

Product Specification

Product Name: Outdoor LoRa Gateway

Model Name: DSGW-014

Revision History

| Specification | | Sect. | Update Description | By |
|---------------|-----------|-------|---------------------|----|
| Rev | Date | | | |
| 1.0 | 2022-9-22 | | New version release | Li |
| 1.1 | 2022-10-9 | | Delete reset button | Li |
| | | | | |
| | | | | |

Approvals

| Organization | Name | Title | Date |
|--------------|------|-------|------|
| | | | |
| | | | |
| | | | |

Region List

| Type | Region | Frequecy (MHZ) |
|------|---------------|----------------|
| -CN | China | CN470 |
| -EU | Europe | EU868 |
| -US | North America | US915 |
| -AS | Asia | AS923 |
| -AU | Australia | AU915 |
| -KR | Korea | KR920 |
| -IN | India | IN865 |
| -RU | Russia | RU864 |

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| 6 QA Requirements | 错误!未定义书签。 |

1. Introduction

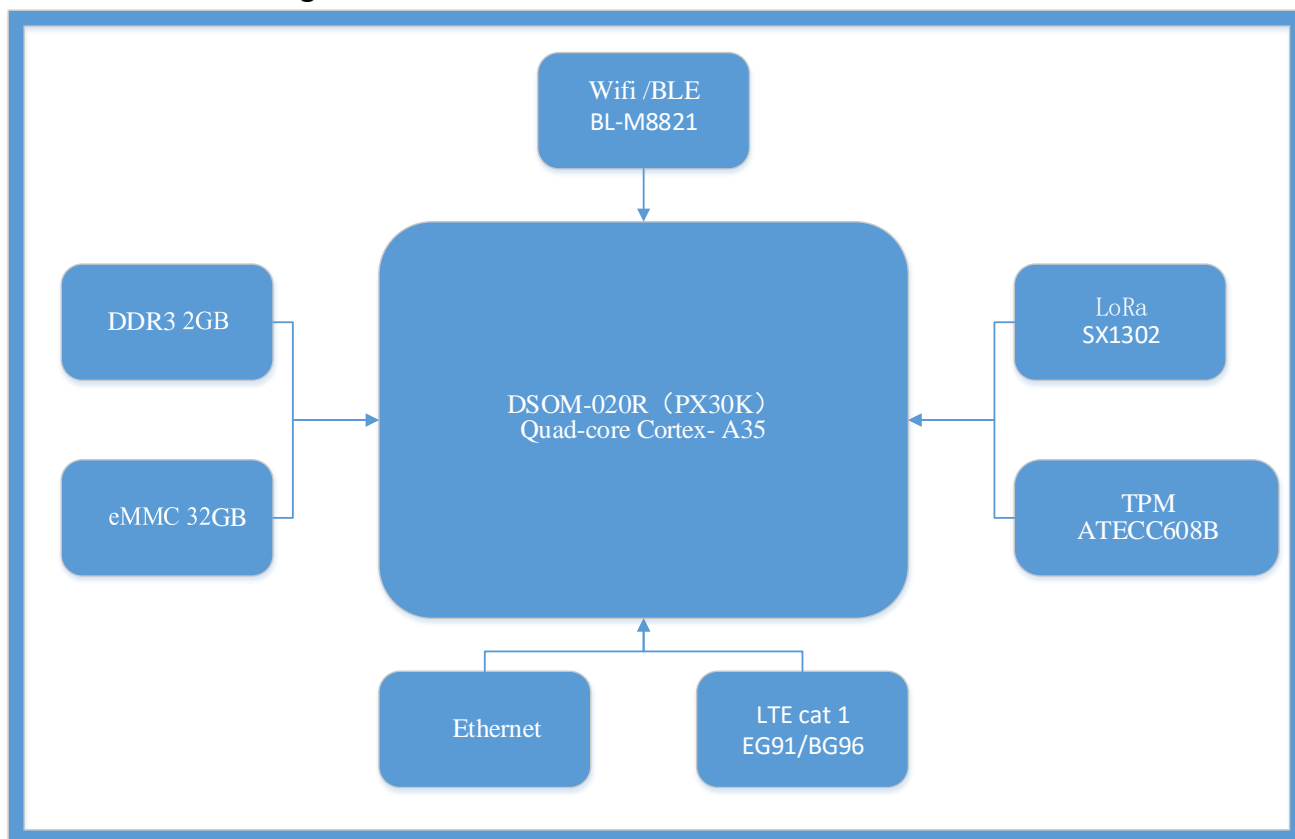
1.1 Purpose& Description

The DSGW-014 Outdoor LoRa Gateway is a high-efficiency gateway. It's a smart Gateway with POE or DC power supply. It can be used in various scenarios flexibly, for example, it can be applied to Earn HNT cryptocurrency by mining Helium and building coverage for The People's Network. It provides reliable connectivity for a wide range of devices through wireless protocol including Wi-Fi 2.4G/5G, Bluetooth, LoRa,LTE.

