

User Manual

Tutorial on Installing the LoRaWan Gateway

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2. Introduction

The LoRa gateway communicates with the Nanoprecise LoRa sensors and will allow for all overall data (RMS ACC, TEMP, ...) to be transmitted instantly after it gets measured (every 5-10-20 min as setup). The RAW data file (Vibration and Sound time wave form) will be communicated over cellular network on the scheduled interval (default 2x per day). If LoRa network is not available the Nanoprecise LoRa sensors will only send over cellular at scheduled intervals.

3. LoRa Gateway Installation Instructions

3.1. Package contents

The included LoRa Gateway is already preconfigured with a Twilio SIM card for connection to the NanoPrecise LoRaWAN Server. The setup should be a simple plug and play. This particular LoRa gateway has a sim card with the following ICCID: XXX The package includes the following:

1. Dragino LG308 LoRaWAN Gateway with a Twilio SIM card installed
2. 1x 4G antenna (Black)
3. 1x LoRa Antenna (White)
4. 1x Power supply adapter
5. 1x Ethernet Cable



Figure 1: The LoRa Gateway.



3.2. Installation Instruction

1. Find a suitable location for the LoRaWAN gateway.
2. The 4G antenna (black) with a cord connects to the connector tagged 4G on the back of the gateway as shown in the image below. The LoRa antenna (white) connects to the LoRa connector.
3. The power supply adaptor connects to the 12V/1A input connector.
Note: The included Ethernet cable is only needed if a reconfiguration of the gateway settings is required.



Figure 2: An image showing the back of the LoRa Gateway.

4. Once all the connectors are in place, plug in the gateway to a suitable power outlet.
5. The device has a total of 6 LEDs with functions shown below

LG308 has totally 6 LEDs, They are:







- **Power LED** : This **LED** will be **solid on** if the device is properly powered.
- **HEART LED** : No function yet.
- **SYS LED** : This **LED** will show different colors on different states:
 - ✓ **SOLID**: Device is alive with LoRaWAN server connection.
 - ✓ **BLINKING**: a) Device has internet connection but no LoRaWAN Connection. or b) Device is in booting stage, in this stage, it will **BLINKING** for several seconds.
 - ✓ **OFF**: Device doesn't have Internet connection.
- **ETH LED**  : These two LEDs show the ETH interfaces connection status.
- **WiFi LED** : This LED shows the WiFi interface connection status.

Figure 3: A detailed guide on the LED patterns of the LoRa Gateway.

6. After a few minutes of powering on the device. The SYS LED should be SOLID RED. This indicates that there is an internet connection and the connection to the NanoPrecise LoRaWAN Server is successful. This should be the case as the device is already preconfigured. Please contact the NanoPrecise support team if there are any issues with the installation.