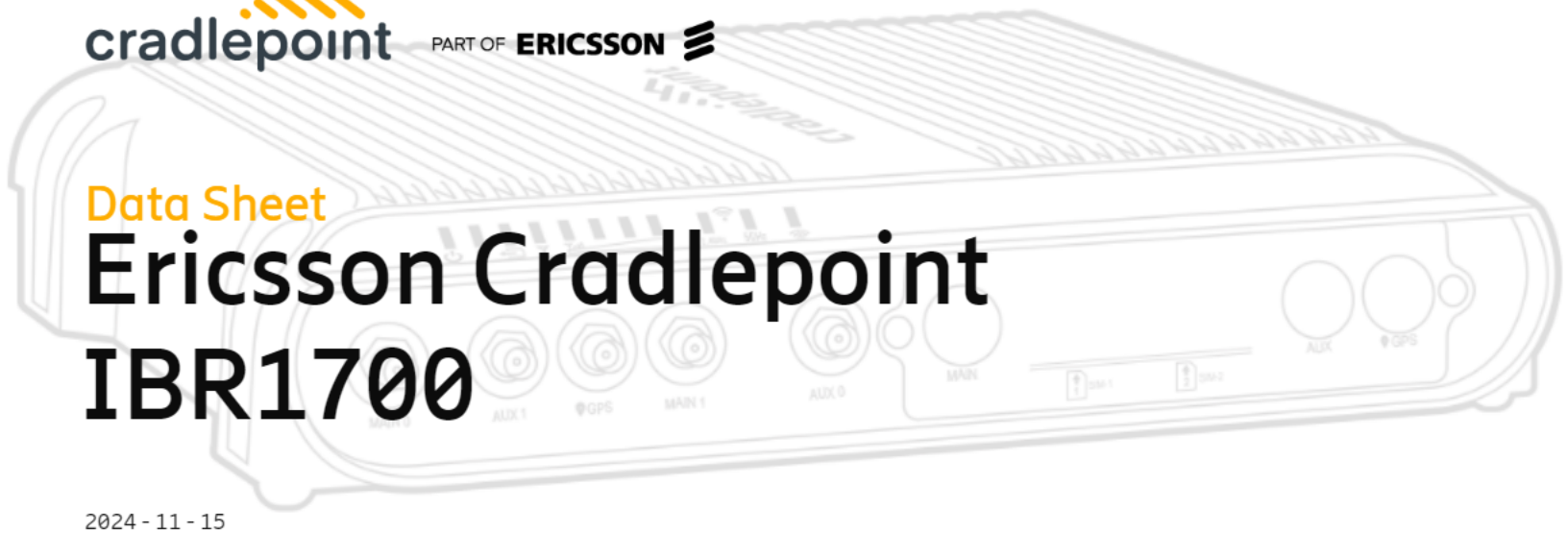
cradlepoint PART OF ERICSSON



Data Sheet

Ericsson Cradlepoint IBR1700

2024 - 11 - 15

Ericsson NetCloud Service for mobile with an IBR1700 ruggedized router is a Gigabit-class LTE networking platform designed to provide persistent connectivity for in-vehicle deployments. Ericsson NetCloud provides connectivity, network, security, and location services to connect everything in the vehicle, while providing access to IT for remote management, troubleshooting, and analytics.

High Performance In-Vehicle Connectivity

The Ericsson Cradlepoint IBR1700 ruggedized router for vehicles with the Ericsson NetCloud Service for mobile was designed for organizations that depend on field forces and mobile networks. In addition to embedded Gigabit-class LTE, it also includes tri-radio Wi-Fi allowing dedicated radios for video offload, enhanced security, better signal quality, and higher client capacities. Ericsson NetCloud mobile advanced features add threat management, web filtering, application visibility, analytics, and advanced GNSS/GPS functionality including location tracking and cellular coverage maps to the service.

