

WWAN Failover Manager



Stay Connected - Eliminate Downtime

Internet connectivity has become such an integral part of business operations today that any amount of downtime is devastating impacting everything from revenues, reputation and ultimately business viability. Implementing Business Continuity for "Always-on" connectivity requires a fully integrated, rapidly deployable and cost-effective solution. The BEC WWAN Failover Manager is a high performance 4G/LTE fixed wireless platform purpose-built for high availability, mission-critical resilience and secure wireless connectivity. The WWAN Failover Manager features: Dual Gigabit Ethernet interfaces, automated failover and RS-232 serial console / terminal server for Out-of-Band Management (OOBM).

KEY FEATURES

- LTE-Advanced (LTE-A) Category 6
- Carrier Aggregation Support
- Global LTE Band Support
- 4G/LTE & Ethernet IP broadband connectivity
- Support seamless & reliable WAN failover
- Embedded GPS for real-time asset tracking
- Advanced event notification for failover and data usage
- Supports IP Pass-Through and Managed Failover
- Compact form factor, fits in the palm on your hand
- Flexible deployment, easily integrated into any network environment
- Remote managed and monitored via BECentral Cloud
- RS-232 serial console port for Out-of-Band (OOBM) Access and Management
- Optional Power over Ethernet (PoE) Powered
- Compatible with major edge routers



Model: MX-200A-e

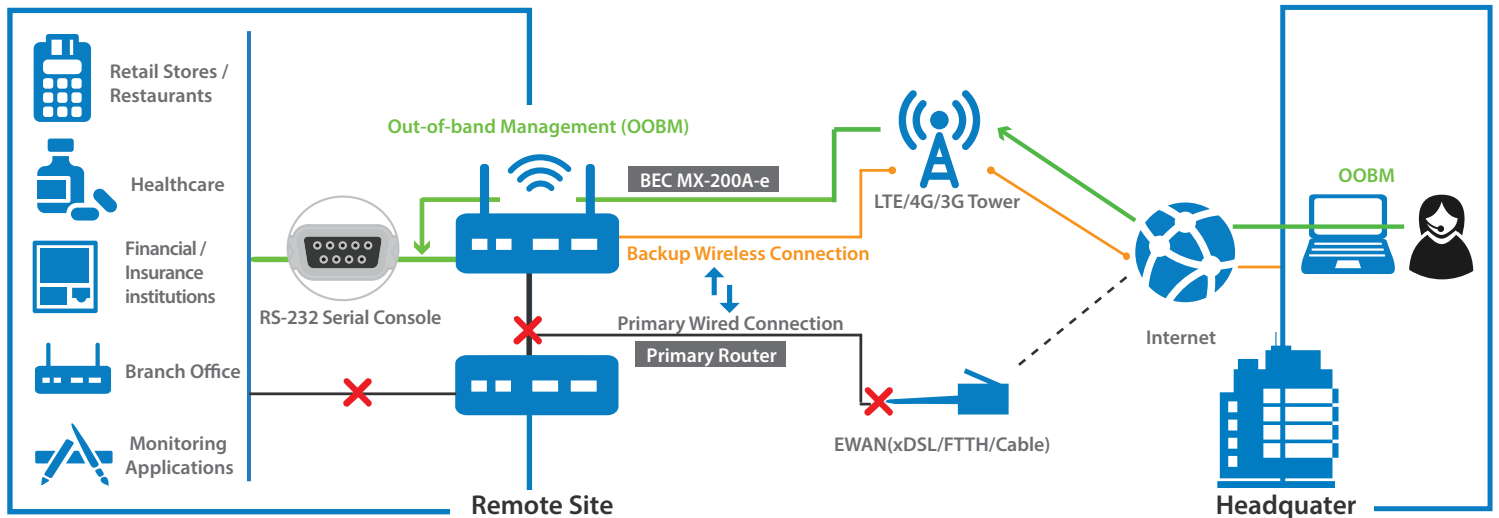


BENEFITS

- Intelligent Business Continuity
 - Actively monitor primary and backup connection for fully automated failover
 - Ensure "Always-on" connectivity, reduce operation downtime and revenue loss
- Designed for Rapid Deployment
 - Small footprint, easily mounted discretely anywhere
 - Can serve as primary connection in lieu of fixed line delays or for pop-up connectivity
- Industrial Grade Design
 - Extended Temperature Range/Flexible Input Voltage selection
- Carrier Grade Management
 - Cloud-Based device management to extend network visibility and control of devices remotely
 - Console port for secure cellular out of band access to your network equipment

• Certified on Major Carrier Networks:  AT&T  T-Mobile  Verizon

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

Carrier Aggregation Combinations

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

Carrier Aggregation Combinations (Cont.)

- LTE Band 3: 3 + 7/20
- 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

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)

Quality of Service Control

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

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
- Out-of-Band Management via serial console

Hardware Specifications

Physical Interface

- 3G/4G LTE: Two(2) SMA Female Connectors
- GPS: One (1) SMA Female Connector
- WAN: 3G/4G LTE (and/or ETH WAN Optional)
- RS-232 (DCE, DB-9): one (1) port
- Ethernet LAN: 2-port 10/100/1000Mbps auto-crossover (MDI/ MDI-X) switch
- SIM Card: One (1) slot
- Reset Button
- Power Connector: 4-pin connectors
- LED Indicators
 - Power
 - Internet
 - LTE
 - Ethernet

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: -4 to 140° F (-20 to 60° C)
- Humidity: 20 ~ 95% non-condensing

