

# SG50

## Ultra Low Power Solar LoRaWAN® Gateway

*Milesight*



SG50 is an energy-efficient solar LoRaWAN® gateway designed for outdoor environments with limited power availability and ample solar energy resources. With built-in batteries and accessorial solar panel, SG50 can work independently in various scenarios especially the place with hard access to power resource.

Besides the high adaptability, SG50 is highly compatible with mainstream network servers and support remote management via remote network servers which provides both convenience and secured management.

Benefiting from its robust structural design and high IP67 protection rate, SG50 can work smoothly in harsh environments. It is specifically tailored for applications such as oil and gas, mining, forestry, and remote industries where power consumption must be carefully managed.

### ◆ Features

- Fast deployment with the all-in-one design and standard accessories
- Built-in rechargeable batteries & accessorial solar panel for wireless usage
- Support cellular for backhaul network enabling independent networking
- Equip with high-efficient power management design prolonging its battery life up to 4 days
- Compatible with remote management system for simple deployment even in remote regions
- IP67 enclosure and robust structural design promote its strength and working lifespan
- Equip with SX1302 chip, handling a higher amount of traffic with lower consumption

- Support 8 channels for more than 2000 end-nodes connections
- Equip with GPS for simple remote management and deployment

## ◆ Specifications

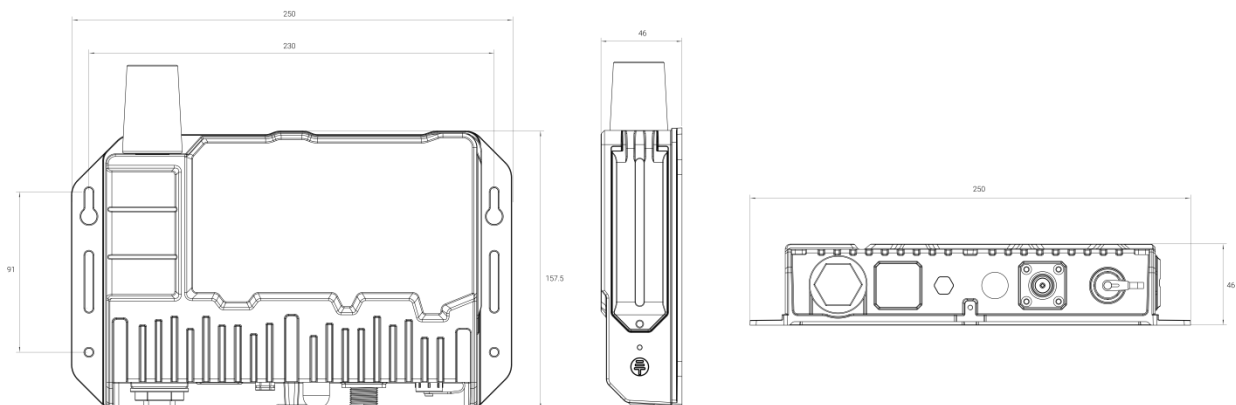
| Hardware System    |                                                                                                                                                                                                                     |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU                | Dual-core 240MHz, 32-bit Xtensa® LX7                                                                                                                                                                                |
| Memory             | 8 MB PSRAM                                                                                                                                                                                                          |
| Flash              | 16 MB                                                                                                                                                                                                               |
| LoRaWAN®           |                                                                                                                                                                                                                     |
| Antenna Connector  | 1 × 50 Ω N-Female External Connector                                                                                                                                                                                |
| 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 <sup>1</sup>   | Support                                                                                                                                                                                                             |
| Cellular Interface |                                                                                                                                                                                                                     |
| Network            | 4G LTE (CAT 1)/GSM                                                                                                                                                                                                  |
| Antenna            | 1 × External Antenna (Share with GPS)                                                                                                                                                                               |
| Cellular Band      | <b>L08GL (Global except North America):</b><br>LTE-FDD: B1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28/66<br>LTE-TDD: B34/38/39/40/41;<br>GSM: B2/3/5/8<br><br><b>L09NA (North America):</b><br>LTE-FDD: B2/4/5/12/13/66 |
| SIM Slot           | 1 (Nano SIM-4FF)                                                                                                                                                                                                    |
| Wi-Fi Interface    |                                                                                                                                                                                                                     |
| Antenna            | 1 × External Antenna                                                                                                                                                                                                |
| Standards          | IEEE 802.11b/g/n, 2.4 GHz                                                                                                                                                                                           |
| Mode               | AP Mode (Device Configuration Only)                                                                                                                                                                                 |
| GNSS               |                                                                                                                                                                                                                     |
| Technology         | GPS                                                                                                                                                                                                                 |
| Antenna            | 1 × External Antenna (Share with Cellular)                                                                                                                                                                          |
| Others             |                                                                                                                                                                                                                     |

