

# CAL-025

## LoraWan Gateway

The CAL-025 is an easy to install industrial grade high reliability gateway based on the LoRaWAN protocol, with built-in Semtech high-performance multi-channel transceiver SX1308 and MTK platform. Supports both half duplex and full duplex communication modes. The gateway can be connected to the LoRaWAN cloud server through Ethernet, LTE 4G, or WiFi. The industrial gateway includes three modes: AP, STA, and PPPoE as routers. An RJ45 port can automatically perform WAN/LAN switching. This industrial grade gateway is suitable for industrial fields such as Industry 4.0, smart industry, and smart manufacturing, and can also be used in smart buildings, making it a strong supplement to industrial grade outdoor gateways.

## Main Features

- DC 12V input;
- Maximum output power 25dBm;
- Supporting LoRaWAN Class A/C;
- Configurable through WIFI or LAN;
- Communication data rate 292bps to 50kbps;
- Supporting Ethernet, LTE4G, and WiFi backhaul;
- High sensitivity, reaching -141dBm at a rate of 300bps;
- Power/WIFI/LoRaWAN/USB indicator light display status;
- Indoor industrial grade high reliability: 3kV surge protection;
- High speed data transmission channel and 1 GFSK channel for sub;
- LoRaWAN communication supports half duplex mode and full duplex mode options;
- Supports 10/100 Gigabit Ethernet, with LAN/WAN automatically switching through an RJ45 port;
- LoRaWAN downlink: 1 ordinary channel(125kHz/250kHz/500kHz, LoRa configurable or GFSK);
- Support frequency band (optional when ordering):434MHz, 470MHz/510MHz, 780MHz, 868MHz;
- LoRaWAN uplink: 8 ordinary multi spread factor channels (SF7 to SF12125kHz), 1 single spread factor channel;
- Full duplex communication supports single antenna transmission of downlink signals while receiving 8 uplink LoRa signals;
- Supporting WIFI 2.4GHz, compatible with WLAN 802.11b/g/n protocol / AP module / Station / PPPoE mode for internet connection
- One LoRaWAN antenna, one WIFI antenna, and one 4G antenna, LoRaWAN antenna gain defaults to 0dBi, WIFI antenna gain defaults to 5dBi, The default 4G antenna gain is 4dBi.