5G Ready for Upward Compatibility

The IBR1700 ruggedized router for in-vehicle uses is 5G-ready with the ability to be field upgraded and accept a future generation modular 5G modem. In addition, it can act as a controller for an Ericsson Cradlepoint 5G wideband adapter. The unique capability of Ericsson to operate the adapter in captive mode allows two separate, Ethernet-connected appliances to be managed as a single entity. These two capabilities ensure investment protection and upward compatibility to the latest LTE and 5G technology as they evolve over time.

Notable Benefits

- Deploy high-speed connectivity with Gigabit LTE, Wi-Fi, and Ethernet delivering enterprise grade performance.
- Gain 5G Ready capabilities with a second modem slot and captive modem functionality for simultaneous multi-carrier connectivity.
- Prioritize access on public safety networks for reliable, secure connectivity.
- Integrate into Automatic Vehicle Location systems with discrete GNSS and dead reckoning.
- Extend your deployment with GPIOs, NetCloud SDK and API, and container support for customizable solutions.
- Define policies through centralized cloud-based management for easy deployment at scale.
- Enable unified edge security with application aware multizone firewalls, IDS/IPS, and internet security.
- Create a cellular coverage map for complete visibility into your area's 5G and LTE coverage (5G mapping requires an optional 5G modem).

Product Page

NetCloud Service

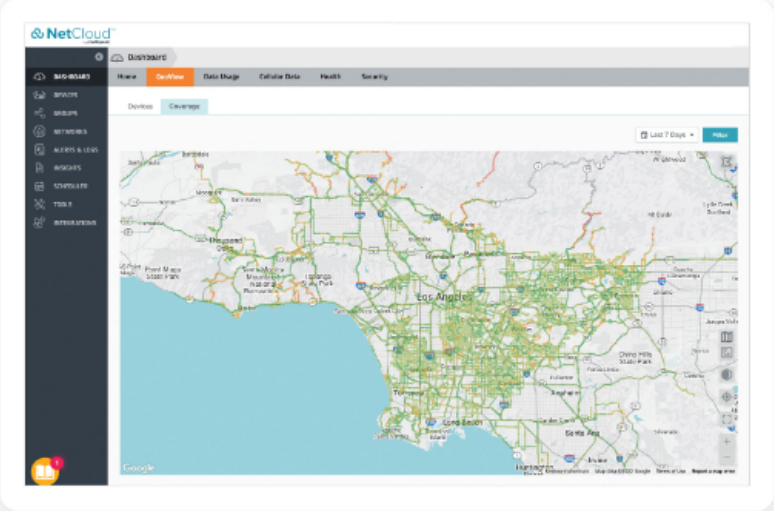
Quick Start Guide

Key Software Capabilities

Ericsson NetCloud Service for mobile with a IBR1700 in-vehicle router provides everything needed to unlock the power of cellular technology to connect vehicles, users, and IoT to critical applications and services. Ericsson NetCloud includes router software for optimizing routing, VPN, SD-WAN, and security capabilities along with capabilities centralized in the cloud such as group policy definition, reports, troubleshooting, and analytics dashboards as well as cellular coverage maps. Ericsson NetCloud Service includes a warranty (for the router), online training, live and online support, and continuous software updates for both the router and the modem.

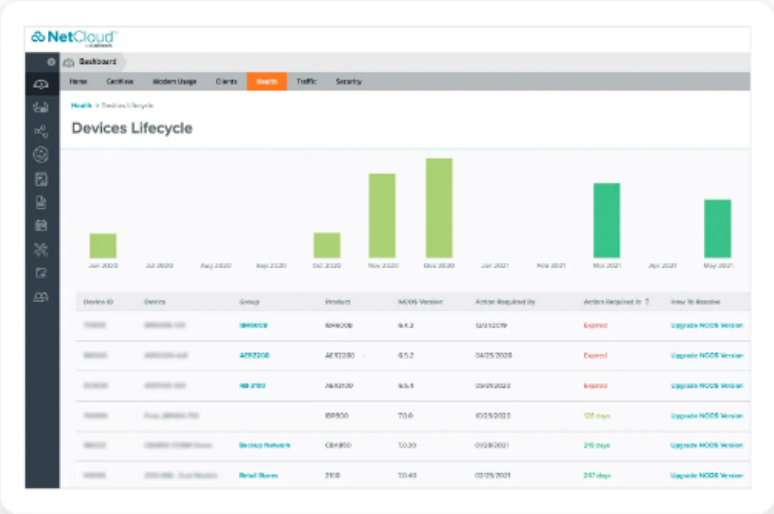
Coverage Map

Ericsson NetCloud uses GNSS/GPS and 5G/4G cellular health to provide precise analytics about location and signal strength. Data can be mapped to display both the current and historical locations of a vehicle, as well as generate detailed coverage maps that display cellular health, allowing users to gain operational insights and solve problems.



