

# Product Brief

**LoRaWAN Temperature Sensor**  
**Model: LAS-603**

**Ver.: 1.4**



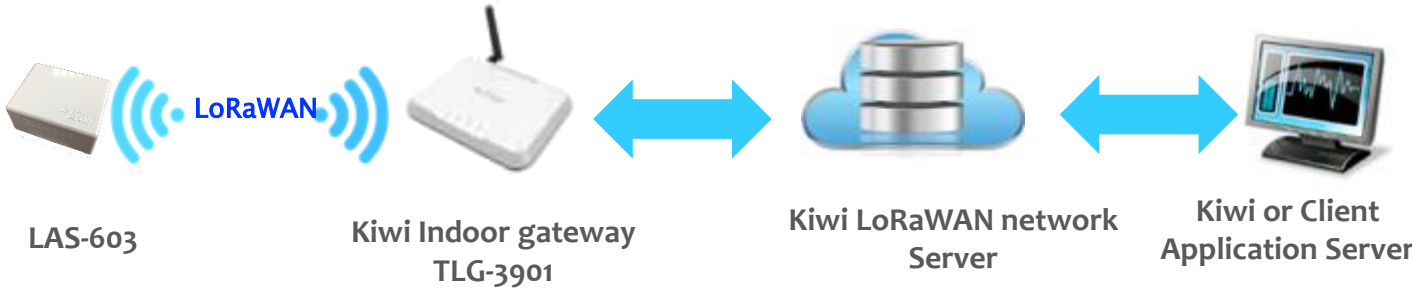
Due to WW HACCP topic, the food safety is key important for customer. LAS- 603 temperature sensor is designed for refrigerator wireless temperature monitoring. We may use this device to track ambient changes in temperature and then stream the temperature data using wireless technology such as Lora. With LoRaWAN wireless module, this temperature sensor status will be sent to the network server via gateway. Finally authenticated user can monitor the status remotely. It is optional for frequency 868MHz (Europe), 915MHz(USA), 920MHz(Taiwan, Japan, Singapore, Indonesia, Thailand. As it is with algorithm of low power consumption, the internal battery will work for 3 years (upload, once per four hours, every 5 minutes to detect, alarm message upload).

## Product Features:

- Ambient Temperature monitoring and remote reporting
- One-Time Lithium Battery Panasonic CR-AG
- Embedded magnet adsorption to any iron metal face or equipment, plug and play.
- TI Digital Temperature Sensor IC, well long time stability and full range thermal compensation
- Wild Embedded Sensor IC operates temp. (-30°C~70 °C)
- Power-saving Long-Range(LoRa) transmission mode
- Low drift \ high response speed
- Small size \ easy installation \ working stable
- Water resistant level: IP65
- Long life, operation time at least up to 5 years with Panasonic CR-AG
- Configurable LoRa Parameters, time interval, SF, Frequency.
- After defrost a refrigerator procedure, the measuring stable time would be 2 hours later on accordingly.

Supermarkets

Shops/Malls



LAS-603

Kiwi Indoor gateway  
TLG-3901

Kiwi LoRaWAN network  
Server

Kiwi or Client  
Application Server

- Open Show Case Temp. monitoring
- Walk-in Refrigerator Temp. monitoring
- Ware House Temp. monitoring
- Low-Temp. Truck Temp. monitoring
- Carry Refrigerator Temp. monitoring

## TECHNICAL SPEC

LoRa	LoRa Module (TELEC certificate) Frequency : 868~ 930MHz
Temp. Sensing Range	-30°C~70 °C
Temp. Sensing Tolerance	Typ. ± 0.3 °C (maximum ± 0.4 °C)
Temp. Sensing Resolution	0.1°C
Measuring interval	Every 5 mins. Can be modified via LoRaWAN cloud server
Transmission Interval	Every 4 hours. 1 hour /2 hours/4 hours (default); can be modified via LoRaWAN cloud server
Water Resistant	IP65
Compliance	TELEC
Dimension	64 x 75 x 37mm

## TECHNICAL SPEC

Working Power Consumption	<0.6W
Battery Type	Lithium battery Panasonic CR-AG (two cells pack), 2400mAhx2

## MECHANICAL

Box case	PC+ABS
Color	White
Dimension	64 x 75 x 37mm
Weight	~150g

## ENVIRONMENT

Storage Temperature	-40°C~+85°C
Working Temperature	-30°C~+70°C
Working Relative Humidity	5%~95%
Operation Lifetime	>5 years @ -20°C