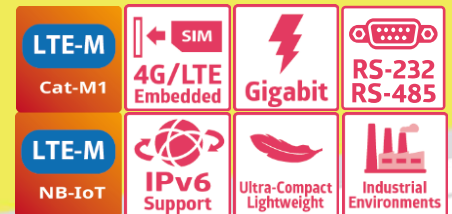




M150-NB

Advanced Industrial eMTC/ NB-IoT Router



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Overview

The M150-NB Advanced Industrial eMTC/ NB-IoT Router is a high performance fixed wireless platform enabling real-time cellular data connectivity for your existing serial devices and Ethernet network. The M150-NB provides a reliable and cost-effective alternative solution for business continuity. The platform can serve as the primary connection or backup connection when wired connections fail, are unavailable or non-existent.

High Availability and Network Resilience

The M150-NB features two Gigabit Ethernet interfaces and a RS-232/ RS-485 Serial interface enabling wireless data connectivity for a broad range of applications and vertical machine-to-machine (M2M) market segments. Intelligent software supports configurable LAN/WAN options, and enterprise level functionality such as: SPI firewall, Quality of Service (QoS), auto failover for unparalleled uptime and network redundancy.

Designed for Industrial Environments

M150-NB is designed for continuous operation in harsh environments, the M150-NB supports an extended operating temperature range from -20 to 60° C (-4 to 140° F) and a flexible input voltage range of 9-56V DC making it suitable for diverse environments and applications. To enable simple, reliable and efficient integration the ultra-compact, lightweight and low-profile design incorporates highly flexible mounting options to ensure that the device can be easily mounted discretely anywhere.

High performance & reliability and easy to manage and access

- Offers eMTC(Cat.M1)/NB-IoT(Cat.NB1) and/or Ethernet IP broadband connectivity (3G fallback is optional)
- Automatic failover for network resilience and reliable connectivity
- Option GPS for real-time asset tracking and location data-based application^{*3}
- Local and Remote management via Web GUI, SNMP or CWMP(TR-069)

Serial Port (DB-9 female)

- RS-232/ RS-485
- Supports Modbus/TCP, Telnet Server, SSH Server, UDP Server/ Client, TCP Server/ Client

Ultra-Compact and Lightweight Design

- Small form factor M2M with affordable price
- Fits in the palm on your hand
- Simplified deployments, easily mounted discretely anywhere

