



Advanced Industrial 5G RedCap Routers

The BEC MX-320 Series of 5G RedCap Industrial Routers are high-performance, ultra-compact industrial-grade platforms designed to deliver reliable and secure connectivity across M2M/IoT and industrial communication applications.

The MX-320 Series brings the benefits of 5G RedCap to deployments that require efficient 5G connectivity with lower power and complexity than full-scale 5G. It features two Gigabit Ethernet interfaces with configurable LAN/WAN options, an RS-232 serial interface for serial device connectivity over IP, Active GPS, advanced security, QoS, SPI firewall, integrated VPN, auto-failover, and network redundancy.

Managed by BECentral®, BEC's cloud-based device management platform, the MX-320 Series extends visibility and maximizes deployment efficiency.

Key Applications:

Private 5G / Private LTE, Industrial IoT, SCADA, Remote Monitoring and Control, Utility Field Networks, Primary or Backup Connectivity, Serial-to-IP Connectivity.

Features & Specifications

Model Variants

- MX-320: Standard model with serial and GPS
- MX-320A: Variant without serial or GPS

Availability and Resilience

- Dual-WAN ports (5G SA & Ethernet WAN)
- Load balancing - Maximizing bandwidth of outbound traffic
- Automatic failover and fallback
- Virtual Routing Redundancy Protocol (VRRP)

Supported Frequency Bands

- 3GPP Release 17 RedCap
- 5G SA: n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n30, n38, n40, n41, n48, n66, n70, n71, n77, n78, n79
- 5G SA Peak data rates: 223Mbps DL / 123Mbps UL
- LTE (CAT 4): B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B30, B34, B38, B39, B40, B41, B42, B43, B48, B66, B70, B71, B106
- LTE Peak data rates: 200Mbps DL / 105Mbps UL
- Maximum Output power: 23dBm (PC3)
- LTE B41, B42 Supports 26dBm (PC2)
- Rx Diversity and MIMO DL 2x2

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
- IP Tunnel IPv6 in IPv4 (6RD)
- IP Tunnel IPv4 in IPv6 (DS-Lite)
- 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 for video service
- MLD proxy and MLD snooping for video service
- Supports port-based Virtual LAN (VLAN)

Secured VPN

- IPsec VPN Tunneling (up to 8 tunnels)
- PPTP VPN Tunneling (up to 4 in/out tunnels)
- L2TP over IPsec VPN Tunneling (up to 4 dial-in/dial-out tunnel)
- GRE (up to 8 tunnels)
- Embedded PPTP / L2TP / IPsec Client and Server
- IKE Key Management
- MPPE Encryption for PPTP
- IPsec DES, 3DES and AES encryption

Quality of Service Control

- IEEE 802.1Q VLAN
- Bandwidth Management
- Outbound Load Balancing (Round Robin, Weight or IP Hash)

Dynamic Routing Protocols

- BGP and OSPF

Global Navigation Satellite (GNSS)

- Support for GPS, GLONASS, Beidou, Galileo, & QZSS

Key Features

- **DUAL-WAN Interfaces**
5G SA and Ethernet WAN (EWAN) ensuring high availability, network resilience, and automatic failover
- **Enterprise Routing and VPN**
Dynamic Routing (OSPF and BGP) and Secured VPN (IPsec, GRE, LT2P, PPTP, OpenVPN)
- **RS-232 Interface**
Enabling serial device connectivity over IP (Modbus/TCP) and Out-of-Band Management (OOBM)
- **Active GPS**
Enable real-time tracking for location-based services or export data in NMEA format
- **Ultra-Compact**
Fits in the palm of your hand, simplifying deployments & discrete mounting virtually anywhere
- **Rugged/Hardened**
Industrial-grade components with extended temperature range and flexible input voltage selection

Management

- Quick Installation Wizard
- Web-based GUI for remote and local management
- Firmware upgrade and configuration data upload and download via web-based GUI
- Supports DHCP server/client/relay
- TR-069 supports remote management
- BECentral® Cloud Management
- Support SNMP
- Syslog monitoring

Hardware Specifications

Physical Interface

- 5G SA/LTE: Two (2) SMA Female Connectors
- GPS: One (1) SMA Female Connector
- RS-232 (DCE, DB-9): one (1) port
- Ethernet LAN: 2-port 10/100/1000Mbps auto-crossover (MDI/ MDI-X) switch
- 1 x Versatile Port
: LAN1 / EWAN
- SIM Card: One (1) slot
- Reset Button
- Power Connector: 2-pin connectors
- Mini-USB B Type Interface (MX-320A only)
- LED Indicators: Ethernet 1-2 / LTE Signal Strength / Internet / Power

Power Specifications

- Input: DC 9V - 56V

Physical Requirements

- Dimensions: 4.29"(W) x 1.17"(H) x 3.43"(D)
(109mm x 29.7 mm x 87 mm)

Operating Environment

- Operating Temperature: -40° to 70°C (-40° to 158°F)
- Storage Temperature: -40° to 85°C (-40° to 185°F)