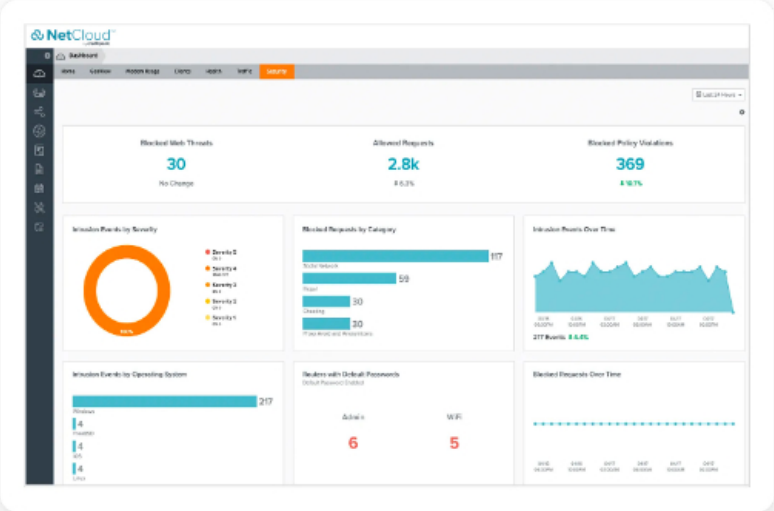
Advanced Software Lifecycle Management

Ericsson NetCloud improves the typical software lifecycle management process. New features are continuously delivered to Ericsson NetCloud and become available for the router without interrupting network performance. Software versions are tracked for every endpoint, with the latest update just a click away. Straightforward subscription and license management is easily accessible and provided to keep the network running without interruption.



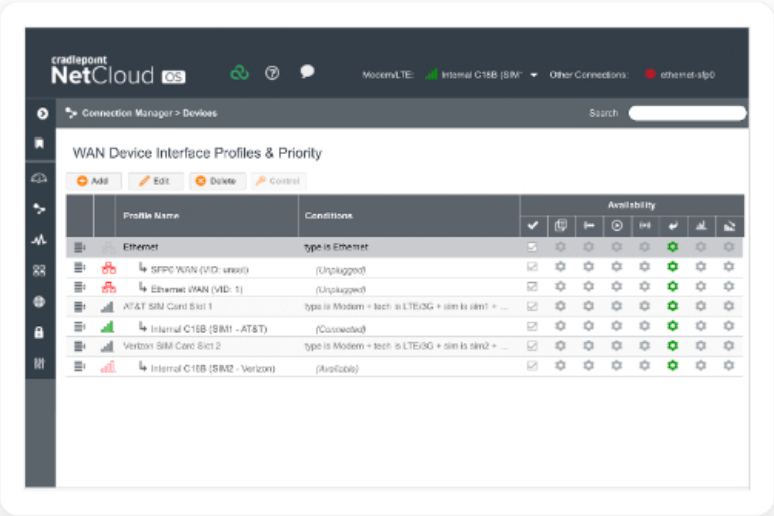
Security Services

Ericsson NetCloud Service advanced security features add application aware zone-based firewall, CP Secure Threat Management (IPS/IDS), and CP Secure Web Filter for protecting your network and meeting the evolving security needs of in-vehicle environments.



Connection Manager

Connection Manager provides the ability to manage all WAN connections types including wireless, Wi-Fi as WAN, and wired, from a single software-defined policy. Our custom-built modem software ensures users establish wireless WAN connectivity faster while maintaining the highest level of resiliency.



