

Product Brief

Model: LAS-603

Ver.1.7

LoRaWAN Temperature Sensor



1. Description

According to the worldwide HACCP topic, food safety is key important for customers. LAS- 603 temperature sensor is designed for refrigerator wireless temperature monitoring. We may use this device to track ambient changes in temperature and then stream the temperature data using wireless technology via Lora. With LoRaWAN wireless module, this temperature sensor status will be sent to the network server via gateways. Finally, authenticated users can monitor the status remotely. It is optional for frequencies 915MHz(USA), 920MHz(Taiwan, Japan, Singapore, Indonesia, Thailand) As it is with an algorithm of low power consumption, the internal battery will work for 5 years. And due to the embedded magnetic design, it is extremely easy for device setup.

2. Features

- Ambient temperature monitoring and remote reporting
- One-Time Lithium Battery
- Embedded magnet design to any iron metal face or equipment, plug, and play.
- Wild sensing operates temperature, $-30\sim 70^{\circ}\text{C}$
- Power-saving Long-Range (LoRa) transmission mode
- Low drift, high response, small size, easy installation, working stable
- Water-resistant level: IP65
- Long life, operation time at least up to 5 years with embedded battery
- Configurable LoRa Parameters, time interval, SF, Frequency.

3. Applications

- Open show case temperature monitoring
- Walk-in refrigerator temperature monitoring
- Warehouse temperature monitoring
- Cold chain temperature monitoring
- Carry refrigerator temperature monitoring

4. Product Specifications

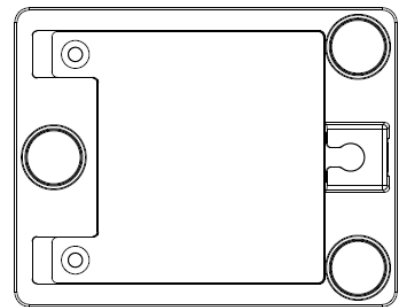
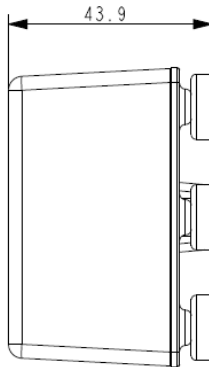
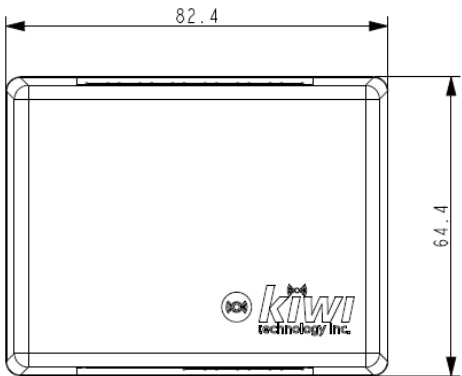
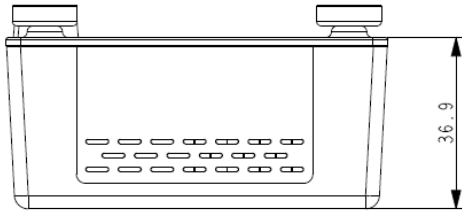
TECHNICAL SPEC	
MEASUREMENT RANGE ¹	-30 ~ 70°C
ACCURACY	Typ. ± 0.3 °C (maximum ± 0.5 °C)
TEMPERATURE RESOLUTION	0.1 °C
MEASURING INTERVAL	5 minutes. It can be adjusted via LoRaWAN cloud server
TRANSMISSION INTERVAL	1 hour It can be adjusted via LoRaWAN cloud server
LORA	LoRa Module (certificate)
LORA FREQUENCY RANGE	920.6~ 928.0 MHz, Japan 920.0~ 925.0 MHz, Taiwan
LORA ANTENNA	Embedded antenna
POWER INPUT	Embedded battery, Lithium battery two cells pack, 4800mAh.
OPERATION LIFETIME ²	5 years
MECHANISM	
Color	White
DIMENSION (MM)	82.4 x 64.4 x 36.9
WEIGHT (g)	140
ACCESSORIES IN PACKAGE	Screw x 2
ENVIRONMENT	
OPERATION TEMPERATURE	-30 ~ 70°C
STORAGE TEMPERATURE	-40 ~ 85°C
OPERATING RELATIVE HUMIDITY	5~95%
WATER RESISTANCE	IP65
CERTIFICATE	TELEC, VCCI, NCC, BSMI, FCC, RoHS, REACH

¹ After defrosting a refrigerator procedure, the measuring stable time would be 2 hours later accordingly.

² Operation lifetime is considered under -20°C, measuring interval 5 minutes, and transmission interval 1 hour.

5. Mechanical Drawing

Unit: mm



History

Date	Version	Revision Description	Writer
2021/08/03	v1.7	<ul style="list-style-type: none">- Format update- Correct wrong spec. and description	Chris Chuang