



# MXConnect Series 4G / LTE Outdoor Router



## BEC MX-200A ODU



### Overview

The BEC MX-200A ODU is an industrial-grade 4G/LTE Outdoor Router designed for mission critical operation in rugged, harsh environments. The MX-200A ODU is a Category 6 device supporting LTE Advanced and Carrier Aggregation and come with 2 Gigabit Ethernet ports. The IP68 rated enclosure will withstand dirt, harmful ingress of water, humidity and extreme temperatures for years of dependable operation. The Embedded high gain MIMO directional antenna provides improved signal quality, increased signal range and coverage across multiple frequency bands. Physical size and weight (under 4lbs) were key design considerations, thus the MX-200A ODU can be mounted directly on exterior walls, chimneys, lightweight poles and used for retrofitting applications such as the replacement of older generation wireless technology.

### Innovative MIMO Antenna Technology

Homes and businesses with a weak or nonexistent wireless signal can benefit from the extended range and reach of the MX-200A ODU Multiple MIMO antenna technology options allow service providers to select the optimal solution for their environment or application whether LOS (Line of Sight) or NLOS (Non-Line of Sight). Physical size and weight were key design considerations of the MX-200A ODU; it can be mounted directly on exterior walls, chimneys, lightweight poles and used for retrofitting applications such as the replacement of older generation wireless technology.

### Rugged Weatherproof Design

The MX-200A ODU is an industrial-grade outdoor fixed wireless router with an IP68 rated enclosure to withstand extreme weather conditions and harsh rugged deployments. In addition to outdoor, it can be installed in environments such as: manufacturing plants, industrial automation, stadiums, convention halls, stadium facilities, school campuses or virtually any venue requiring a robust wireless solution.

The MX-200A ODU of 4G/LTE Outdoor routers creates value, enables new growth opportunities and helps operators maximize network ROI.

### Remote Management and Network Visibility

Monitoring, management and control of network devices in real-time is important. Administrators can extend network visibility with BECentral®, BEC's Cloud Based Remote Management Platform. BECentral provides administrators with a comprehensive suite of services for real-time device monitoring, provisioning, troubleshooting and maintenance from a single centralized location. The platform will simplify device access, lower support expenses, accelerate deployments / service delivery and maximizes the operational efficiency.

### Carrier Certified



### Multiple LTE Frequency Bands

- Category 6 UE, data rates of up to 300Mbps (DL) /50Mbps (UL)
- Advanced IP networking functionalities including bridge and router modes
- Support for most North America LTE bands

### Patented Dual-Pol Antenna Technology

- H-Plane & V-Plane Polarization
- Precise alignment achievable with multi-angle, multi-position pole mount brackets
- Simplicity and high isolation for stable and reliable connections
- Optimize antenna design per band

### Enterprise Class Routing and Secured VPN

- BGP and OSPF Dynamic Routing Protocols
- Secured VPN : IPSec, GRE, L2TP, PPTP and OpenVPN

### Lightweight, Compact and Unobtrusive Design

- Multiple mounting options, easily installed by single person
- Can be installed virtually anywhere

### Designed for Challenging/Rugged Deployments

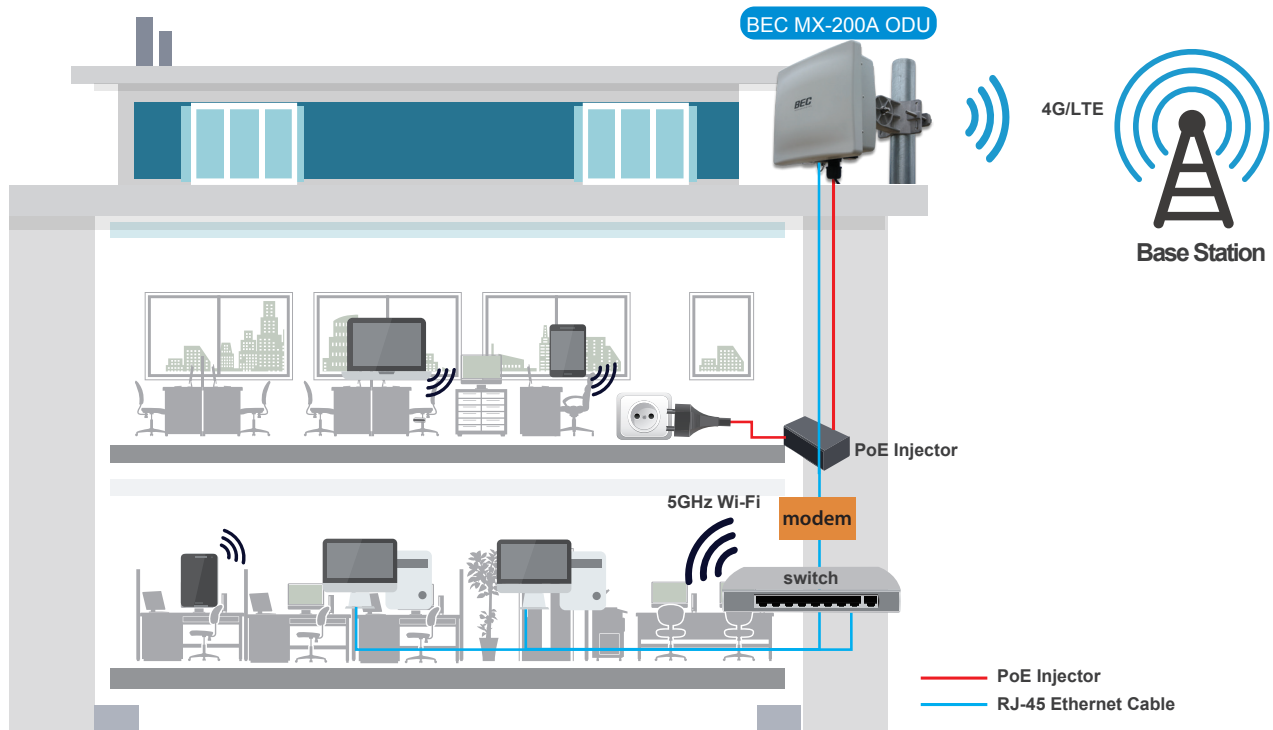
- IP68 hardened enclosure with Industrial-grade components
- Designed for the toughest industrial environments

