M600 5G Series

High-Performance Industrial/In-Vehicle Router

3GPP Rel-16 | 5GNR sub-6 GHz | NSA / SA Modes | 4G LTE Cat.19 | IP50 | Carrier Aggregation | BECentral® CloudEdge

Dual-SIM | 802.11ac 802.11n | Firewall | VPN | EN50155* | M12 X-coded* | FAKRA*

*on select models

Ideal Use Cases

- Industrial IoT (IIoT)
- Transport & Logistics
- Energy & Utilities
- Private Networks
- Smart Cities
- Mission Critical
- Public Safety

The BEC M600 5G Industrial/In-Vehicle Router Series delivers exceptional 5G performance and reliability. Engineered for resilience in demanding environments, it accommodates diverse applications, from transportation and in-vehicle use to the ever-evolving IoT/M2M landscapes. It features a compact and rugged design, seamlessly integrating dual SIMs, a four-port Gigabit Switch, High-Power Wi-Fi 5, an embedded multi-GNSS receiver for GPS or GLONASS, and ignition sensing for in-vehicle applications. Additionally, it boasts enterprise-level features such as dynamic routing, advanced security measures, Quality of Service (QoS), integrated VPN, and auto-failover, ensuring unparalleled uptime and network redundancy.

Whether managing a vehicle fleet or an intricate IoT network, the M600 5G Router Series is the dependable choice, offering a seamless, high-performance, and reliable connectivity experience.



M600 5G

5G Performance and Enhanced Capacity

Designed for performance, the 3GPP Release 16 compliant platform that delivers lower latency and enhanced network connectivity with standalone access (SA), two-carrier sub-6 GHz aggregation, non-standalone access (NSA) dual connectivity, and up to five carrier aggregation for LTE. This single platform offers the flexibility of quick deployment for any 5G or LTE network.

Durable and Versatile Interface Connectivity

Models equipped with FAKRA and M12 connectors contribute to the overall durability and efficiency of the platform. FAKRA connectors in cellular, GPS, and Wi-Fi interfaces ensure a secure, stable connection, minimizing signal issues. M12 connectors, resistant to dust and water, provide a reliable, enduring solution, especially in challenging environments.

High Availability and Network Resilience

The M600 5G is a robust industrial router with advanced network processing, multi-WAN connectivity, and built-in features for reliability. It seamlessly handles connectivity issues by automatically redirecting traffic from the primary to the secondary WAN interface in case of failure, and it supports carrier network redundancy through dual SIMs.

BECentral® CloudEdge Services

BECentral® CloudEdge, an industry-leading cloud-based service, accelerates LTE and 5G Wireless WAN connectivity for deployments of any size. This platform offers zero-touch provisioning, real-time analytics, detailed reporting, historical analysis, performance monitoring, proactive alerts, and API extensibility for third-party integration.

High Performance & Support for 5G NR & LTE Networks

- 5G NR
  3GPP Release 16 Compliant
  SA: 2.4 Gbps (DL) / 900 Mbps (UL)
  NSA: 3.4 Gbps (DL) / 550 Mbps (UL)

- 4G/LTE Cat.19
  : LTE: 5CA DL / 2CA UL (Carrier Aggregation)
  : Peak Data Rate: 1.6 Gbps (DL) / 200 Mbps (UL)
  (The presented data rates are theoretical only, and the actual value depends on network conditions.)

Carrier-Grade Wireless-LAN

- Compliant with IEEE 802.11a/b/g/n/ac standards
- Simultaneous Dual-Band Wireless up to 2400Mbps
- 4x4 802.11a/n/ac (5GHz) and 3x3 802.11b/g/n (2.4GHz)
- High Transmit Power Design
- Wi-Fi Hotspot with Captive Portal
- Multiple SSID with Client Isolation

Enterprise Class Routing and Secured VPN

- BGP and OSPF Dynamic Routing Protocols
- IPSec, GRE, L2TP, PPTP and OpenVPN
- Advanced secure and simultaneous VPN connections
- Advanced Qality of Service (QoS) Framework

Durable Industrial-Grade Enclosure

- IP50 enclosure for protection against dust and water ingress
- Designed to withstand high temperatures, vibrations, and sudden impacts
- Small form factor with optional mounting kits
- Ignition power control option when mounted within vehicles

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M600 5G Series

High-Performance Industrial/In-Vehicle Router

Features & Specifications

Supported Frequency Band*1

5G NR sub-6 GHz (3GPP Rel-16)

Band(NA/NSA)	n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48, n66, n70, n71, n75, n76, n77, n78, n79
Carrier Aggregation	sub-6 GHz (FDD+FDD, TDD+TDD,FDD+TDD 2CA)
Max. Transmission Data Rate	NSA: 3.4Gbps DL / 550Mbps UL. SA: 2.4Gbps DL / 900Mbps UL

