MXConnect® MX-100U-5GW

Multi-Service 5G Router

5GNR Sub-6 GHz | 4G LTE Cat.19 | MIMO DL 4 X 4 | LTE NR NSA / SA Modes | 3GPP Rel-16

Multi-WAN | Wi-Fi 802.11ac | Auto WAN Failover | Firewall | BECentral®

Ideal Use Cases

- Distributed Enterprise
- WWAN Primary Connectivity
- Private Networks
- CBRS Deployments
- SD-WAN Deployments
- Retail Networks
- Gigabit/FTTH Internet Services

The BEC MX-100U-5GW Multi-Service 5G 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-100U-5GW integrates multi-core processing power and flexible architecture to extend connectivity for any network.

New 5G Radio Technology Overthrow Your Imagination

The BEC MX-100U-5GW supports 4G/LTE and 5G Sub-6 GHz with dual connectivity modes, standalone access (SA) fully benefiting from all the 5G capabilities and non-standalone access (NSA) attached to a 4G network up to a gigabit speed to ensure a quick and flexible adaptation to any LTE or 5G NR networks.

Multi-WAN with Intelligent Path Selection

The MX-100U-5GW 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-100U-5GW 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.

24/7 Cloud Management and Network Visibility

Remote monitoring, management, and control of devices in real-time is essential for IoT networking devices, M2M and critical applications. BECentral®, BEC's Cloud Remote Management, is a comprehensive device management platform designed to minimize deployment, lower support expenses, and maximize the operational efficiency and profitability of the operator.

High Performance and Network Resilience

- 5G NR
  - 3GPP Release 16 NSA/SA Operation, Sub-6 GHz
  - NSA: 3.2 Gbps (DL) / 525 Mbps (UL)
  - SA: 2.4 Gbps (DL) / 900 Mbps (UL)
- 4G/LTE Cat.19 (Max.) 1.6 Gbps (DL) / 200 Mbps (UL)
- Automatic Failover and dual WAN interfaces for network resilience and reliable connectivity
- 2-Port Gigabit Auto-MDI/MDI-X Switch
- Advanced SX Antenna Technology for increased coverage, signal reception and efficiency

Enterprise Class Routing and Secured VPN

- BGP and OSPF Dynamic Routing Protocols
- IPSec, GRE, L2TP, PPTP, and OpenVPN
- Advanced secure and simultaneous VPN connections

Superior Wireless Technology

- Simultaneous Dual Band Wi-Fi with high-power design
- Wi-Fi Hotspot with Captive Portal
- Supports Wi-Fi Multimedia (WMM) wireless QoS
- Carrier-Grade Wi-Fi, WPA2/AES and MSSID with isolation
- Multiple Operation Modes: Access Point, Bridge and Repeater

Management

- Web-based GUI for remote and local management
- SNMP v1 , v2, v3, MIB-I and MIB-II support
- TR-069 remote management
- SMS Control function for status and reboot
- Supported by BECentral®, BEC's Cloud-Based device management platform, to extend network visibility and control of devices remotely

MXConnect® MX-100U-5GW

Multi-Service 5G Router

Features & Specifications

Availability and Resilience
- Multiple WAN ports (4G/5G, ETH WAN, or Wireless)
- Load Balancing - Maximizing bandwidth of outbound traffic
- Automatic WAN failover
- VRRP

Supported Frequency Bands
- **5G NR Sub-6 GHz**
  : Comply 3GPP Rel.16
  : Support Frequency Range 1 Bands (SA & NSA): n1 / n2 / n3 / n5 / n7 / n8 / n12 / n20 / n25 / n28 / n38 / n40 / n41 / n48 / n66 / n71 / n77 / n78
  : Modulation (Uplink): π/2-BPSK, QPSK, 16QAM, 64QAM, and 256QAM
  : Modulation (Downlink): QPSK, 16QAM, 64QAM, and 256
- **4G / LTE (Cat.19)**
  : Support Frequency Bands (FDD & TDD)
  : FDD: B1 / B2 / B3 / B4 / B5 / B7 / B8 / B9 / B12 / B13/ B14 / B17 / B18 / B19 / B20 / B25 / B26 / B28 / B29 / B30 / B32 / B66 / B71
  : TDD: B34 / B38 / B39 / B40 / B41 / B42 / B43 / B48
- **Data Transmission**
  5G NSA: DL 3.2 Gbps / UL 525 Mbps
  5G SA: DL 2.4 Gbps / UL 900 Mbps
  4G/LTE: DL 1.6 Gbps / UL 200Mbps
- **4G/LTE/5G SX Antenna**
  Low Band: 2x2 MIMO
  Mid Band / High Band: 4x4 MIMO (DL Only)
- 4G/5G Management Center in web-based GUI