Hardware Specifications

The following features are delivered through the hardware.

INTERFACES	
Modem:	One of the following: — Embedded 1200M-B Modem with 4 x SMA cellular antenna connectors — Embedded 600M Modem with 2 x SMA cellular antenna connectors Optional dual modem: — MC400 Modular Modem
Ethernet:	5 x GbE (LAN/WAN switchable)
Wi-Fi:	Tri-radio, dual-band, concurrent operation (2.4 GHz and 5 GHz) — Two 2x2 MU-MIMO 802.11n — One 4x4 MU-MIMO 802.11ac Wave 2 — Modes: AP, Wireless Client, and WiFi as WAN — Silver SMAs: 574 Mbps (2.4 GHz) and 1.2 Gbps (5 GHz) — Gold SMAs 2x2: 574 Mbps (2.4 GHz) — Gold SMAs 4x4: 1.733 Gbps (5 GHz) — 6 x RP-SMA Wi-Fi antenna connectors — Multiple SSIDs — WPA/WPA2/WPA3 Personal, WPA2/WPA3 Enterprise, WEP Auto, Open — Wi-Fi Alliance Certified

Expansion:	— 1 x MC400 Modular Modem Slot (Peak throughput: 300 Mbps) — 1 x USB 2.0 Type A (output: 5V, 500mA, 2.5W) — 1 x GPIO Connector — 1 x RS-232 Serial Port
GNSS/GPS:	1 x SMA GPS antenna connector
GNSS / GPS	
Acquisition: **(Time to First Fix)**	32 seconds (cold start)
Protocols:	NMEA 0183
Constellations:	600M — GPS — Galileo — GLONASS — BeiDou — GNSS 1200M-B — GPS — Galileo — GLONASS — BeiDou
Accuracy:	Horizontal: < 2 m (50%), < 5 m (95%)
Sensitivity:	600M — Acquisition: -145 dBm — Tracking: - 160 dBm 1200M-B — Tracking: - 159 dBm
Frequencies:	L5
Power:	600M — Voltage Supply: 3.15 V — Max Current: 3.25 V 1200M-B — Voltage Supply: 3.1 V — Max Current: 20 mA
ENVIRONMENTAL	
Temperature:	— Operating: -30 °C to 70 °C (-22 °F to 158 °F) — Storage: -40 °C to 85 °C (-40 °F to 185 °F)

Humidity:	— Operating: 5% to 95% — Storage: 5% to 95%
Ingress Protection:	IP64 (dust tight and splashing water)
POWER	
Required:	One of the following: — 9-36 VDC steady state input (vehicle installations with 9-24 VDC requires 3A inline fuse, >24 VDC requires 2.5A fuse) — External DC power supply, 100-240 VAC input, 12 VDC 3A output (optional)
Features:	— Reverse polarity and transient voltage protection (ISO 7637-2) — Ignition sensing (automatic ON and time-delay OFF)
Consumption:	— Idle: 8 W — Typical: 14 W — Heavy: 24 W
PHYSICAL	
Size:	224.3 × 190 × 44 mm (8.8 × 7.5 × 1.7 in)
Weight:	1.7 kg (3 lb 7 oz)
RELIABILITY	
Calculated MTBF:	286,853 hours (Telcordia SR332 at 25 °C)
CERTIFICATIONS	
Safety:	UL/cUL, CB Scheme, EN 62368-1, e-Mark
Materials:	WEEE, RoHS, RoHS-2, California Prop 65
Security:	FIPS 140-2 Inside (IBR1700-FIPS models only)
Shock/ Vibration/ Humidity:	MIL STD 810G and SAE J1455
CLOUD SERVICES	
Service Plans:	NetCloud Service for Mobile
Service Add-Ons:	NetCloud Exchange, NetCloud Advanced
Support:	NetCloud Packages include support for the full subscription term.
Warranty:	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.
Device Management:	NetCloud Manager for the full subscription term.
Software Updates:	NetCloud Manager for the full subscription term.
WI-FI POWER	
FCC:	— 2.4 GHz: 29.2 dBm Conducted — 5150–5250 MHz: 29.0 dBm Conducted — 5725–5850 MHz: 30.0 dBm Conducted

