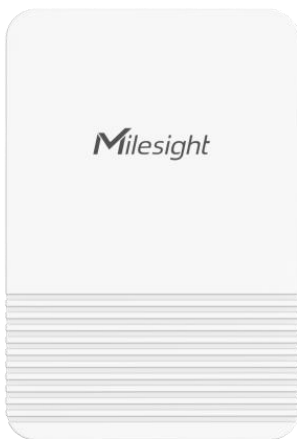


# Temperature & Humidity Sensor

Featuring LoRaWAN®

EM320-TH

*Milesight*



EM320-TH is a simple, compact and powerful LoRaWAN® temperature & humidity sensor. It is equipped with high-precision sensors and IP67 waterproof design, applicable for accurate temperature and humidity data detection in various harsh environments. FDA-approved food-grade material's enclosure and magnet design allow it to be placed in freezers and refrigerators and in contact with food or medicines safely.

In addition to LoRaWAN® technology with low power consumption, it has built-in high-capacity batteries available for usage for up to 10 years without battery replacement. Moreover, EM320-TH is compatible with both Milesight LoRaWAN® Gateway and Milesight Development Platform to achieve remote data monitoring and management. It is suitable for both indoor and outdoor applications such as cold chain transportation, agricultural greenhouses, office buildings, hospitals, factories, etc.

EM320-TH can be used in cold chains, refrigerators, buildings, hospitals, and factories.

## ◆ Features

- Uses Sensirion high-precision sensor, capable of sensing subtle changes in temperature and humidity
- IP67 waterproof enclosure with multi-level structure and sealing ring design enabling strong waterproof performance for harsh environments
- Uses FDA-approved food-grade material's enclosure, which is safe for contact with food or medicines
- EN12830 certified for cold-chain applications
- Ultra-low power consumption and standby with 5400 mAh built-in replaceable batteries,

ensuring durable battery life

- Wall mounting or magnet version optional for multiple installation scenarios
- Anti-theft and anti-slip pad design on back cover to secure firm and sturdy installation
- Long range data transmission for up to 15 kilometers in rural areas
- Store locally historical records and support retransmission to prevent data loss
- Equipped with NFC for easy configuration
- Compliant with standard LoRaWAN® gateways and network servers
- Quick and easy management with Milesight IoT Cloud and Milesight Development Platform solution

## ◆ Specifications

### Wireless Transmission

Technology	LoRaWAN®
Antenna	Internal Antenna
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16dBm (868 MHz)/20dBm(915 MHz)/19dBm (470 MHz)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A

### Measurement

#### Temperature

Range	-30°C to + 60°C
Accuracy	+/- 0.2°C
Resolution	0.1°C

#### Humidity

Range	0% to 100% RH
Accuracy	+/- 2%
Resolution	0.5% RH

### Others

LED	1 × LED Indicator (Internal)
Button	1 × Power/Reset Button (Internal)

### Software

Power On & Off	Mobile App via NFC, Power Button (Internal)
Configuration	Mobile App via NFC
Advanced Features	Threshold Alarm, Data Storage (3,000 entries), Data Retransmission, Data Retrievability

### Physical Characteristics

Power Supply	2 × 2700 mAh ER14505 Li-SOCl <sub>2</sub> Batteries
Battery Life* (10 min interval, 25°C)	Over 10 years (SF7, EU868 & US915) Around 7 Years (SF10, EU868) Around 6.3 Years (SF10, US915)
Operating Temperature	-30°C to +60°C
Relative Humidity	≤95%
Housing & Color	PC + ABS (Food-Grade), White
Weight	93.2g (Standard Version), 102g (Magnet Version)
Ingress Protection	IP67
Dimension	85 × 58 × 18 mm (3.34 × 2.28 × 0.70 in)
Installation	Standard Version: Wall Screw Mounting, Pole Mounting Magnet Version: Magnetic Adsorption

### Approvals

Regulatory	CE, FCC, Telec, EN12830
Environmental	RoHS

\* Tested under laboratory conditions and for guideline purposes only.

### ◆ Dimensions (mm)