1.2 Product Feature Summary

- Support the POE switch power supply
- Base on the LoRa Concentrator Engine: Semtech SX1302
- Support Wi-Fi 2.4G/5G IEEE 802.11b/g/n/ac
- Support Bluetooth
- Support GPS, GLONASS, Galileo and QZSS
- Support IP66 waterproof housing
- Support OTA
- Support LTE cat 1
- One WAN/LAN variable network port

1.3 Hardware block diagram

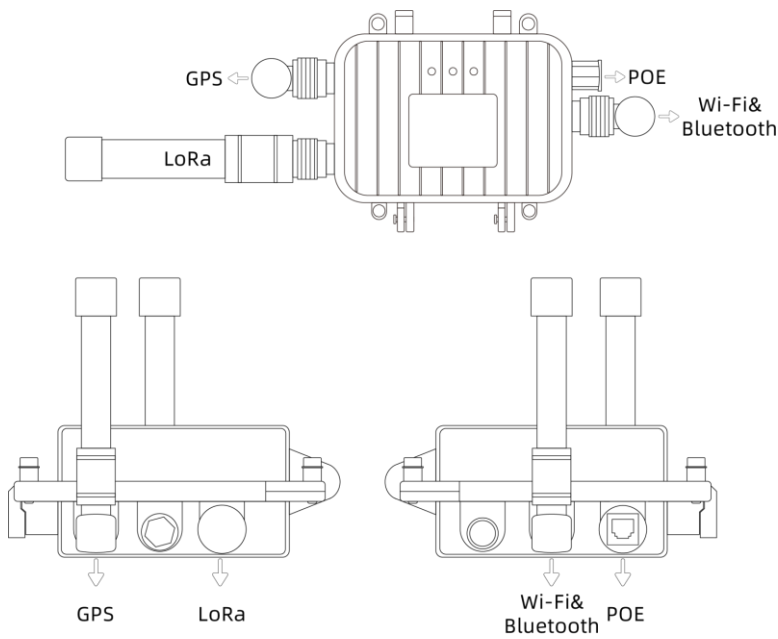


2. Mechanical Requirement

2.1 Drawings



2.2 Interface



2.3 installation



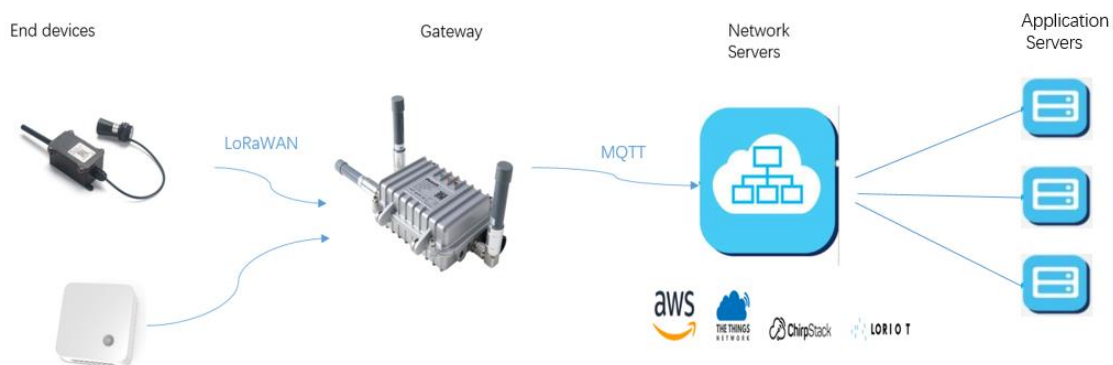
3. Electrical Requirements

3.1 Hardware Information

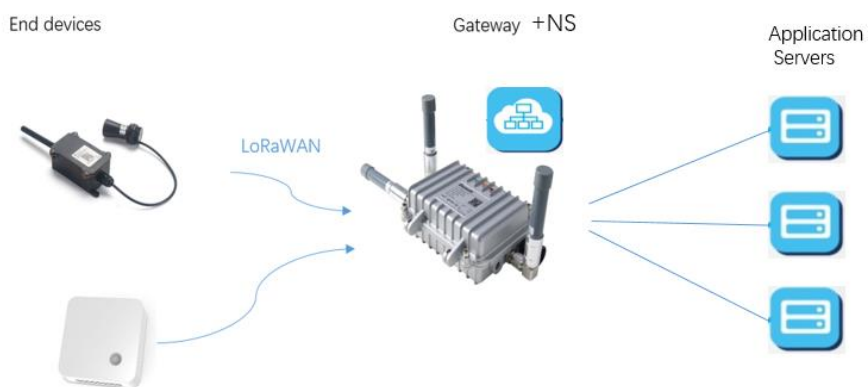
| Category | Specifications |
|-----------------------|---|
| CPU | Quad-core Cortex-A35 |
| RAM | 2GB |
| ROM | eMMC 32GB (up to 128GB) |
| System | Linux |
| Security module | ATECC608B |
