UG67

LoRaWAN® Hotspot

Compatible with Helium Network

Datasheet

Milesight

UG67 is a robust 8-channel outdoor LoRaWAN® hotspot, which is compatible with Helium LongFi technology. Adopting SX1302 LoRa chip, high-performance quad-core CPU and secure crypto chip, UG67 provides high-efficiency and reliable connection. UG67 has line of sight up to 15 km and can cover about 2 km in urbanized environment, which can cover larger areas and provide connectivity to more than 2000 nodes.

Besides helium miner feature, UG67 can also work as a normal gateway with mainstream network servers support (such as TTI, ChirpStack, etc.) and built-in network server and Milesight IoT Cloud for easy deployment.

◆ Application Example

Ethernet/Wi-Fi/4G
Backhaul Connectivity

helium

| LoRa Devices | LoRaWAN® Hotspot | Helium Network | Application Server |
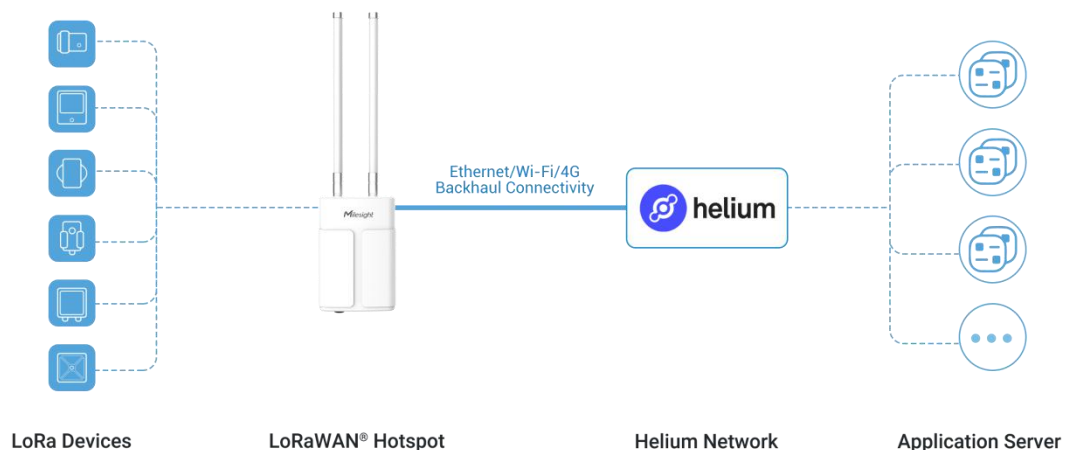
◆ Features

- Quad-core NXP industrial processor for high capability applications
- Built-in 2 GB DDR4 RAM and 32 GB eMMC flash for large storage
- Equip with SX1302 chip and support 8 half/full-duplex channels, handing a higher amount of traffic with lower power consumption
- Built-in ECC608 crypto chip for high security authentication and reliable Helium network connectivity
- High gain antenna for best network coverage
- 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
- Set up Helium network with easy steps
- 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
- Detect and analyze the noise level and provide an intuitive diagram for deployment
- Embedded Python SDK for user secondary development
- Fast and user-friendly programming by Node-RED development tool

◆ Dimensions (mm)
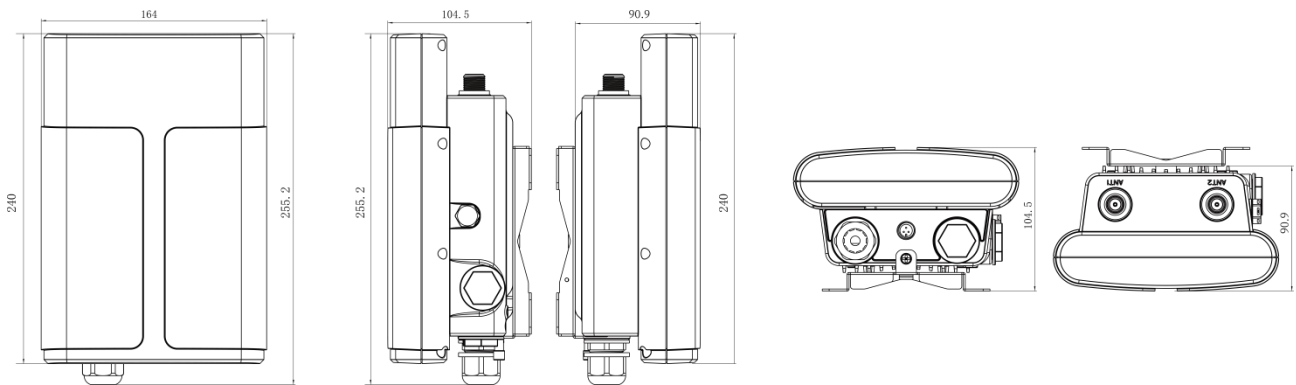
◆ Specifications

Hardware System	
CPU	Quad-core 1.5 GHz, 64-bit ARM Cortex-A53
Memory	2 GB DDR4 RAM
Flash	32 GB eMMC
Encryption Chip	ECC608B

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/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

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, Milesight IoT Cloud
Reliability	WAN Failover
App	Python SDK, Node-RED

Power Supply

Power Input	1. 1 × 802.3 af PoE input 2. 12 VDC with M12 Connector

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℉ to +158℉) Reduced Cellular Performance Above 60°C
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℉