Australia/ New Zealand:	Radio 1 (2x2) — 2.4 GHz: 30.9 dBm Conducted — 5180-5240 MHz: 19.5 dBm Conducted — 5260-5320 MHz: 19.5 dBm Conducted — 5500-5700 MHz: 26.3 dBm Conducted — 5745-5825 MHz: 29.1 dBm Conducted Radio 2 (4x4) — 5180-5240 MHz: 18.0 dBm Conducted — 5260-5320 MHz: 18.0 dBm Conducted — 5500-5700 MHz: 25.0 dBm Conducted — 5745-5825 MHz: 30.5 dBm Conducted
EU/Rest of World:	— 2.4 GHz band: 17.3 dBm Conducted — 5180-5240 MHz: 17.8 dBm Conducted
PERFORMANCE	
Stateful Firewall Throughput:	940 Mbps
IPSec VPN Throughput:	20 Mbps
Concurrent VPN Tunnels:	10
Concurrent Sessions (TCP):	32,000
Typical Client Count:	30
Layer 2 / Layer 3 VLANs:	Up to 64
LEDs	
	Refer to the IBR1700 Series Router Quick Start Guide.

Performance testing was conducted based on requirements as defined in RFC2544 using fixed-frame 1518-byte packets. Throughput results reflect unidirectional UDP traffic with less than 1% packet loss as tested with wired connections. Results do not reflect performance of the cellular wireless operator networks.

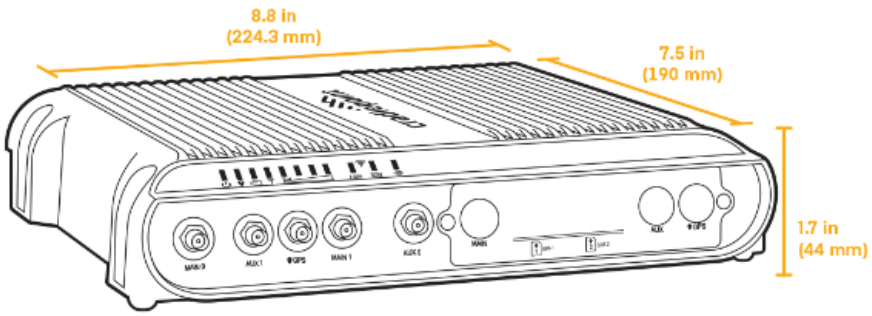
Enterprise-Class Modem Specifications

SPECIFICATION	IBR1700-600M	IBR1700-1200M-B
Technology:	Cat 11 LTE Advanced — Dual SIM slots, 2FF form factor — SIM-based auto-carrier selection	Cat 18 LTE Advanced Pro — Dual SIM slots, 2FF form factor — SIM-based auto-carrier selection — 3GPP Release 12
3G:	WCDMA/UMTS/HSPA+	WCDMA/DC-HSPA+
Carrier Aggregation:	Up to 5CA downlink, 2CA uplink See Understanding Carrier Aggregation.	Up to 5CA downlink, 2CA uplink See Understanding Carrier Aggregation.

