



WLRI-GPS-M



LoRaWAN® Gateway

The WLRI-GPS-M is a robust 8-channel outdoor LoRaWAN® gateway. Adopting SX1302 LoRa chip and high-performance quad-core CPU, WLRI-GPS-M supports connection with more than 2000 nodes. WLRI-GPS-M has line of sight up to 15 km* and IP67 waterproof case, which is ideally suited to smart agriculture, smart metering and many other outdoor applications.

WLRI-GPS-M supports not only multiple back-haul backups with Ethernet, Wi-Fi and cellular, but also has integrated mainstream network servers (such as TTI, ChirpStack, etc.) and built-in network server and WatchNET IoT Cloud for easy deployment.

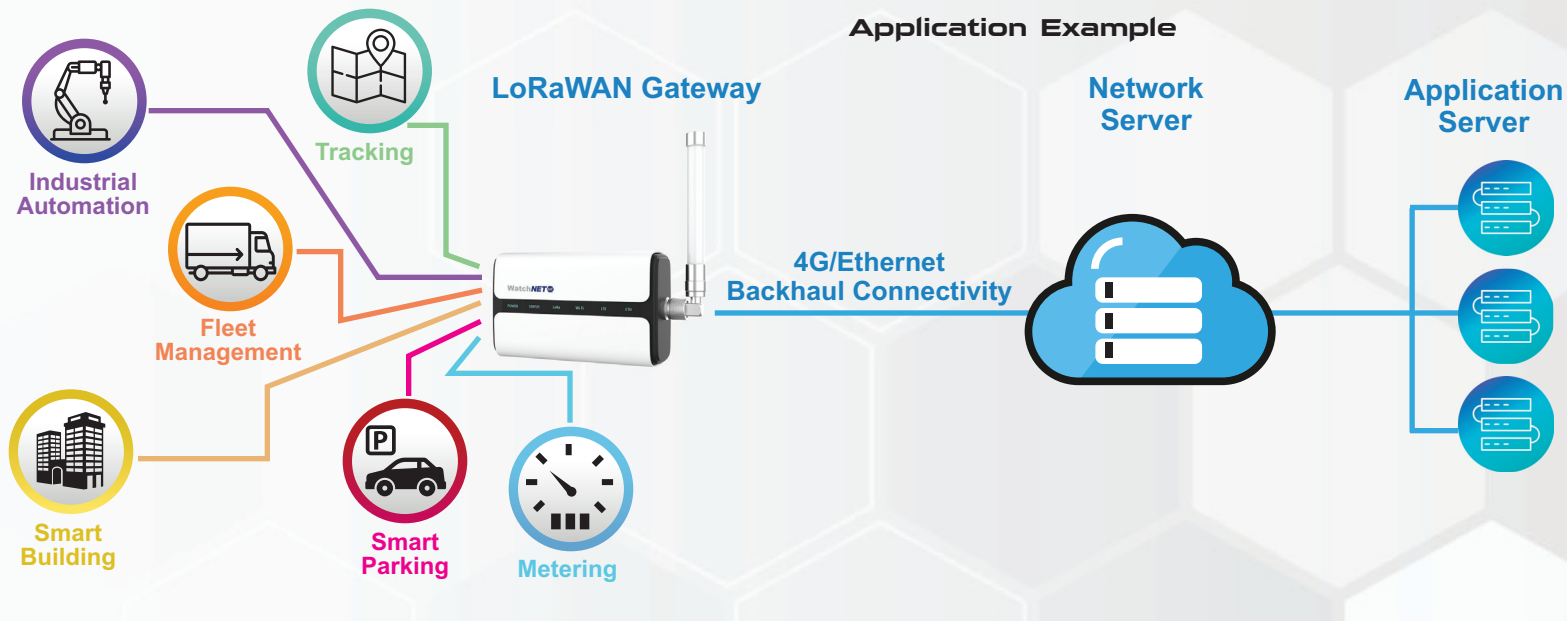
Features:

- Quad-core industrial processor with better memory
- Equip with SX1302 chip, handing a higher amount of traffic with lower consumption
- 8 half/full-duplex channels
- IP67 waterproof enclosure and industrial design for harsh environment applications
- Wall or pole mounting (optional)
- PoE or solar power supply (optional)
- Capacitor for sending alarms in case of power failure
- Multi backhaul backups with Ethernet, cellular (4G/3G) and Wi-Fi
- Devicehub and WatchNET IoT Cloud provide easy and centralized management of remote devices



- Enable security communication with multiple VPNs like IPsec/OpenVPN/L2TP/PPTP/DMVPN
- Compatible with mainstream network servers like The Things Industries, ChirpStack, etc.
- Detect and analyze the noise level and provide intuitive diagram for deployment
- Built-in network server and MQTT/HTTP/HTTPS API for easily integration
- Embedded Python SDK for users secondary development
- Fast and user-friendly programming by Node-RED development tool

