



EM500-CO₂

CO₂ Sensor



► Introduction

EM500-CO₂ sensor is a long range wireless sensor compatible with standard LoRaWAN protocol. Combining with the advanced LoRa technology and 19000mAh battery make it a low power consumption product with years-long use life. It integrates CO₂, barometric pressure, temperature and humidity sensors, which suits outdoor environment monitoring applications.

► Features

- A robust and waterproof solution for outdoor environment monitoring applications
- Integrated multiple sensors like CO₂, barometric pressure, temperature and humidity
- Easy configuration via NFC
- Standard LoRaWAN protocol
- Compliant with Ursalink Cloud and third-party platform
- Low power consumption with 19000 mAh replaceable battery
- 1-year warranty

► Applications

- ✓ Warehouse environment monitoring
- ✓ Basement and underground parking environment monitoring
- ✓ Smart agriculture
- ✓ Building automation

► Specifications

LoRaWAN	
Frequency	EU433/CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
Tx Power	16dBm(868)/20dBm(915)/19dBm(470)
Sensitivity	-147dBm @300bps
Mode	OTAA/ABP Class A
Antenna	Embedded Ceramic Antenna
Sensors	
CO ₂	
Range	400 - 5000 ppm
Accuracy	±30 ppm or ±3 % of reading
Resolution	1ppm
Barometric Pressure	
Range	300 - 1100 hPa (-40°C - 85°C)
Accuracy	±1 hPa
Resolution	1hPa
Temperature	
Range	-40°C to + 70°C
Accuracy	0°C to + 70°C (+/- 0.3°C), -40°C to 0°C (+/- 0.6°C)
Resolution	0.1°C
Humidity	
Range	0% to 100% RH

Accuracy	10% to 90% RH (+/- 3%), below 10% and above 90% RH(+/- 5%)
Resolution	0.1%
Operation	
Power On & Off	NFC, power button (Internal)
Configuration	Mobile APP(NFC) or PC software(USB Type-C)
Physical Characteristics	
Power Supply	19000 mAh Li-SOCL ₂ battery (ER34615)
Battery Life	6 years (10 min interval, SF12) >10 years (10 min interval, SF7)
Operating Temperature	-30°C to +70°C
Ingress Protection	IP66
Dimension	147.9 × 71 × 69.5 mm
Mounting	Pole, wall, DIN rail

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