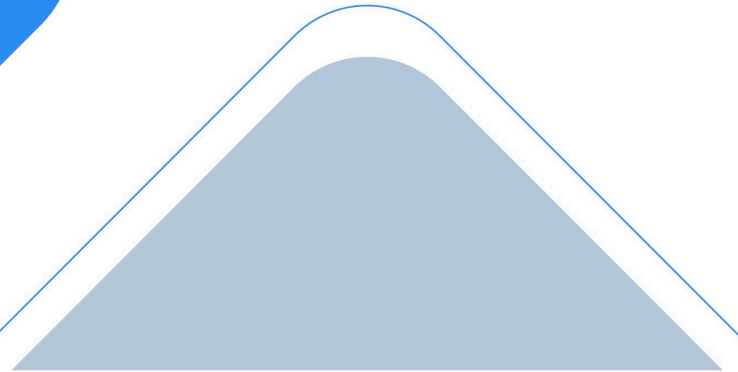


MS-7UG67

LoRaWAN[®] Hotspot

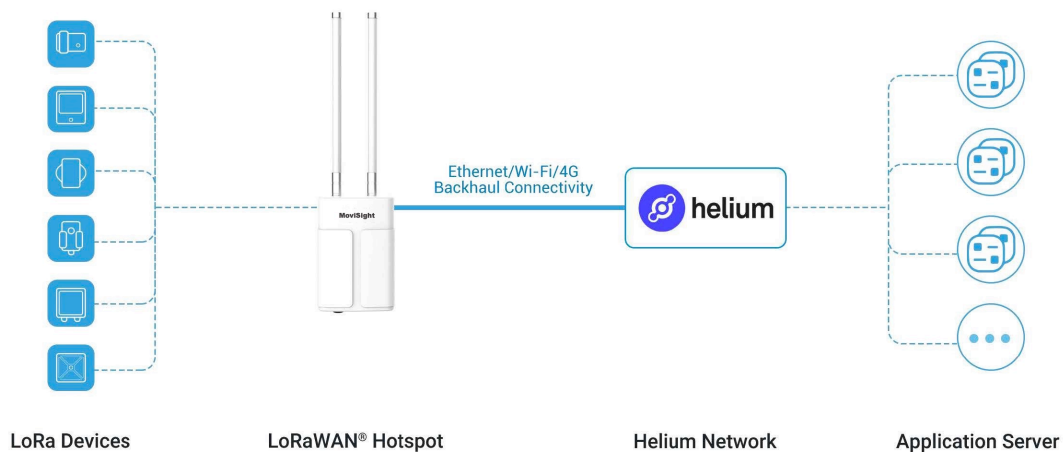
Compatible with Helium Network



MS-7UG67 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, MS-7UG67 provides high-efficiency and reliable connection. MS-7UG67 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, MS-7UG67 can also work as a normal gateway with mainstream network servers support (such as TTI, ChirpStack, etc.) and built-in network server and MoviSight IoT Cloud for easy deployment.

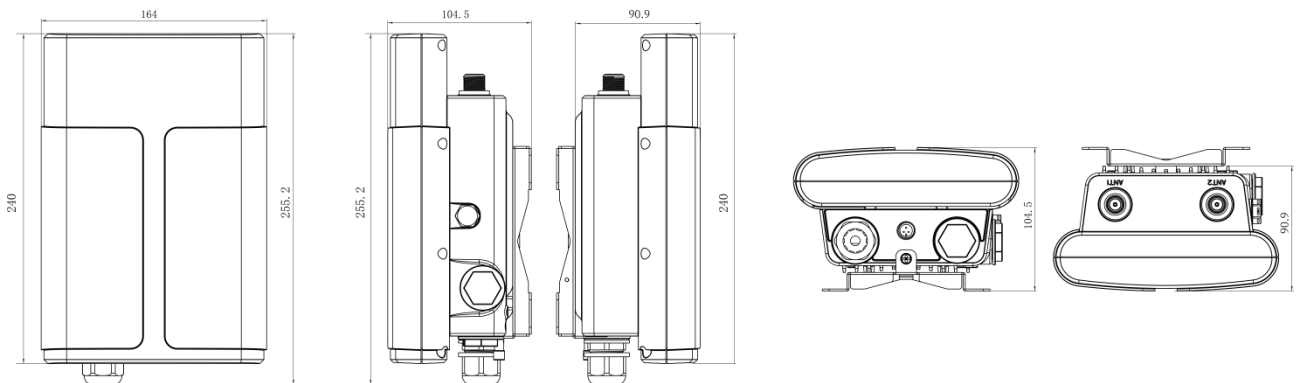
◆ Application Example



◆ 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, handling 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 MoviSight 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, MoviSight IoT Cloud |
| Reliability | WAN Failover |
| App | Python SDK, Node-RED |
| Power Supply | |
| Power Input | <ol style="list-style-type: none"> 1 × 802.3 af PoE input 12 VDC with M12 Connector |
| Physical Characteristics | |
| Ingress Protection | IP67 |
| Dimensions | 250 x 172 x 92 mm (9.84 x 6.77 x 3.62 in) |
| Installation | Wall or Pole Mounting |
| Environmental | |
| Operating Temperature | -40°C to +70°C (-40°F to +158°F) |
| Temperature | 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 |