|                                     |                                                                                                                           |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Button                              | 1 × Reset/Wi-Fi Button                                                                                                    |
| Console Port                        | 1 × USB 2.0 (Type-C) for Power Supply and Console                                                                         |
| LED Indicators                      | 1 × SYSTEM, 1 × LTE, 1 × Wi-Fi                                                                                            |
| Built-in                            | Watchdog, Timer                                                                                                           |
| <b>Power Supply and Consumption</b> |                                                                                                                           |
| Power Supply                        | 1. Solar Power or DC Power (12~24VDC) via M12 Connector<br>2. 3.6V, 25000mAh Backup Batteries<br>3. 5V, 2A by Type-C Port |
| Battery Life <sup>2</sup>           | Up to 4 Days Without Sunlight (100 Nodes Connection with 10 min Report Interval)                                          |
| Power Consumption                   | Typical 0.8W                                                                                                              |
| <b>Physical Characteristics</b>     |                                                                                                                           |
| Ingress Protection                  | IP67                                                                                                                      |
| Housing & Color                     | Metal Cast Aluminum, White                                                                                                |
| Weight                              | 1.275 kg (Without Batteries), 1.755 kg (With Batteries)                                                                   |
| Dimension                           | 250 × 157.5 × 46mm (9.84 x 6.20 x 1.81 in)                                                                                |
| Installation                        | Wall or Pole Mounting                                                                                                     |
| <b>Environmental</b>                |                                                                                                                           |
| Operating Temperature               | -30°C to +70°C (-22°F to +158°F)                                                                                          |
| Charging Temperature                | -20°C to +50°C (-4°F to +122°F)                                                                                           |
| Storage Temperature                 | -40°C to +85°C (-40°F to +185°F)                                                                                          |
| Relative Humidity                   | 0% to 95% (Non-condensing) at 25°C/77°F                                                                                   |

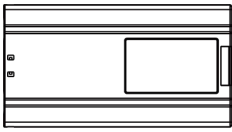
<sup>1</sup>AU915 and US915 do not support LBT.

<sup>2</sup> Tested under laboratory conditions and for guideline purposes only.

## ◆ Dimensions(mm)



## ◆ Accessories



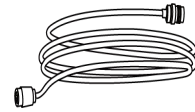
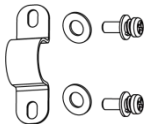
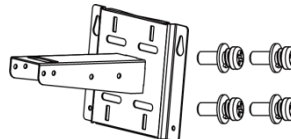
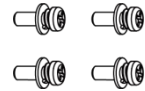
1 × Battery Pack



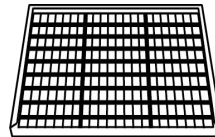
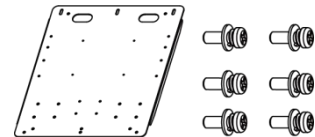
1 × SIM Card Ejector Tool



1 × LoRaWAN® Antenna

1 × Antenna  
Coaxial Cable (1m)1 × Antenna U-strap  
Kit1 × Antenna U-bolt  
Kit1 × Mounting  
Bracket Kit4 × Mounting  
Screws

2 × Hose Clamps

4 × Wall Mounting  
Kits1 × Solar Panel  
(With M12 Power  
Cable)1 × Solar Panel  
Bracket Kit

### \*Note:

1. Contact us if you need any other special accessories or customized accessories.
2. Optional solar panel specifications:

| Model                             | SP1530 (Default)        | SP1545 (Optional) |
|-----------------------------------|-------------------------|-------------------|
| <b>Electrical Characteristics</b> |                         |                   |
| Open-Circuit Voltage              | 17 V (± 0.3 V)          |                   |
| Rated Voltage                     | 15 V (± 0.3 V)          |                   |
| Rated Current                     | 2 A (± 5%)              | 3 A (± 5%)        |
| Maximum Power                     | 30 W (± 5%)             | 45 W (± 5%)       |
| Minimal Power                     | 28.5 W (± 5%)           | 43 W (± 5%)       |
| <b>Physical Characteristics</b>   |                         |                   |
| Cell Type                         | Monocrystalline Silicon |                   |
| Operating Temperature             | -20°C~80°C              |                   |
| Weight                            | 1.645kg                 | 2.305kg           |
| Dimension                         | 533 × 303 × 17 mm       | 570 × 380 × 17 mm |







# Delmation

products



## Delmation Products

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