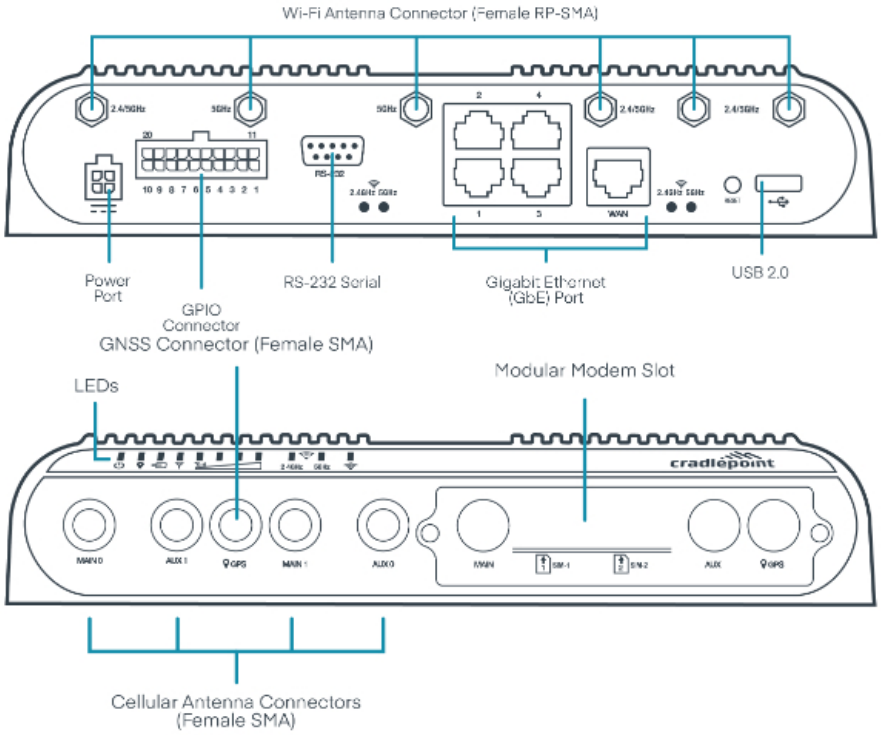
Peak Downlink Rates:	— LTE: 600 Mbps — HSPA+: 42.2 Mbps	— LTE: 1.2 Gbps — DC-HPSA+: 42.2 Mbps
Peak Uplink Rates:	— LTE: 75 Mbps — HSPA+: 5.76 Mbps	— LTE: 150 Mbps — DC-HPSA+: 5.76 Mbps
MIMO:	2x2 MIMO	4x4 MIMO
Modulation:	Up to 256	Up to 256
4G/LTE Bands:	LTE FDD — B1 (2100), B2 (1900), B3 (1800), B4 (1700), B5 (850), B7 (2600), B8 (900), B12 (700), B13 (700), B14 (700), B17 (700), B20 (800), B25 (1900), B26 (850), B28 (700), B29 (700), B30 (2300), B66 (1700) LTE TDD — B38 (2600), 40 (2300), B41 (2500)	LTE FDD — B1 (2100), B2 (1900), B3 (1800), B4 (1700), B5 (850), B7 (2600), B8 (900), B12 (700), B13 (700), B14 (700), B17 (700), B18 (850), B19 (850), B20 (800), B25 (1900), B26 (850), B28 (700), B29 (700), B30 (2300), B32 (1500), B66 (1700), B71 (600) LTE TDD — B38 (2600), B39 (1900), B40 (2300), B41 (2500), B42 (3500), B43 (3700), B46 (5200), B48 (3500)
3G Bands:	B1, B2, B4, B5, B8, B19	B1, B2, B4, B5, B8, B9, B19
Power:	LTE 23 dBm ± 1, HSPA+ 23 dBm ± 1 (typical conducted)	LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1 (typical conducted)
Antennas:	SMA male connectors, external 600 MHz - 6 GHz cellular paddle antennas	SMA male connectors, external 600 MHz - 6 GHz cellular paddle antennas
GNSS/GPS:	Discrete Active GPS with Dead Reckoning	Discrete Active GPS with Dead Reckoning
SMS:	Yes	Yes
Regulatory:	FCC (U.S.), IC (Canada), CE (EU), RCM (AU/NZ)	FCC (U.S.), IC (Canada), CE (EU), RCM (AU/NZ)
Network Operator Standards:	PTCRB (U.S., Canada), GCF (Worldwide)	PTCRB (U.S., Canada), GCF (Worldwide)
Network Operator Certifications:	AT&T, Verizon†	AT&T, Verizon†
Public Safety Network Certifications:	Verizon Frontline	ESN, FirstNet Trusted™, Verizon Frontline
Private Cellular Network:	N/A	Yes, includes FCC Part 96 (CBRS Band 48)

†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, to operate on their network. 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.

