

Wireless 802.11ah LTE Outdoor Router

MOI4231

- The MOI4231 is designed with IEEE 802.3at PoE power input, allowing for simplified and flexible power installation. This feature reduces the need for additional wiring, making setup quick and cost-effective while ensuring consistent power delivery for uninterrupted operation.
- Equipped with 802.11ah Wi-Fi HaLow technology, the MOI4231 delivers long-range, low-power wireless connectivity. This makes it an ideal solution for IoT and industrial applications, expanding network reach across factories, agriculture, transportation, industrial sites, and other outdoor environments with dependable coverage, enabling seamless data transmission even in challenging conditions.
- MOI4231's durable design features an IP67-rated enclosure combined with surge and ESD protection, enabling the router to withstand extreme weather and electrical disturbances and ensuring reliable, year-round performance in the toughest outdoor industrial environments.
- The MOI4231 is equipped with advanced M.gear antennas that operate across multiple frequency bands, significantly enhancing 4G LTE signal reception and transmission. This multi-band capability ensures stronger, more reliable connectivity even in challenging environments, resulting in improved network performance and stable data communication for critical industrial applications.

Features

- IEEE 802.3at PoE power input supports simplified and flexible power installation.
- Supports 802.11ah Wi-Fi HaLow for long-range, low-power wireless connectivity ideal for IoT and industrial applications.
- The IP67-rated enclosure with surge and ESD protection withstands harsh conditions, ensuring reliable, year-round operation.
- Versatile wall and pole mounting options facilitate seamless integration into any outdoor space.
- Compatible with M.gear detachable N-type LTE/Wi-Fi/GNSS antennas for expanded coverage and greater reliability.
- Stable operation in extreme temperature range from -30°C to +70°C
- LED indicators display power and network connection status in real-time for easy monitoring.

Specifications

General

Cellular Interface

- 4G: LTE FDD

Band (Telit LE910C4-WWxD)

- LTE FDD : B1, B2, B3, B4, B5, B7, B8, B9, B12, B13, B14, B18, B19, B20, B25, B26, B28

Hardware Interface

- 1 x Gigabit Ethernet port with 802.3at PoE
- 1 x Micro SIM Card Slot
- 1 x Reset Button

Antenna

- 2 x N-Type connectors for detachable LTE Antenna
- 1x N-Type connector for detachable WiFi HaLow Antenna
- 1x N-Type connector for detachable GPS Antenna (option)

Physical Characteristics

Enclosure : Metal case

Dimensions (W x H x D) : 254.7 x 160 x 79.5 mm

Weight : 1550g

Installation : Wall mounting, Pole mounting

LED Display :

- PWR Status LED (Green/Red)
- Wi-Fi HaLow status LED (Blue/Yellow)
- 4G LTE status LED (Red/Cyan)

Power Supply

Power Input : IEEE 802.3at PoE PD

Software

Network Protocols

- IPv4, IPv6, IPv4/IPv6 dual stack, DHCP server and client
- Static IP, SNTP, DNS Proxy
- Static Routing and RIP v1/v2

VPN

OpenVPN, IPSec (DES, 3DES, AES128, AES196, AES256, MD5, SHA-1, SHA128, SHA192, SHA256), PPTP, L2TP, WireGuard

Firewall

- NAT, Virtual server, Port trigger, DMZ
- MAC and URL filter, Stateful packet inspection, DOS attack

Alarm: SMS, VPN/WAN disconnect, SNMP trap

Management: Web GUI with HTTPS/HTTP, Dual image, Syslog, SNMP, SSH v2

WiFi HaLow :

- Access Point/Station
- Security: WPA3

Environment

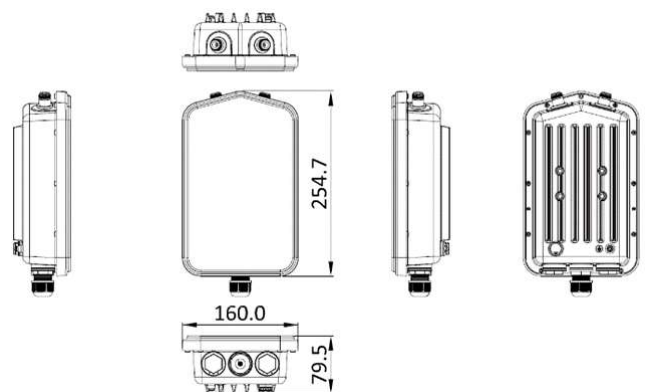
Operating Temperature: -30 ~ +70°C

Storage Temperature: -30 ~ +85°C

Ambient Relative Humidity: 10 ~ 95% (Non-condensing)

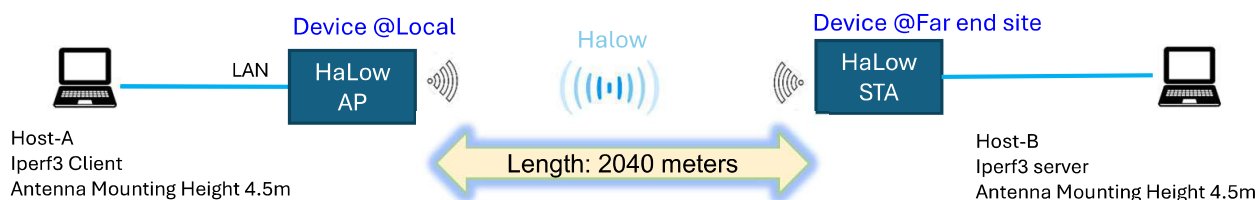
Humidity: 0 ~ 95% (Non-condensing)

Enclosure Drawing



OTA Range test

MOI4231 HaLow OTA Range Test @ 2.04km



Distance(m)	Bandwidth (MHz)	Model	Ch_No.	Link Rate(RX/TX) AP view	Signal (dBm) AP view	TCP (Mbps) AP TX	TCP (Mbps) AP RX	UDP (Mbps) AP TX	UDP (Mbps) AP RX
2040	8	MOI4231	12	19.5/13.0	-80	9.18	9.3	10.3	9.62