| Network Interface | The network interface supports CAT-5/CAT-5E to transmit data and POE Power Supply (voltage range is 44~ 57V). It is WAN/LAN variable. |
| Indicator LEDs | 1) . Power LED normally on when powered on 2) . Network LED normally on when connected 3) . LTE Card indicator |
| Wireless protocol | Wifi, BLE, LoRa,LTE |
| GPS | GPS, GLONASS, Galileo and QZSS (LTE Integrated) |
| Operating Temperature | -20℃~65℃ |
| IP rating | IP66 |
| LTE | Cat1 |

4. Solution

4.1 Connect to third-party LoRaWAN platforms(DSGW-014-※-L)



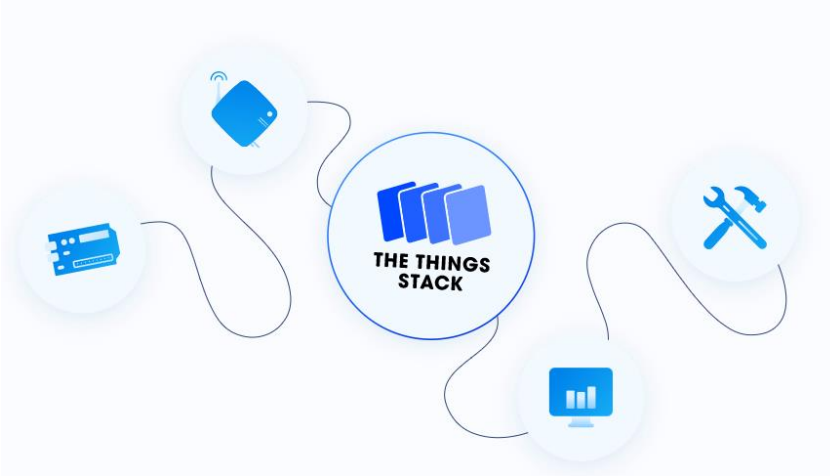
4.2 Build-in Network Server



5. Thrid-Part Platform

5.1 The Things Stack (DSGW-014-※-F-TTN)

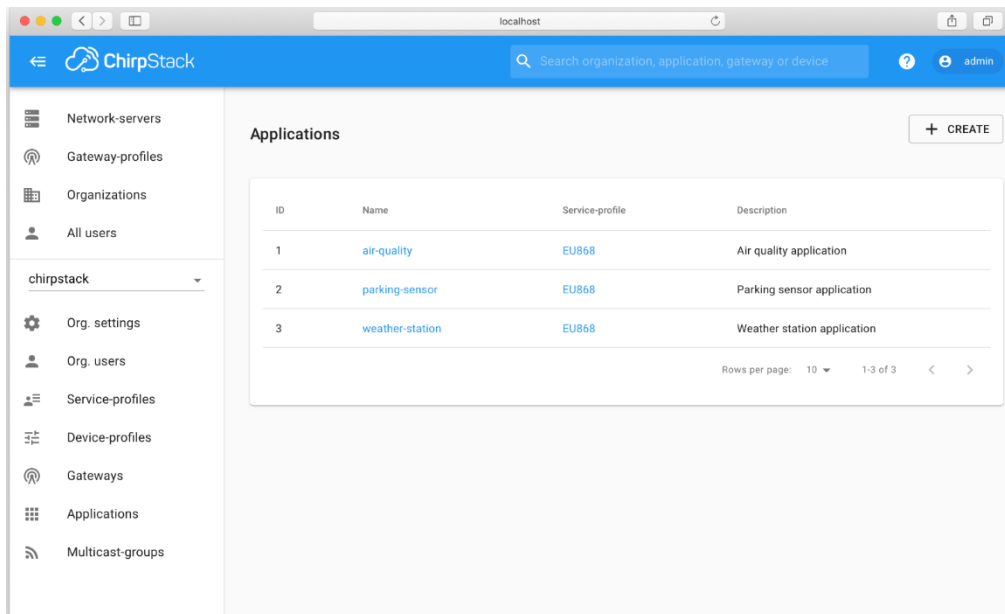
The Things Stack is an enterprise grade LoRaWAN network server, built on an open source core. The Things Stack allows you to build and manage LoRaWAN networks on your own hardware or in the cloud.



