![PUSR logo](www.pusr.com)

# Ourdoor LoRaWAN Gateway

## USR-LG280

## Introduction

USR-LG280 is a robust 8-channel outdoor LoRaWAN® gateway. Adopting SX1302 LoRa chip and high-performance quad-core CPU, LG280 supports connection with more than 2000 nodes. LG280 has line of sight up to 15 km and can cover about 2km in urbanized environment, which is ideally suited to smart office, smart building and many other outdoor applications.

LG280 supports not only multiple back-haul backups with Ethernet, Wi-Fi and cellular, but also has integrated mainstream network servers (such as The Things Industries, ChirpStack, etc.) and built-in network server for easy deployment.

## Product Features

**Benefits**

- Built-in industrial CPU and big memory
- Ethernet, 2.4GHz Wi-Fi and global 2G/3G/LTE options make it easy to get connected
- Embedded network server and compliant with several third party network servers
- MQTT(s) or HTTP(s) protocol for data transmission to application server
-  Rugged enclosure, optimized for wall or pole mounting

**Security & Reliability**

- Automated failover/failback between Ethernet and Cellular
- Enable unit with security frameworks like IPsec/OpenVPN/GRE/L2TP/PPTP/ DMVPN
- Embedded hardware watchdog to automatically recover from various failure and ensure highest level of availability
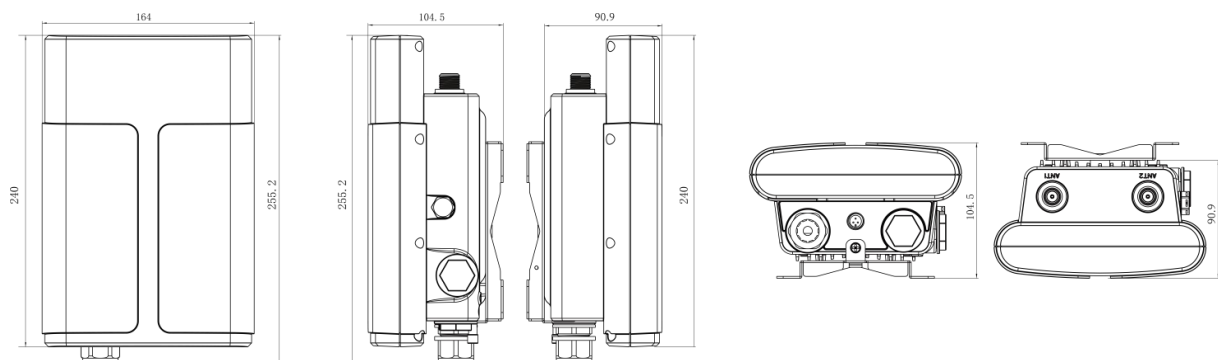
**Easy Maintenance**

- Milesight DeviceHub provides easy setup, mass configuration, and centralized management of remote devices
- The user-friendly web interface design and various upgrading options help administrator to manage the device as easy as pie
- WEB GUI and CLI enable the admin to achieve quick configuration and simple management among a large quantity of devices
- Users can efficiently manage the remote devices on the existing platform through the industrial standard SNMP

**Capabilities**

- Link remote devices in an environment where communication technologies are constantly changing
- Industrial quad core 64-bit ARM Cortex-A53 processor, high-performance operating up to 1.5GHz with low power consumption, and 8GB eMMC available to support more applications
- Support wide operating temperature ranging from -40°C to 70°C

## Dimensions

Unit: mm

# Specifications

| Items | Description | |
|---|---|---|
| Processor | Quad-core 1.5GHz, 64-bit ARM Cortex-A53 | |
| Power Supply | 1 × 802.3 af PoE Input,<br>12 VDC with M12 Connector | |
| Working Current | Typical 3.6W, Max 4.8W | |
| **LoRaWAN** | | |
| Radio Chip | SX1302 | |
| Frequency | **AU915:** (902-928MHZ)<br>FDD:B1/B2/B3/B4/B5/B7/B8/B28<br>TDD:B40<br>WCDMA:B1/B2/B4/B5/B8<br>GSM/EDGE:B2/B3/B5/B8 | **EU868:** (868-873MHz)<br>FDD: B1/B3/B7/B8/B20/B28A<br>TDD: B38/B40/B41<br>WCDMA:B1/B8<br>GSM/EDGE:B3/B8 |
| Tx Power | 27dBm Max | |
| Rx Sensitivity | -140dBm @292bps | |
| Protocol | V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C | |
| Antenna | 2 × 50 Ω N-Female External Connectors, fiber antenna | |
| **Ethernet** | | |
| Ports | 1*10/100/1000Mbps RJ45(PoE PD supported),<br>auto MDI/MDIX, full or half duplex (auto-sensing) | |
| **WiFi** | | |
| Standard | IEEE 802.11 b/g/n, 2.4 GHz | |
| Antenna | Fully Integrated and Internal Antenna | |
| Tx Power | 802.11b: 18 dBm +/-2.0 dBm (11 Mbps)<br>802.11g: 15 dBm +/-2.0 dBm (6 Mbps)<br>802.11g: 15 dBm +/-2.0 dBm (54 Mbps)<br>802.11n@2.4 GHz: 14 dBm +/-2.0 dBm (MCS0_HT20)<br>802.11n@2.4 GHz: 14 dBm +/-2.0 dBm (MCS7_HT20)<br>802.11n@2.4 GHz: 13 dBm +/-2.0 dBm (MCS0_HT40)<br>802.11n@2.4 GHz: 13 dBm +/-2.0 dBm (MCS7_HT40) | |
| **Cellular** | | |
| 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 |
| **Physical Property** | |
| Casing material | PC+Aluminium ADC12, IP67 protection |
| Dimensions | 240 x 164 x 90.9 mm |
| Weight | 1671.7g |
| Installation | Wall or Pole Mounting |
| Operating temperature | -40°C to +70°C |
| Storage temperature | -40°C to +85°C |
| Operating humidity | 0% to 95% (non-condensing) |
| **Software Function** | |
| Network Protocols | PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, DDNS, HTTP, HTTPS, DNS, SNTP, Telnet, SSH, MQTT, MQTTS, BACnet/IP, etc. |
| VPN Tunnel | DMVPN/IPsec/OpenVPN/PPTP/L2TP/GRE |
| Firewall | ACL/DMZ/Port Mapping/MAC Binding |
| Management | Web, CLI, SMS, On-demand dial up, DeviceHub |
| **APPROVALS** | |
| Regulatory | RCM |

## Purchase & Support

■ **For more information, please visit our websites:**

• Official website: **https://pusr.com**

• Official shop: **https://shop.usriot.com**

• Technical support: **http://h.usriot.com/**

# Your Trustworthy Smart IOT Partner