

TREK-120

LoRa Cold Chain Temperature/ Humidity Sensor



Features

- Supports temperature/humidity/free fall detection
- Wireless data transmissions via NFC and LoRa technology
- Sensor configurable to alarm for real-time management
- Easy, simple installation in diverse refrigerated vehicles
- IP65 rated for protection against water and dust ingress
- Low power consumption for at least 1 year battery life*
- Supports IoT cloud services for centralized and real-time exception management

Specifications

Temperature	Measurement Range	-30 ~ 70 °C (-22 ~ 158 °F)
	Accuracy Range	±0.5 °C from 0 ~ 20 °C (±32.9 °F from 32 ~ 68 °F) ±1 °C from -30 ~ 70 °C (±33.8 °F from -22 ~ 158 °F)
	Resolution	0.1 °C (32.18 °F)
Humidity	Measurement Range	0 ~ 100% RH
	Accuracy Range	±3% from 0~80% at 30°C *The variation in accuracy is 0.5 % /C
Frequency	NFC	13.56MHz
	LoRa	860-930MHz for Taiwan/USA/Japan/South Korea 868MHz for Europe 470.3-489.3MHz for China
3-Axis Accelerometer		ST IIS2DH with free fall detection
Data Storage Capacity		65Kbits for 2000 temperature and humidity values + 30 free fall values
LED Indicators		1 x Power status 1 x Alarm
Buttons		1 x Start button
Battery		3.6V/2000mAh wide-temperature (-30 ~ 70 °C) battery
Data Transmissions		NFC only and NFC + LoRa
Mechanical	Mount Options	2 x Screw holes for mounting Fix by Tape Fix by Magnet
	Dimensions (W x D x H)	123.97 x 65.21 x 23.14 mm (4.88 x 2.56 x 0.91 in)
	Weight	108 g (0.23 lb)
Environment	Operating Temperature	-30 ~ 70 °C (-22 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	IP Rating	IP65
	Drop Tolerance	4 ft. drop onto concrete
	Certifications	CE/FCC/NCC

*Battery life time depends on operating environments

LoRa Gateway Dongle

Features

- Support frequency from 433MHz to 928MHz frequency Bands
- Host interface: USB
- Enhanced noise filtering for better RF performance
- SMA connector for external antenna
- Dimension: 82x62x20 mm, weight: 100g



Ordering Information

Part number	Description
TREK-120-ANF000A00	Temperature/humidity/G sensor by NFC
TREK-120-ANLNA0A00	Temperature/humidity/G sensor by NFC+LoRa NA902/TW920
TREK-120-ANLEU0A00	Temperature/humidity/G sensor by NFC+LoRa EU868
TREK-120-ANLCN0A00	Temperature/humidity/G sensor by NFC+LoRa CN470
TREK-120-ANR000A00	Cold Chain NFC reader
TREK-120-ALG000A00	LoRa gateway dongle 902MHz ~ 928MHz
TREK-120-ALG000B00	LoRa gateway dongle 863 ~ 870MHz
TREK-120-ALG000C00	LoRa gateway dongle 470.3 ~ 489.3MHz
TREK-120-BATT00A00	Wide temperature Li-Metal battery 2000mAh, 10pcs/pack

NFC Reader

Features

- NFC Frequency : 13.56MHz
- Host interface: Micro USB
- Enhanced noise filtering for better RF performance
- Dimension: 121.63 x 74.18 x 15.6 mm, weight: 52 g



Optional Items

Part number	Description
TREK-530-GRWBADA20	TREK-530 WiFi/BT, w/LoRa GW TW/US
TREK-530-LRWBADA21	TREK-530 EU LTE/GPS, w/LoRa GW, A6.0 TW
TREK-530-LRWBADB20	TREK-530 US LTE&GPS, w/LoRa GW, A6.0 US