



Ideal Use Cases

- Gigabit/FTTH Internet Services
- Distributed Enterprise
- WWAN Primary Connectivity
- Business Continuity/Failover
- Private 5G, LTE, CBRS Networks
- SD-WAN Deployments
- Retail Networks

The BEC MX-600 Multi-Service Modular Routers are highly integrated, performance-driven, feature-rich platforms that incorporate advanced data communications and network diversity from a flexible platform enabling support for a broad array of use cases and applications. Enterprise-ready and performance-driven, the MX-600 integrates multi-core processing power and flexible architecture to extend connectivity for any network.

Multi-WAN with Intelligent Path Selection

The MX-600 provides full rate Gigabit wired connectivity via two independent RJ-45 interfaces, which are configurable for Dual WAN, WAN/LAN, or LAN1/LAN2 operations. Wi-Fi as a WAN is supported for high-data applications such as video offload. The MX-600 is also equipped with built-in modularity to support instant cellular WAN expansion. The platform enables multiple deployment options with intelligent WAN path selection and built-in redundancy to support varied services such as residential wired Gigabit internet, distributed enterprise, and wireless wan services.

Modular Cellular WAN Expansion

The modular design allows for instant cellular expansion via the MX-100 Series Industrial USB Modems. Each modem includes dual-SIM with auto carrier selection, active GPS for location-based services, and future technology evolution. In addition, users can select scalable throughput options of LTE CAT 6, CAT 12, CAT 18, and 5G sub-6 GHz supporting a variety of services and applications across tier 1 licensed commercial networks, CBRS shared spectrum, 2.5 GHz EBS/BRS Networks, and Private LTE or 5G.

Carrier-Grade Wi-Fi with Captive Portal

The MX-600 provides a carrier-class Wi-Fi network optimized for signal strength and robust coverage using powerful 802.11ac Wi-Fi 5 technology. The dual-band access delivers extremely fast Wi-Fi speeds of up to 1200 Mbps, specifically the 2.4GHz frequency range support 400Mbps, and the 5 GHz frequency range supports 867 Mbps. network without needing any external wires or cables. The captive portal enables highly secure connectivity with multiple authentication options and extensive controls for access and bandwidth management. Customization options allow for operator logos, branding, or advertisement placement.



24/7 Cloud Management & Network Visibility

Remote monitoring, management, and control of devices in real-time are essential for any network deployment. BECentral™, BEC's cloud-based remote management platform for managing large-scale UE deployments. Administrators can view multiple visual dashboards with real-time analytics intelligence, detailed reporting, performance monitoring with complete lifecycle management.

Features & Specifications

Availability and Resilience

- Dual Gigabit (EWANs, WAN/LAN, LAN)
- Wi-Fi as WAN
- Modular Interface for Cellular Modem
- Auto failover and failback
- Load Balancing
- VRRP

Carrier-Grade Wireless LAN

- Compliant with IEEE 802.11a/b/g/n/ac standard
- Concurrent dual-band 802.11a/n/ac (5 GHz) and 802.11b/g/n (2.4 GHz)
- Up to 866Mbps wireless phy rate at 5GHz
- Up to 400Mbps wireless phy rate at 2.4GHz
- 64/128 bits WEP supported for encryption
- Wireless security with WPA, WPA2, WPA/WAP2
- Multiple SSID (4 SSIDs), BSSID
- Wireless MAC Filtering
- Wireless Client Isolation
- Wi-Fi Hotspot with Captive Portal
- Support RADIUS authentication
- Wireless Client rate-limiting

Network Protocols and Features

- Dual WAN Failover/ Failback
- Dual WAN Load Balancing
- IPv4, IPv6, IPv4/IPv6 dual stack
- Dual APN
- 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

Quality of Service Control

- Traffic prioritization based-on IP protocol, port number, and IP address

USB Application Server

- Storage: FTP server and Samba server

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
- Password protection for system management
- VPN Passthrough

VPN Termination

- IPSec VPN Tunneling
- PPTP VPN Tunneling (1 dial-in/dial-out tunnels)
- L2TP over IPSec VPN Tunneling (1 dial-in/dial-out tunnel)
- GRE
- OpenVPN

Dynamic Routing Protocols

- BGP and OSP

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), SNMP
- Remote System Log monitoring
- Scheduling Auto-Reboot
- Physical layer/protocol diagnostic test tool
- BECentral® Cloud Management

Hardware Specifications

Physical Interface

- Gigabit Ethernet: RJ45 x 2
- Wi-Fi: 2 x 2 11ac (max. 866Mbps phy rate) 2 x 2 11n (max. 400Mbps phy rate)
- RP-SMA connector: x 2 (external 2.4 / 5 GHz dual-band Wi-Fi antennas,
- Reset button
- Power jack

Modular Interface for Cellular WAN

- MX-100 Series of Industrial USB Modems
- MX-100U: (LTE CAT 6, CA: 2CA DL)
- MX-100UE: (LTE CA 12, CA: 3CA DL/2CA UL)
- MX-100UG: (LTE CAT 18, CA: 5CA/2CA UL)
- MX-1005G: (5G NR sub-6 GHz)
- (2) SMA connectors: 2x2 MIMO DL external LTE antenna x 2 + GPS antenna x 1 (MX-100U and MX-100UE)
- (4) SMA connectors: (4x4 MIMO DL external LTE antenna x 4 + GPS antenna x 1) (MX-100UG and MX-1005G)
- SIM slot: x 2 (mini-SIM/2FF)
- USB 3.0 Host: x 1

Power Specifications

- Input: DC 15V 1.6A

Physical Requirements

- Dimensions: 6"(W) x 2.1"(H) x 6.2"(D) (154mm x 54 mm x 158 mm)

Operating Environment

- Operating temperature: 32 to 104°F (0 to 40° C)

Hardware Overview

