# UG56

LoRaWAN® Gateway

Milesight

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
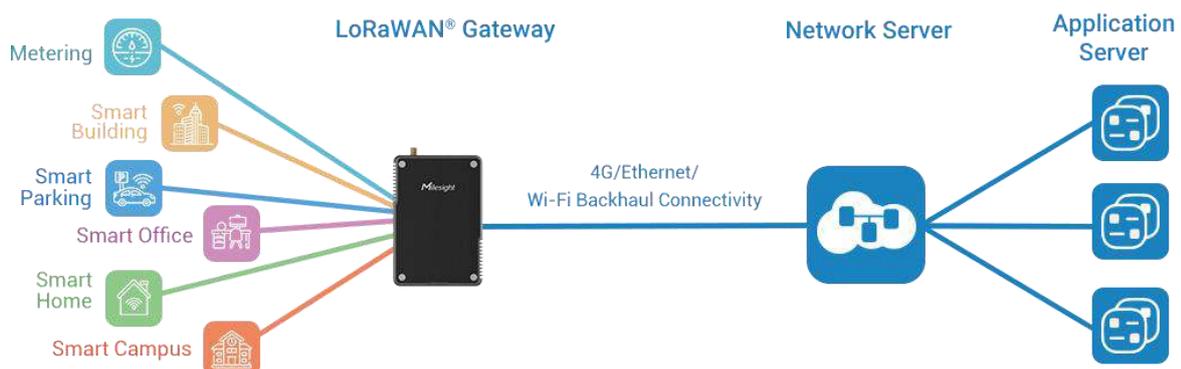
◆ Features

- 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 The Things Industries, 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
- 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	Internal Antenna
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, 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

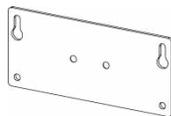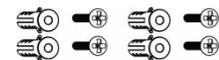| Ingress Protection	IP30
Housing & Color	Metal, Black
Dimensions	110 x 75 x 24 mm (4.33 x 2.95 x 0.94 in)
Installation	Desktop, Wall Mounting
Environmental	
Operating Temperature	-20°C to +60°C (-4℉ to +140℉)
Storage Temperature	-40°C to +85°C (-40℉ to +185℉)
Ethernet Isolation	1.5 kV RMS
Relative Humidity	0% to 95% (non-condensing) at 25°C/77℉

◆ Dimensions(mm)
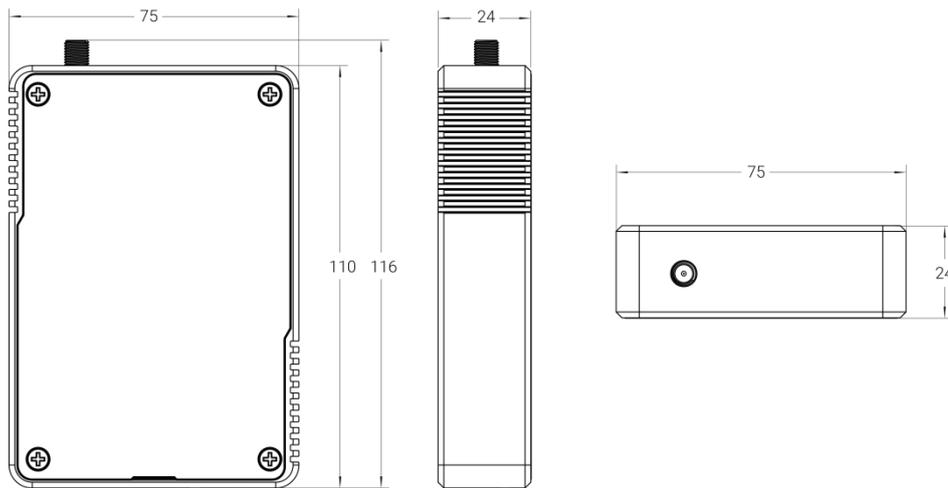
◆ Accessories

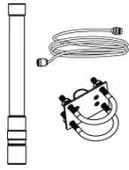| 1 × LoRaWAN® Magnetic Antenna | 1 × Wall Mounting Bracket | 2 × Bracket Fixing Screws | 4 × Wall Mounting Kits |

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

1 × 60cm LoRaWAN®
Fiber-Glass Antenna Kit
(Optional)

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