### Ideal Solution for

- + Industrial
- + Oil and Gas
- + Mining
- + Marine
- + Manufacturing Plants
- + Urban/Rural
- + Remote Connectivity

**NOTE: Package includes Gigabit PoE Injector and the Mounting Kit**

## Application Diagram



## Features & Specifications

### Availability and Resilience

- Dual-WAN ports (4G & Ethernet WAN)
- Load balancing - Maximizing bandwidth of outbound traffic
- Automatic failover and fallback

### Supported Frequency Bands\*

- LTE Band 1 (1920–1980 MHz UL | 2110–2170 MHz DL)
- LTE Band 2 (1850–1910 MHz UL | 1930–1990 MHz DL)
- LTE Band 3 (1710–1785 MHz UL | 1805–1880 MHz DL)
- LTE Band 4 (1710–1755 MHz UL | 2110–2155 MHz DL)
- LTE Band 5 (824–849 MHz UL | 869–894 MHz DL)
- LTE Band 7 (2500–2570 MHz UL | 2620–2690 MHz DL)
- LTE Band 8 (880–915 MHz UL | 925–960 MHz DL)
- LTE Band 12 (699–716 MHz UL | 729–746 MHz DL)
- LTE Band 13 (777–787 MHz UL | 746–756 MHz DL)
- LTE Band 20 (832–862 MHz UL | 791–821 MHz DL)
- LTE Band 25 (1850–1915 MHz UL | 1930–1995 MHz DL)
- LTE Band 26 (814–849 MHz UL | 859–894 MHz DL)
- LTE Band 29 (717–728 MHz DL Only)
- LTE Band 30 (2305–2315 MHz UL | 2350–2360 MHz DL)
- LTE Band 41 (2492–2690 MHz TDD)
- UMTS/HSPA+: B1, B2, B4, B5, B8
- GSM/GPRS/EDGE (850/900/1800/1900)
- LTE FDD (Cat. 6) Data Rate: DL up to 300Mbps & UL up to 50 Mbps
- LTE Bandwidth\*: 1.4, 3, 5, 10, 15, 20 MHz
- Max. Output Power: 23dBm
- Carrier Aggregation
  - DL LTE-FDD
    - 20 MHz intraband non-contiguous
    - 40 MHz interband
  - DL LTE-TDD
    - 40 MHz intraband contiguous and non-contiguous
    - 40 MHz interband

\* Different product SKU for some band combinations

### Carrier Aggregation Combinations

- LTE Band 1: 1 + 8
- LTE Band 2: 2 + 2/5/12/13/29
- LTE Band 3: 3 + 7/20

### Carrier Aggregation Combinations (Cont.)

- LTE Band 4: 4 + 4/5/12/13/19
- LTE Band 5: 5 + 2/4/30
- LTE Band 7: 7 + 3/7/20
- LTE Band 8: 8 + 1
- LTE Band 12: 12 + 2/4/30
- LTE Band 13: 13 + 2/4
- LTE Band 20: 20 + 3/7
- LTE Band 30: 30 + 5/12
- LTE Band 41: 41 + 41

### 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)

### 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/Tunneling

- IPsec VPN Tunneling (up to 8 tunnels)
- PPTP VPN Tunneling (up to 4 dial-in/dial-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

### VPN/Tunneling (Cont.)

- IKE Key Management
- MPPE Encryption for PPTP
- IPsec DES, 3DES and AES encryption

### Dynamic Routing Protocols

- BGP and OSPF

### 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
- Support SNMP
- Syslog monitoring
- BECentral® Cloud Management

### Quality of Service Control

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

### Hardware Specifications

#### Physical Interface

- WAN: 3G/4G LTE (and/or ETH WAN Optional)
- Ethernet LAN: 2-port 10/100/1000Mbps auto-crossover (MDI/ MDI-X) switch
- SIM Card: One (1) slot
- GPS (Optional)

#### Power Specifications

- Input: DC 9V~56V

#### Physical Requirements

- Dimensions: 8.5" (W) x 7.5" (H) x 3.0" (D) (257mm x 227 mm x 91mm)
- IP68 Grade Enclosure

### Operating Environment

- Operating temperature: -40°C to 55°C (-40°F to 131°F)