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

Network Protocols and Features
- IPv4, IPv6, IPv4 / IPv6 dual stack
- IPv6 in IPv4 (6RD) / IPv4 in IPv6 (DS-Lite) / IPv6-464XLAT
- NAT, static routing and RIP-1/2
- Universal Plug and Play (UPnP) compliant
- Dynamic Domain Name System (DDNS)
- Virtual server and DMZ
- SNTP, DNS relay, IGMP proxy and IGMP snooping, MLD proxy and MLD snooping for video service
- Supports port-based Virtual LAN (VLAN)

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 wirele ss 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

Quality of Service Control
- Traffic prioritization based-on IP protocol, port number, and IP address
- Uplink and Downlink Bandwidth Control

VPN/Tunneling (Optional)
- IPSec, OpenVPN, PPTP, L2TP VPN Tunneling
- OpenVPN VPN Tunneling
- PPTP VPN Tunneling
- L2TP VPN Tunneling
- GRE (up to 8 tunnels)
- Embedded PPTP / L2TP / IPSec / OpenVPN Client and Server
- IKE Key Management
- MPPE Encryption for PPTP
- IPSec DES, 3DES and AES encryption

Dynamic Routing Protocols
- BGP and OSP

Management
- Quick Installation Wizard
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload and download via web-based GUI and over-the-air
- Supports DHCP server/client/relay
- TR-069 supports remote management
- BECentral® Cloud Management
- SNMP v1 , v2, v3, MIB-I and MIB-II support
- Syslog monitoring
- SMS Control function for status and reboot

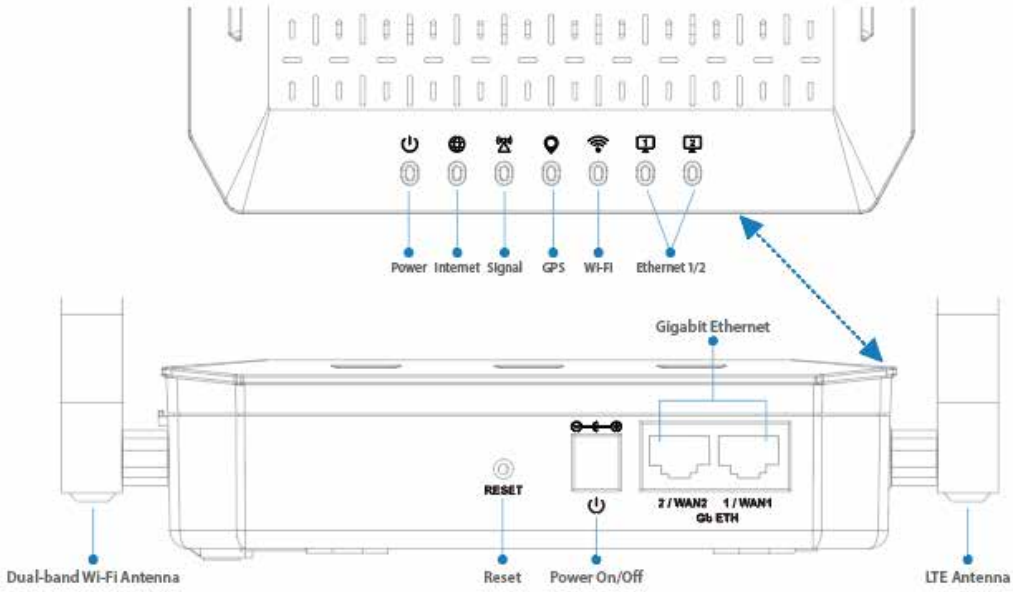
Hardware Specifications
Physical Interface
- Gigabit Ethernet: RJ45 x 2
- Wi-Fi: 2 x 2 11ac (max. 866Mbps phy rate)
  2 x 2 11n (max. 400Mbps phy rate)
- RP-SMA connector: x 2
  (external 2.4 / 5 GHz dual-band Wi-Fi antennas,
- (4) SMA connectors: (4x4 MIMO DL (external 5G antennas)
- SIM slot: x 2 (mini-SIM/2FF)
- USB 3.0 Host: x 1
- Reset button
- Power jack

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 104ºF (0 to 40º C)

Hardware Interfaces



 Copyright © BEC Technologies, Inc. All rights reserved