4G LTE (CAT 19 DL / CAT 18 UL)

Band(FDD/TDD)	1, 2, 3, 4(66), 5(18,19,26), 7, 8, 12(17), 13, 14,20, 25, 26, 28, 29, 30, 32, 34, 38, 39, 40, 41, 42, 43, 46(LAA), 48, 71
Carrier Aggregation	5CA DL / 2CA UL
Max. Transmission Data Rate	1.6Gbps DL / 200Mbps UL

Network Protocols and Features

- Dual WAN Failover/ Failback
- Dual WAN Load Balancing
- IPv4, IPv6, IPv4/IPv6 dual stack*2
- Dual APN*2
- Keep Alive
- IP Pass-Through
- NAT, Virtual Server and DMZ
- Static Routing, Dynamic Routing (RIP v1/v2, OSPF, BGP)
- SNTP, DNS relay and DDNS
- Universal Plug and Play (UPnP) compliant
- Supports DHCP server/client/relay

Virtual Private Network (VPN)

- IPSec
- PPTP
- L2TP
- GRE
- OpenVPN

Wireless LAN

- Compliant with IEEE 802.11a/b/g/n/ac standard
- Concurrent dual-band 802.11a/n/ac (5GHz) and 802.11b/g/n (2.4GHz)
- Up to 1733Mbps wireless operation rate at 5GHz
- Up to 600Mbps wireless operation rate at 2.4GHz
- Wi-Fi security with WEP 64/128, WPA-PSK, WPA2-PSK, Mixed WPA/WPA2-PSK
- WPS (Wi-Fi Protected Setup) for easy setup
- Multiple SSIDs
- Supports WDS repeater function
- Wireless MAC Filtering
- Wi-Fi Client Isolation
- Wi-Fi Hotspot with Captive Portal
- Support RADIUS authentication
- Wi-Fi client rate-limiting

Global Navigation Satellite System (GNSS)*3

- Embedded multi-GNSS engine for GPS or GLONASS system

Firewall

- Built-in NAT Firewall
- Stateful Packet Inspection (SPI)
- Prevents DoS attacks including Land Attack, Ping of Death, etc.
- Access Control
- IP Filtering, MAC Filtering, URL Filtering
- VPN Pass-through

Management

- Password protection for system management
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload and download via web-based GUI
- CWMP(TR-069)*2, SNMP
- Cellular data usage allowance
- Remote System Log monitoring
- Scheduling Auto-Reboot
- Physical layer/protocol diagnostic test tool
- BECentral® Cloud-Based Remote Management

USB Application

- Storage/NAS: embedded FTP server, SAMBA server

Hardware Specifications

Physical Interface	• WAN: 5G NR sub-6GHz (and/or GbE WAN) • Ethernet LAN: four (4) RJ-45 port 10/100/1000Mbps auto-crossover (MDI/ MDI-X) switch • USB 2.0 Host: one (1) port • SIM Card: two (2) 2FF mini-SIM slot • Reset Button • Power Connector: 4-pin connector with ignition sensing • LED Indicators • Antenna: 5G NR(FR1): four (4) detachable antennas Wi-Fi: four (4) detachable dual-band antennas GPS: one (1) detachable active antenna (option)
External Connector	• 5G NR: SMA x four (4) • Ethernet: RJ-45 x four (4) • Wi-Fi: RP-SMA x four (4) • GNSS: SMA x one (1) • USB: Type A x one (1) • SIM: mini-SIM(2FF) slot with cover x two (2)
Power Specifications	Input: DC 10V~56V
Physical Specifications	199.2 x 132.7 x 46.6 mm (199.2 x 149.1 x 46.6 mm - antenna connector protrusion included)
Operating Requirements	• Operating: -40°C to 70°C • Humidity: 20 ~ 95% non-condensing

Notes:
*1. The 5G NR/4G LTE is dependent on your local service provider.
*2. Only upon request for Telco/ ISP tender projects.
*3. The support for GPS and/or GLONASS functions depends on the equipped module's capabilities.

I/O Specification

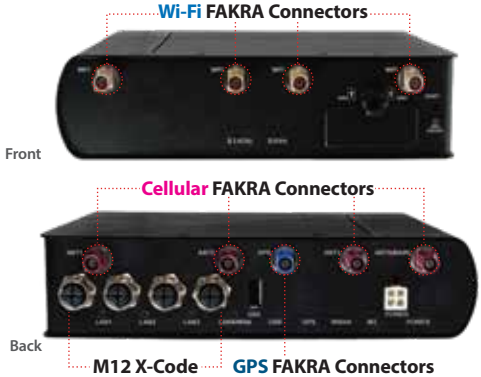
M600 5G



M600-M12 5G



M600-M12-FA 5G



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