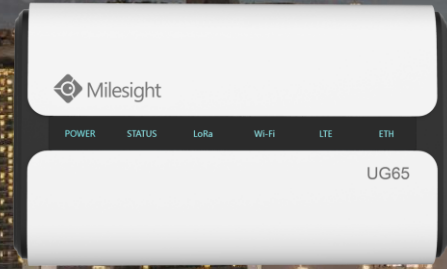


UG65



LoRaWAN® Gateway Designed for Indoor Application

UG65 is a robust 8-channel indoor LoRaWAN® gateway.

UG65 is adopting SX1302 LoRa chip and high-performance quad-core CPU.

UG65 supports connection of 2000 nodes.

UG65 has line of sight up to 15 km and can cover about 2 km in urbanized environment, which makes it ideal for smart office, smart building and range of other indoor applications.

UG65 supports:

- **Multiple back-haul backups with Ethernet, Wi-Fi and cellular, and integrated mainstream network servers (such as TTI, ChirpStack, etc.)**
- **Built-in network server and MQTT/HTTP/HTTPS API for easily integration.**
- **Embedded Python SDK for customer specific development.**
- **User-friendly programming by Node-RED development tool.**

UG65

LoRaWAN® Gateway Designed for Indoor Application

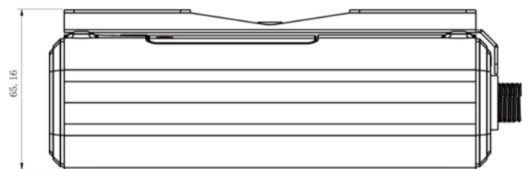
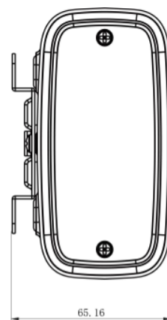
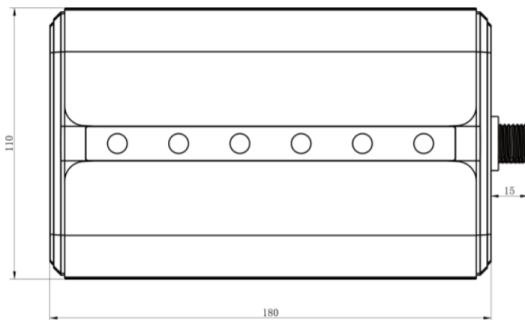


System

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 (Optional: 1 × 50 Ω N-Female external connector)
Channels	8 Half/Full-duplex
Frequency bands	CN470/IN865/EU868/RU864/US915/ AU915/KR920/AS923/AS923-2
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



UG65

LoRaWAN® Gateway Designed for Indoor Application



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)

UG65

LoRaWAN® Gateway Designed for Indoor Application



Cellular Interface (Optional)

Antenna	Internal antenna
SIM slot	1 mini SIM-2FF

Others

Reset button	1 × RST
Console port	1 × Type-C
LED indicators	1 × POWER, 1 × STATUS, 1 × LoRa, 1 × Wi-Fi, 1 × LTE, 1 × ETH
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
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
Reliability	WAN Failover
Applications	Python SDK, Node-RED

UG65



LoRaWAN® Gateway Designed for Indoor Application

Power

Power input

1. DC Jack Connector for 9-24 VDC power supply
2. 1 × 802.3 af PoE input

Power consumption

Typical 2.9 W, Max 4.2 W

Physical Characteristics

Ingress protection

IP65

Dimensions

180 x 110 x 56.5 mm (7.09 x 4.33 x 2.22 in)

Installation

Desktop, 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