

MiDoMet LoRaWAN Edge Gateway



The **MiDoMet LoRaWAN Edge Gateway** is an industrial gateway, sturdy and reliable, with IP67 grade protection and based on RAK7249 hardware. This device is ideal for implementing a large and professional LoRaWAN IoT infrastructure. Complies with Class A and C.

It is a complete product, suitable for outdoor installation and is provided with all the accessory: GPS antenna, LTE antenna, WIFI antenna, PoE injector and mounting kit.

The hardware integrates WIFI, 4G, GPS e PoE and can be equipped with photovoltaic system and back-up battery in case of mains power failure.

The software is customized and configured for integration into the customer LoRaWAN network

Also, since the software and user interface are on OpenWRT, it's perfect for developing custom applications (via the open SDK).

MAIN FEATURES

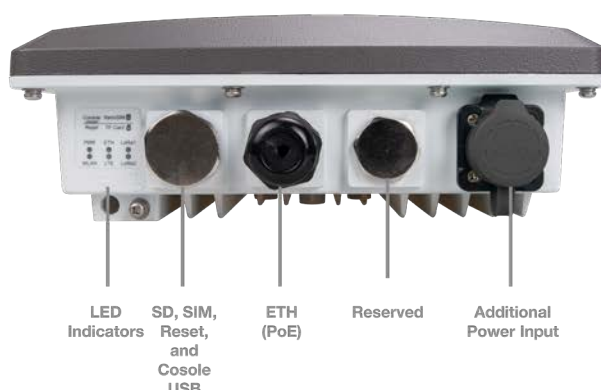
- Designed for outdoor use in harsh conditions
- Industrial grade IP67 / NEMA-6 enclosure with cable glands
- PoE + surge protection
- Double LoRa® concentrator for up to 16 channels
- Backhaul: Wi-Fi, LTE ed Ethernet
- GPS module integrated
- Internal Wi-Fi, GPS, LTE antenna, external LoRa antenna
- Working temperature: -30 ° C ~ + 55 ° C

HARDWARE

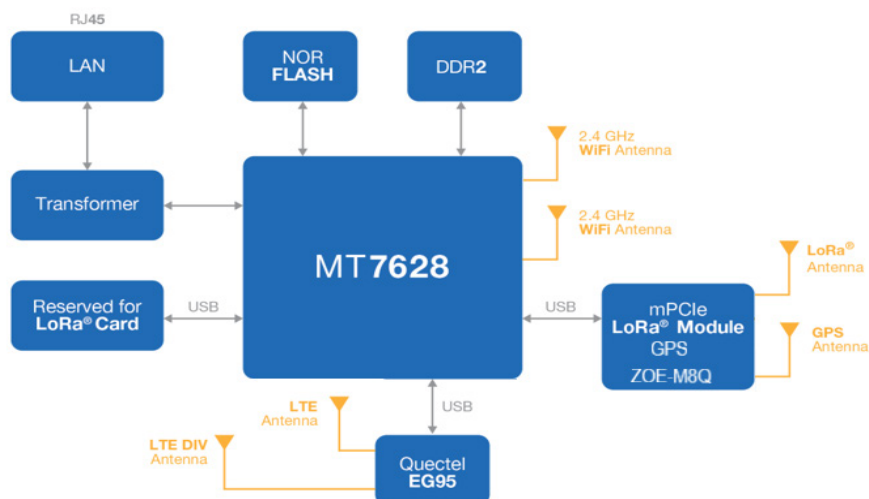
Top view



Bottom view



BLOCK DIAGRAM



MAIN BOARD

CPU:RAK634 Module(MT7628 inside), RAM:128MB DDR2, Flash:16MB, WIFI: 2x2 MIMO 802.11b/g/n
LoRa: Standard with 8 channel or Max.16 channel. Tx Power up to a 27dBm and Rx sensibility up to -139dBm.
4G Cellular: Quectel EG95 for CAT4 cellular network
L70 GPS Module
Power-over-Ethernet (PoE): 100M base-T Ethernet with IEEE802.3af/at standard PoE.

ANTENNA

WiFi, GPS, LoRa, LTE	PoE Injector	Kit di montaggio
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CASE

IP67 waterproof
Interfacce: 1 or 2 N-Type connectors, 1 PoE port e 1 additional reserved port.
Weight: approximately 2kg.
Dimensions: 220mm x 220mm x 104mm.
Mounting pole diameter 70~100 mm



SUPPORTED SOFTWARES

LoRa	NETWORK	MANAGEMENT
Supports class A,B&C	Wi-Fi AP mode	WEB UI
Supports LoRaWAN protocol	LTE APN setup	SSH2, NTP
TX power setup	Uplink backup	Firmware update
Data logger	Supports 802.1q	LoRa packet forwarder
Statistics	DHCP Server/Client	Built-In Network Server
Server address & port setup	Router module NAT	OpenVPN, Ping Watch Dog
	Firewall	MQTT Bridge

FEATURES

Computing	MT7628, DDR2RAM 128MB
WiFi	<ul style="list-style-type: none"> - Frequency: 2.400 - 2.4835GHz - (802.11b/g/n) - RX Sensitivity: -95dBm (Min) - TX Power: 20dBm (Max)
LoRa	<ul style="list-style-type: none"> - SX1303 mPCIe card - 8 Channels (Optional: 16 channels) - TX Power: 27dBm (Max) - RX Sensitivity: -139dBm (Min) - Listen Before Talk
Cellular Net	<ul style="list-style-type: none"> - EG95: LTE CAT 4 - Variant for Europe, LTE FDD: B1/B3/B7/B8/B20/B28A; WCDMA: B1/B8; GSM: 900/1800MHz - Variant for North America LTE FDD: B2/B4/B5/B12/B13; WCDMA: B2/B4/B5
Power	POE (IEEE 802.3af), 37~57VDC
Consumption	12W (typical)
ETH	RJ45 (10/100M)
Antenna	LoRa: 1 or 2 N-Type connectors LTE: Internal antenna Wi-Fi: Internal antenna
Protection	IP 67
Case material	Alluminio e plastica
Weight	3,15Kg con kit di montaggio
Working temperatureo	-30 to 55 °C
Mounting	Wall or pole (diameter 70~100 mm)

RF SPECIFICATION

Wireless Standard	IEEE 802.11b/g/n
WiFi Band	ISM band: 2.412~2.472(GHz)
Wi-Fi Channel	-2.4GHz: 1-13
Wi-Fi Trasmission Power	<ul style="list-style-type: none"> - 802.11b 19dBm@ 1Mbps - 802.11g 18dBm@ 6Mbps 16dBm@ 54Mbps - 802.11n(2.4G) 18dBm@MCS0 (HT20) 16dBm@MCS7 (HT20) 17dBm@MCS0 (HT40) 15dBm@MCS7 (HT40)
Wi-Fi Receiving Sensitivity	<ul style="list-style-type: none"> - 802.11b 95dBm@ 1Mbps - 802.11g 90dBm @6 Mbps 75dBm@54Mbps - 802.11n(2.4G) 89dBm@MCS0 (HT20) 72dBm @MCS7(HT20) 86dBm @MCS0(HT40) 68dBm @MCS7(HT40)
LoRa Frequency	EU868
LoRa TX Power	27 dBm (Max)
LoRa RX Sensibility	-139 dBm (Min)

MD.LRGATE.1