Physical Measurements & Features



Features



SIM Card Info

Ordering Guide

Ericsson NetCloud Service 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, an **Ericsson NetCloud Service Mobile Advanced plan** can be added to the Ericsson NetCloud Serivce Mobile Essentials package at any time.
See additional details of what is included in the Essential and Advanced Ericsson NetCloud software: cradlepoint.com/netcloud-service

Ericsson NetCloud Service Mobile Packages for the IBR1700 Router

REGION	MODEM	MOBILE PACKAGE PLAN	PART NUMBER
North America U.S. & Canada	Cat 11 (600 Mbps) with Wi-Fi	Essentials	MAx-1700600M-NNA
		Essentials + Advanced	MAAx-1700600M-NA
	Cat 18 (1200 Mbps) with Wi-Fi	Essentials	MAx-1700120B-NNA
		Essentials + Advanced	MAAx-1700120B-NA
	Cat 11 (600 Mbps) with Wi-Fi	FIPS — Essentials + Advanced	MAx-170F600M-XFA
	Cat 18 (1200 Mbps) with Wi-Fi	FIPS — Essentials + Advanced	MAx-170F120B-XFA
	Cat 18 with dual 1200 Mbps modem, Verizon & AT&T SIMs inserted	FIPS — Essentials + Advanced	MAX5-170F120B-F0
United States Federal Government	Cat 11 (600 Mbps) with Wi-Fi, no AC power supply or antennas	TAA Compliant NC — Essentials	TAA-MAy-1700600M-NNA
		TAA Compliant NC — Essentials + Advanced	TAA-MAAy-1700600M-NA
	Cat 18 (1200 Mbps) with Wi-Fi, no AC power supply or antennas	TAA Compliant NC — Essentials	TAA-MAy-1700120B-NNA
		TAA Compliant NC — Essentials + Advanced	TAA-MAAy-1700120B-NA

	Cat 11 (600 Mbps) with Wi-Fi, no AC power supply or antennas	TAA Compliant NC FIPS — Essentials + Advanced	TAA-MAy-170F600M-XFA
	Cat 18 (1200 Mbps) with Wi-Fi, no AC power supply or antennas	TAA Compliant NC FIPS — Essentials + Advanced	TAA-MAy-170F120B-XFA
	Cat 18 (1200 Mbps) with dual 1200 Mbps modem, high temp AC power supply, antennas, Verizon & AT&T SIMs inserted	TAA Compliant NC FIPS — Essentials + Advanced	TAA-MAX5-170F120B-F0
Europe: European Union, South Africa & United Kingdom	Cat 11 (600 Mbps) with Wi-Fi	Essentials Essentials + Advanced	MAx-1700600M-EWA MAAx-1700600M-EA
	Cat 18 (1200 Mbps) with Wi-Fi	Essentials Essentials + Advanced	MAx-1700120B-EWA MAAx-1700120B-EA
Asia Pacific: Australia, Malaysia, New Zealand & Singapore	Cat 11 (600 Mbps) with Wi-Fi	Essentials Essentials + Advanced	MAx-1700600M-PWA MAAx-1700600M-PA
	Cat 18 (1200 Mbps) with Wi-Fi	Essentials Essentials + Advanced	MAx-1700120B-PAA MAAx-1700120B-PA
All Regions		Advanced Renewal Essentials + Advanced Renewal Essentials	MAx-NCADV MAx-NCADV-R MAx-NCESS-R

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

Accessories

INCLUDED	PART NUMBER
GPIO Cable, Small, 2x2, Black, 3 meters 22 AWG	170585-001
OPTIONAL	**PART NUMBER**