The link for the things stack: <https://www.thethingsindustries.com/docs/>

5.2 Chripstack (DSGW-014-※-F-CS)

The ChirpStack open-source LoRaWAN Network Server stack provides open-source components for LoRaWAN networks. Together they form a ready-to-use solution including an user-friendly web-interface for device management and APIs for integration. The modular architecture makes it possible to integrate within existing infrastructures. All components are licensed under the MIT license and can be used for commercial purposes.



The link for Chripstack: <https://www.chirpstack.io/>

5.3 AWS IoT Core for LoRaWAN(DSGW-014-※-L)

AWS IoT Core Integration is a software service that enables your LoRaWAN gateway to work with AWS IoT Core.

杭州市大关路 189 号万通中心 A 幢 8 楼,310004

Tel:86-571-86769027/8 8810480

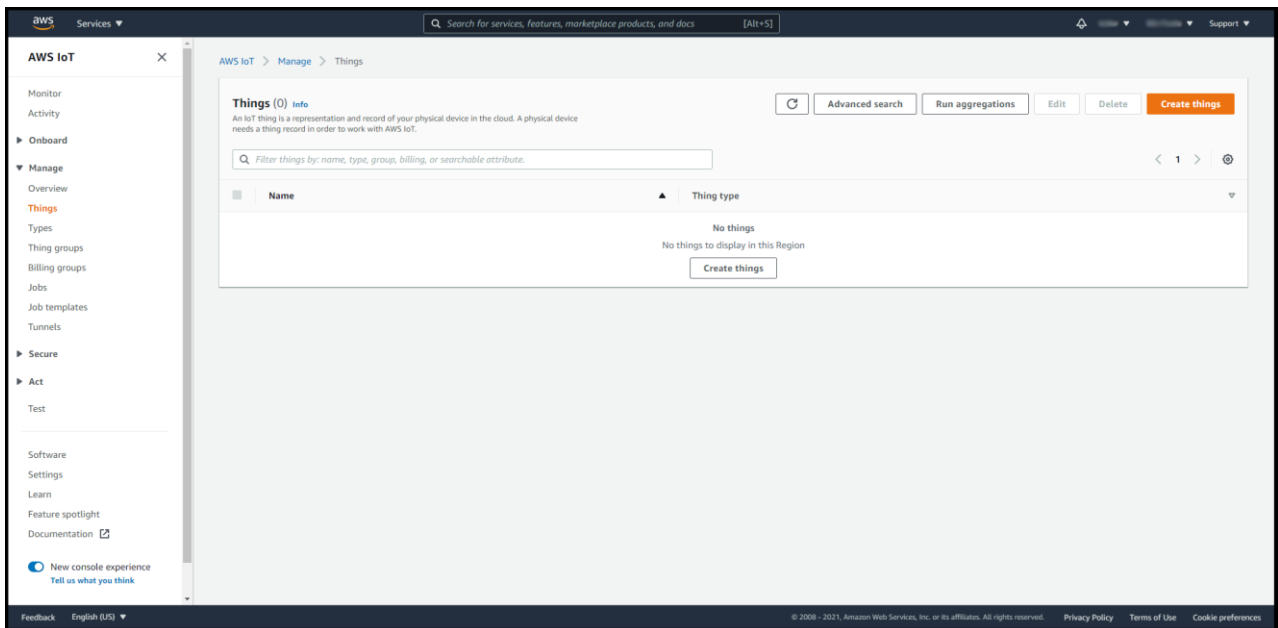
Website: www.dusuniot.com

www.dusunremotes.com

Floor 8, building A, Wantong center,
Hangzhou 310004, China

www.dusunlock.com

This document will show you how to set up a LoRaWAN end-node and view its data on the AWS IoT Console. In addition, it'll show you how to send a message from AWS IoT Console to the end-node as well.



FCC Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:(1)This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, Pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.