SenseCAP Gateway - LoRaWAN

**Introduction**

SenseCAP LoRaWAN Gateway(*) is based on LoRaWAN**(**) protocol, applicable for low-power, long-distance environmental data collection and monitoring in scenarios such as smart agriculture and smart city, etc. As the central device of the LoRa network, the gateway is used for collecting data from different Sensor Nodes and transmit the data to the SenseCAP Portal via 4G or Ethernet cable. Equipped with a high-performance processor and telecom-operator-level LoRa chip, this gateway ensures stable and high performance in a large-scale network. The gateway is designed with an IP66-protection-level enclosure, making it suitable for industrial applications in severe outdoor environments.

**Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>LoRa-G-868-E/4G</td>
<td>European, Africa, Asia (India etc.)</td>
</tr>
<tr>
<td>LoRa-G-923-E/4G</td>
<td>Japan, Malaysia, Singapore, Brunei, Cambodia, Hong Kong, Indonesia, Laos, Taiwan, Thailand, Vietnam, Peru etc.</td>
</tr>
<tr>
<td>LoRa-G-915-E/4G</td>
<td>USA, Canada and South America</td>
</tr>
<tr>
<td>LoRa-G-AU915-E/4G</td>
<td>Australia, etc.</td>
</tr>
</tbody>
</table>

**LoRa Parameters**

- Protocol: Based on LoRaWAN v1.0.2 protocol
- Channel Plan: EU868/US915/AU915/AS923
- Power Output: 25dBm
- Sensitivity: -139dBm (SF12BW125)

**General Parameters**

<table>
<thead>
<tr>
<th>CPU</th>
<th>TI AM3358 Cortex-A8 1GHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Linux Debian</td>
</tr>
<tr>
<td>RAM</td>
<td>DDR3 512MB</td>
</tr>
<tr>
<td>Memory</td>
<td>8GB eMMC</td>
</tr>
<tr>
<td>Ethernet</td>
<td>100Mbps FE (RJ-45)</td>
</tr>
</tbody>
</table>

**4G Band**

- LTE-TDD: B3/B5/B7/B8/B20/B28
- GSM: 850/900/1800/1900MHz

**4G Features**

- Support non-CA Cat 4 FDD and TDD
- LTE-FDD: Max 150Mbps (DL), Max 50Mbps (UL)
- LTE-TDD: Max 130Mbps (DL), Max 30Mbps (UL)

**UMTS Features**

- DC-HSDPA: Max 42Mbps (DL), HSUPA: Max 5.76Mbps (UL), WCDMA: Max 384Kbps (DL), Max 384Kbps (UL)

**4G Antenna**

- 0-4 dBi gain / Linear polarization / Omnidirectional / SMA-J connector

**LED Indicator**

- Indicating network condition (online/offline)

**Grounding**

- Reserved 1 screw hole for GND

**Power Consumption**

- 3.6W

**Power Supply**

- DC 12V/2A

**IP Rating**

- IP66

**UV Resistance**

- Anti-aging (from rain/sun exposure): UL746C F1

**Enclosure Material**

- PC

**Operating Temperature**

- -40 °C to +70 °C

**Operating Humidity**

- 0 to 100 %RH (non-condensing)

**Installation Method**

- Wall or pole mounting

**Device Weight**

- 777g

**Device Dimension**

- 256mm * 160mm * 81mm
1. Ethernet Port
2. Power Connector
3. LED
4. Reserved
5. 4G Antenna Connector
6. Reserved
7. LoRa Antenna Connector

** The LoRaWAN™ name and the associated logo are licensed by the LoRa Alliance.

* SenseCAP LoRaWAN Gateway can access SenseCAP Server, The Thing Network Server and The ChirpStack open-source LoRaWAN Network Server. However, it can only be used with SenseCAP Sensor.