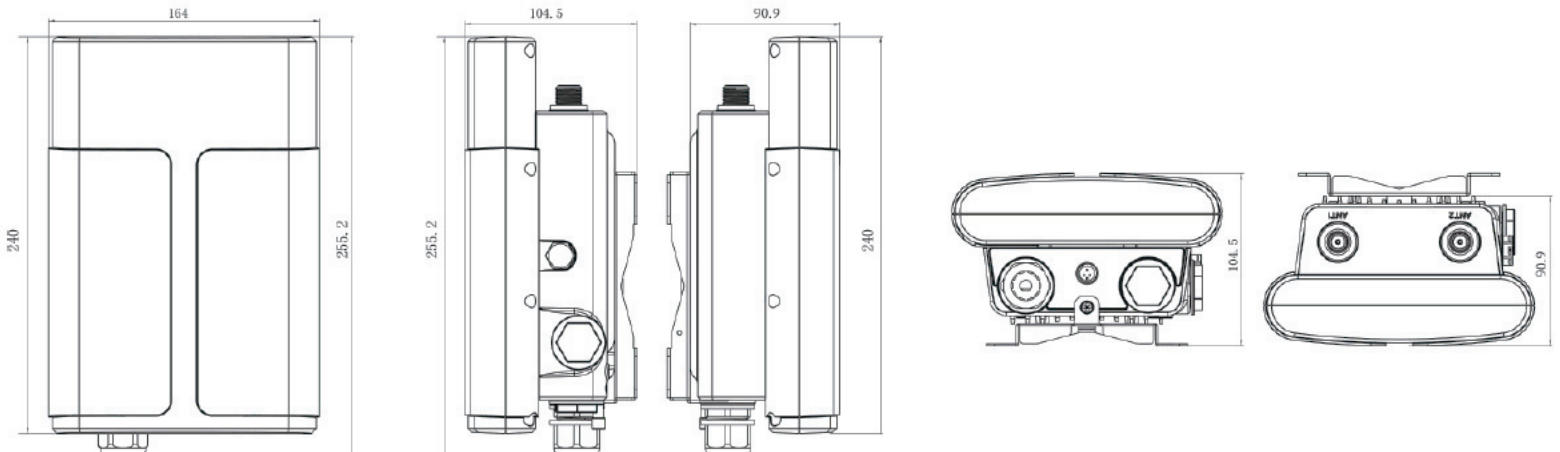
* Outdoor coverage is up to 2 KM line of sight but depending upon the environment & level obstruction



Hardware System	
CPU	Quad-core 1.5 GHz, 64-bit ARM Cortex-A53
Memory	512 MB DDR4 RAM
Flash	8 GB eMMC
LoRaWAN	
Antenna	2 × Internal Antennas + 2 × 50 Ω N-Female External Connectors
Channel	8 (Half/Full-duplex)
Frequency Band	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
Sensitivity	-140dBm Sensitivity @292bps
Output Power	27dBm Max
Protocol	V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C
Ethernet Interface	
Port	1 × RJ45 (PoE PD supported)
Physical Layer	10/100/1000 Base-T (IEEE 802.3)
Data Rate	10/100/1000 Mbps (Auto-Sensing)
Interface	Auto MDI/MDIX
Mode	Full or Half Duplex (Auto-Sensing)
Wi-Fi Interface	
Antenna	Internal Antenna
Standards	IEEE 802.11 b/g/n, 2.4GHz
Mode	AP or Client mode
Security	WPA/WPA2 authentication, WEP/TKIP/AES encryption
Tx Power	802.11b: 18 dBm +/-2.0 dBm (11 Mbps) 802.11g: 15 dBm +/-2.0 dBm (6 Mbps) 802.11g: 15 dBm +/-2.0 dBm (54 Mbps) 802.11n@2.4 GHz: 14 dBm +/-2.0 dBm (MCS0_HT20) 802.11n@2.4 GHz: 14 dBm +/-2.0 dBm (MCS7_HT20) 802.11n@2.4 GHz: 13 dBm +/-2.0 dBm (MCS0_HT40) 802.11n@2.4 GHz: 13 dBm +/-2.0 dBm (MCS7_HT40)
Cellular Interface (Optional)	
Antenna	Internal Antenna
SIM Slot	1 (mini SIM-2FF)
GPS	
Antenna	Internal Antenna
Sensitivity	-167dBm@Tracking, -149dBm@Acquisition, -161dBm@Re-acquisition
Position Accuracy	<2.5m CEP
Others	
Reset Button	1 × RST
Console Port	1 × Type-C
LED Indicators	1 × SYS, 1 × LoRa, 1 × LTE
Built-in	Watchdog, RTC, Timer

Software	
Network Protocols	PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, DDNS, HTTP, HTTPS, DNS, ARP, SNTP, Telnet, SSH, MQTT, etc.
VPN Tunnel	OpenVPN/IPsec/PPTP/L2TP/GRE/DMVPN
Firewall	ACL/DMZ/Port Mapping/MAC Binding/URL Filter
Management	Web, CLI, SMS, On-demand dial up, DeviceHub, WatchNET IoT Cloud, Yeastar Workplace Platform
Reliability	WAN Failover
App	Python SDK, Node-RED
Power Supply and Consumption	
Power Input	1. 1 × 802.3 af PoE input 2. 12 VDC with M12 Connector
Power Consumption	Typical 3.6 W, Max 4.8 W
Physical Characteristics	
Ingress Protection	IP67
Dimensions	240 x 164 x 90.9 mm (9.45 x 6.46 x 3.58 in)
Installation	Wall or Pole Mounting
Environmental	
Operating Temperature	-40°C to +70°C (-40°F to +158°F) Reduced Cellular Performance Above 60°C
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Ethernet Isolation	1.5 kV RMS
Relative Humidity	0% to 95% (non-condensing) at 25°C/77°F
Approvals	
Regulatory	CE, FCC
Environmental	RoHS

Dimensions (mm)



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