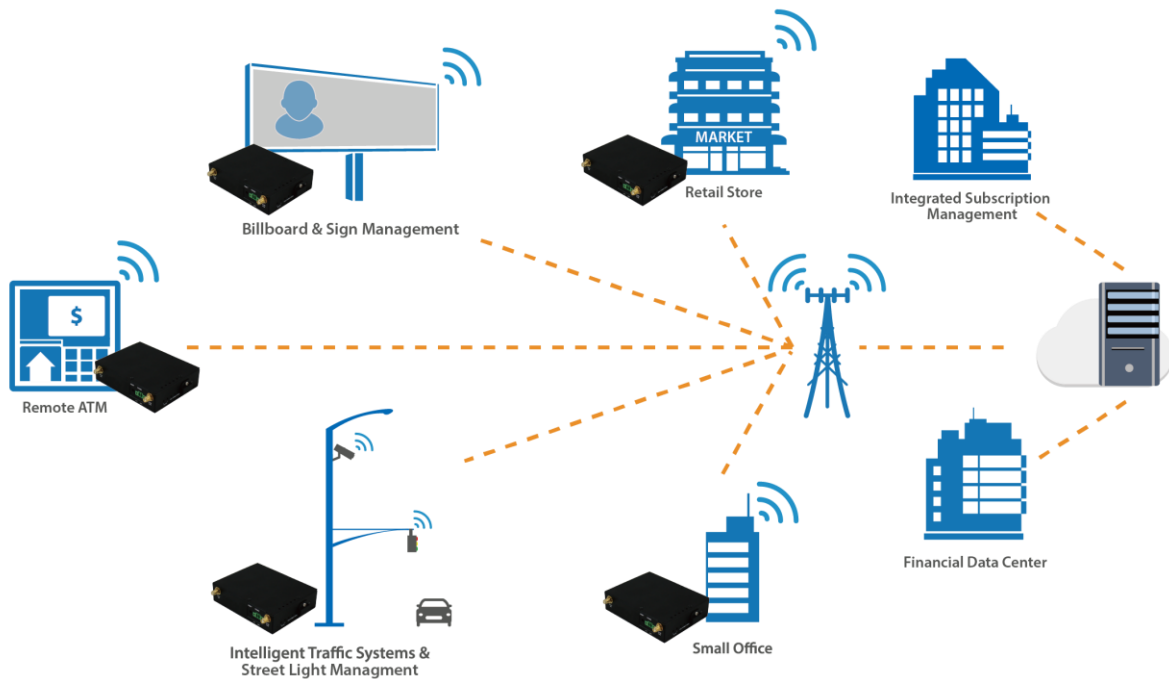
Designed for Industrial Environments

- Hardened enclosure with Industrial-graded components
- Extended Temperature Range
- Flexible Input Voltage selection

Ideal Solution for

- Digital signage, Remote surveillance, Vending Machines, Retail Point-of-Sales (PoS), Remote patient care/maintenance services, SCADA

Application Diagram



Features & Specifications

■ Availability and Resilience

- Dual-WAN Interfaces (eMTC/ NB-IoT, GbE WAN)

■ Embedded eMTC/ NB-IoT ^{*1}

- Supported frequency bands:
 - eMTC(Cat.M1)/ NB-IoT(Cat.NB1):
 - LTE FDD: B1/ B2/ B3/ B4/ B5/ B8/ B12/ B13/ B18/ B19/ B20/ B26/ B28
 - LTE TDD: B39 (For Cat.M1 Only)
 - EGPRS: 850/ 900/ 1800/ 1900 MHz
- Supported data rate:
 - Cat.M1: Max. 375Kbps/ 375 Kbps (DL/ UL)
 - Cat.NB1: Max. 32Kbps/ 70Kbps (DL/ UL)
 - GPRS: Max. 107Kbps/ 85.6Kbps (DL/ UL).

■ Network Protocols and Features

- Dual WAN Failover/ Failback
- Dual WAN Load Balancing
- IPv4, IPv6, IPv4/IPv6 dual stack^{*2}
- Dual APN^{*2}
- 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

■ Virtual Private Network (VPN)

- IPSec
- PPTP
- L2TP
- GRE
- OpenVPN

■ 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
- VPN Pass-through

■ Serial Port (RS-232 / RS-485)

- DB-9 female
- RS-232 / RS-485
- Modbus/TCP, Telnet Server, SSH Server, UDP Server/ Client, TCP Server/ Client

■ Global Navigation Satellite System(GNSS)^{*3}

- GPS (and/or GLONASS) system

■ Management

- Password protection for system management
- Web-based GUI for remote and local management
- Firmware upgrades and configuration data upload and download via Web-based GUI
- TR-069 (CWMP)^{*2}, SNMP
- Cellular data usage allowance
- Remote System Log monitoring
- Scheduling Auto-Reboot
- Physical layer/protocol diagnostic test tool

■ Hardware Specifications

Physical Interface

- WAN: eMTC/ NB-IoT (and/or ETH WAN option)
- Serial Port(DB-9 female): 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: 2-pin connector
- LED Indicators
- Antenna:
 - eMTC/ NB-IoT: one(1) detachable antennas
 - GPS: one(1) detachable antenna(option^{*3})

Power Specifications

- Input: DC 9V~56V

Physical Specifications

- Dimensions: 109.3 x 85.7 x 28.9 mm

Operating Requirements

- Operating: -20°C to 60°C
- Humidity: 20 ~ 95% non-condensing

Notes:

1. The Cat-M1/ NB-IoT is dependent on your local service provider.
2. Only upon request for Telco/ ISP tender projects.
3. The support for GPS and/or GLONASS functions depends on the equipped module's capabilities.
4. Specifications in this datasheet are subject to change without prior notice.