

UG56

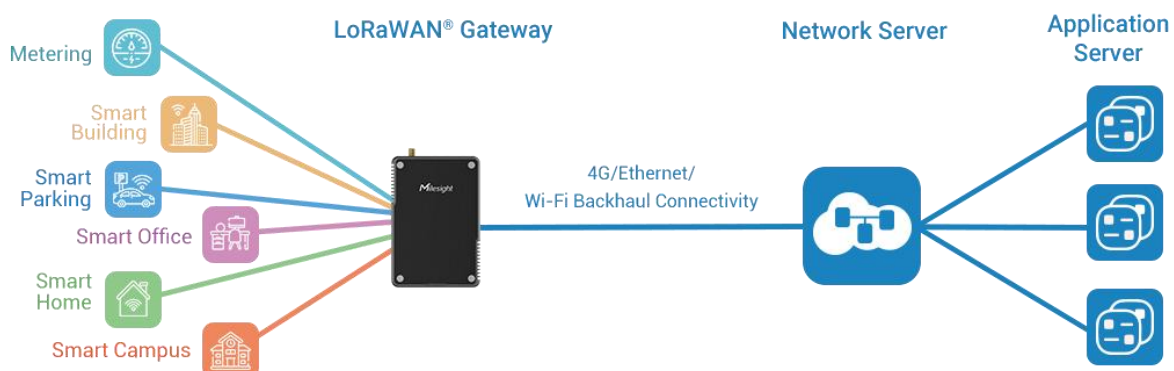
LoRaWAN[®] Gateway



UG56 is a robust 8-channel indoor LoRaWAN[®] gateway. Adopting SX1302 chip and high-performance quad-core CPU, UG56 supports connection with more than 2000 nodes. UG56 has line of sight up to 15 km and can cover about 2 km in urbanized environment, which is ideally suited to smart building, smart industries and many other indoor applications.

UG56 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 Milesight IoT Cloud for easy deployment.

◆ Application Example



◆ Features

- Quad-core industrial processor with big memory
- Equip with SX1302 chip, handling a higher amount of traffic with lower consumption
- 8 half-duplex channels
- Rugged metal enclosure for industrial applications
- Desktop or wall mounting
- Multi backhaul connectivity backups with Ethernet, cellular (4G/3G) and Wi-Fi
- DeviceHub and Milesight 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 TTN, ChirpStack, Actility, 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
- Support BACnet/IP to integrate LoRaWAN data to BMS system easily
- Embedded Python SDK for users secondary development
- Fast and user-friendly programming by Node-RED development tool

◆ Specifications

Hardware System

| | |
|--------------------|--|
| CPU | Quad-core 1.3 GHz, 64-bit ARM Cortex-A35 |
| Memory | 512 MB DDR3 RAM |
| Flash | 8 GB eMMC |
| Extendable Storage | 1 × Micro SD Slot (Internal) |

LoRaWAN

| | |
|-------------------|---|
| Antenna Connector | 1 × 50 Ω SMA Connector (Center PIN: SMA Female) |
| Channel | 8 (Half-duplex) |
| Frequency Band | CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4 |
| Sensitivity | -140 dBm Sensitivity @292bps |
| Output Power | 27 dBm Max |
| Protocol | V1.0 Class A/Class B/Class C and V1.0.2 Class A/Class B/Class C |
| LBT | Support |

Ethernet Interface

| | |
|----------------|-----------------------------|
| Port | 1 × RJ45 (PoE PD supported) |
| Physical Layer | 10/100 Base-T (IEEE 802.3) |

| | |
|-----------|------------------------------------|
| Data Rate | 10/100 Mbps (Auto-Sensing) |
| Interface | Auto MDI/MDIX |
| Mode | Full or Half Duplex (Auto-Sensing) |

Wi-Fi Interface

| | |
|-----------|--|
| Antenna | Internal Antenna |
| Standards | IEEE 802.11b/g/n, 2.4 GHz |
| 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 Connector | 1 × 50 Ω SMA Connector (Center PIN: SMA Female) |
| SIM Slot | 1 (Mini SIM-2FF) |

Others

| | |
|----------------|----------------------|
| Reset Button | 1 × RST (Internal) |
| Console Port | 1 × Type-C |
| LED Indicators | 1 × SYSTEM, 1 × LoRa |
| Built-in | Watchdog, Timer |

Software

| | |
|-------------------|--|
| Network Protocols | PPPoE, SNMP v1/v2c/v3, TCP, UDP, DHCP, DDNS, HTTP, HTTPS, DNS, ARP, SNTP, Telnet, SSH, MQTT, BACnet/IP, 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, Milesight IoT Cloud |
| Reliability | WAN Failover |
| App | Python SDK, Node-RED |

Power Supply and Consumption

| | |
|-------------------|---------------------------|
| Power Input | 1. 1 × 802.3 af PoE Input |
| | 2. 5V, 2A by Type-C Port |
| Power Consumption | Typical 1.8 W, Max 6.9 W |

Physical Characteristics

| | |
|--------------------|--|
| Ingress Protection | IP30 |
| Housing & Color | Metal, Black |
| Dimensions | 110 x 75 x 24 mm (4.33 x 2.95 x 0.94 in) |
| Installation | Desktop, Wall Mounting |

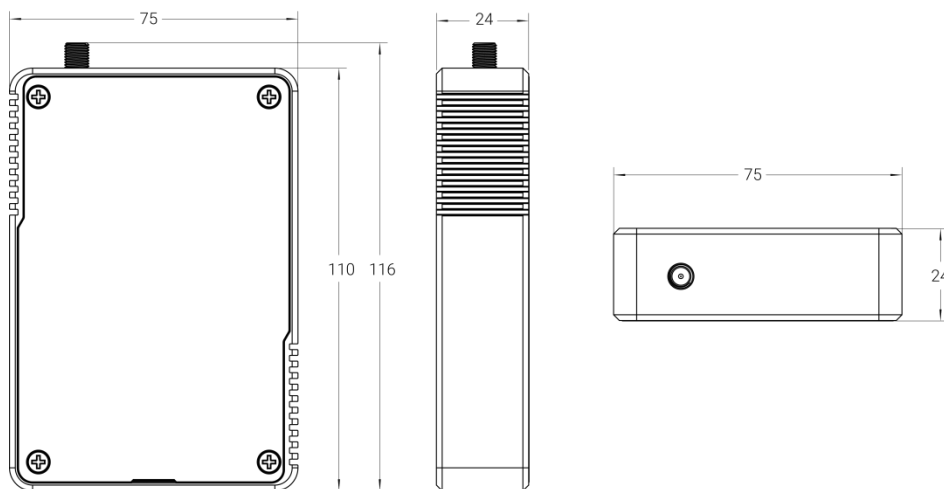
Environmental

| | |
|-----------------------|---|
| Operating Temperature | -20°C to +60°C (-4°F to +140°F) |
| 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 |

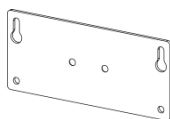
◆ Dimensions(mm)



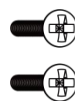
◆ Accessories



1 x LoRaWAN®
Magnetic Antenna



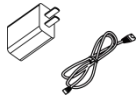
1 x Wall Mounting
Bracket



2 x Bracket Fixing
Screws



4 x Wall Mounting
Kits



1 × Type-C Cable &
Power Adapter
(Optional)



1 × Magnetic Cellular
Antenna
(Cellular Version Only)

***Note:** Contact us if you need any other special accessories or customized accessories.