One of the following: — Power Supply 12V, Small, 2x2, 1.5 meters (North America Type A) — Power Supply, 12V, Small, 2x2, 1.5 meters (North America-United Kingdom-Europe-Australia Types A-G-C-I) — Power Supply, 12V, Small, 2x2 (C7 line cord not included), -30 °C to 70 °C	170716-000 170717-000 170869-000
GPIO Cable, DB9, Black, 3 meters	170676-000
GPIO Cable, Small, 2x10, Black, 2.3 meters	170712-000
DAT-Int Cable, OBD-II M/F with DB9-DB9, Black, 4.6 meters	170758-000
Rail Safe GPIO Cable, Small 2x2, Black, 3 meters, 20 AWG	170871-000
Small 2x2 Power to Barrel Adapter, 152 mm	170665-000
Rack Mount Kit	170750-001
LTE Captive Modem Accessory, Indoor — CBA550-150M-D (150 Mbps modem), Americas — CBA550-150M-D (150 Mbps modem), Global — L950-C7A (300 Mbps modem), Americas — L950-C7A (300 Mbps modem), Global	170900-001 170900-002 170900-005 170900-006
5G Captive Modem Accessory, Outdoor — W2005-5GB (4.1 Gbps modem), AP — W4005-5GB (7.5 Gbps modem), High Band, North America — W1855-5GC (3.4 Gbps modem), North America — W1855-5GC (3.4 Gbps modem), EU — W1855-5GC (3.4 Gbps modem), UK — W1855-5GC (3.4 Gbps modem), AP — R2105-5GB (4.1 Gbps modem), Captive Modem Accessory, Global	170900-009 170900-011 170900-016 170900-018 170900-019 170900-021 170900-015
5G Captive Modem Accessory, Indoor — W1850-5GB (4.1 Gbps modem), Americas — W1850-5GB (4.1 Gbps modem), Global — W1850-5GC (3.4 Gbps modem), Americas — W1850-5GC (3.4 Gbps modem), Global	170900-012 170900-013 170900-017 170900-020
MC400 Modular Modem Kit†	
— MC400 Cat 18 LTE Advanced Pro Modular Modem (1200 Mbps). Includes IBR1700 modem door with screw and COR Extensibilty Dock modem door with screw.	MA-MC400-1200M-B
— MC400 5G Modem (requires 4FF SIM) upgrade for R1900 with RX30-MC or IBR1700 Mobile Routers. Includes modem doors.	MB-MC400-5GB

UNITED STATES FEDERAL GOVERNMENT	PART NUMBER
Power Supply 12 V, Small 2x2, 1.5 meters (North America Type A)	TAA-170716-000
Power Supply, 12 V, Small 2x2, 1.5 meters (North America-United Kingdom-Europe-Australia Types A-G-C-I)	TAA-170717-000
GPIO Cable, Small 2x2, Black, 3 meters, 22 AWG	TAA-170585-001
GPIO Cable, DB9, Black, 3 meters	TAA-170676-000

GPIO Cable, Small 2x10, Black, 2.3 meters	TAA-170712-000
Small 2x2 Power to Barrel Adapter, 152 mm	TAA-170665-000
Rack Mount Kit	TAA-170750-001
LTE Captive Modem Accessory, Indoor, CBA550-150M-D (150 Mbps modem), Americas	TAA-170900-001
LTE Captive Modem Accessory, Indoor, L950-C7A (300 Mbps modem), Americas	TAA-170900-005
5G Captive Modem Accessory, Outdoor, W2005-5GB (4.1 Gbps modem), North America	TAA-170900-007
5G Captive Modem Accessory, Outdoor, High-Band, W4005-5GB (7.5 Gbps modem), North America	TAA-170900-011
5G Captive Modem Accessory, Indoor, W1850-5GB (4.1 Gbps modem), Americas	TAA-170900-012
MC400 Modular Modem upgrade for Mobile†	
— MC400 Cat 18 LTE Advanced Pro Modular Modem (1200 Mbps). Includes IBR1700 modem door with screw and COR Extensibilty Dock modem door with screw.	TAA-MA-MC400-1200M-B
— MC400 5G Modem (requires 4FF SIM) upgrade for R1900 with RX30-MC or IBR1700 Mobile Routers. Includes modem doors.	TAA-MB-MC400-5GB

†Refer to the Cradlepoint MC400 Modular Modem webpage for more information about modular modems.

Support & Warranty

The IBR1700 router is only sold as a component of Ericsson NetCloud Service Mobile Essentials or Essentials and Advanced packages.

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

More Information

Find the most up-to-date information at cradlepoint.com/ibr1700