atomsenses

LoRaWAN

LoRaWAN 11-in-1 Sensor
Temp / Humidity / CO2 / PM1.0 / PM2.5 / PM10 / TVOC / HCHO / O3 / Air Pressure / CO

Modular Indoor Air Quality Combo

SKU: ES-108

The Atomsenses ES-108 is designed to be integrated multi-purpose, comprehensive indoor air quality sensor for detecting CO2 concentration, Temperature, Humidity, PM1.0, PM2.5, PM10, TVOC, HCHO, O3, Air Pressure, CO accurately and economically

It can transmit data over long distances to any brand of LoRaWAN gateway.

⊘ LoRaWAN communication

LoRaWAN communication standard to allow sensor connect to any LoRaWAN Gateway on the market

⊘ Up to 5 years powerful battery

Ultra-low power sensing technology with Ultra-low power wireless technology allowing the sensor to last up to 5 years with 03 x AA batteries

⊘ Industrial Grade High Accuracy

Advanced ultrasonic sensor to deliver high accuracy and stable measurement

⊘ Supports ODM & OEM

- Temperature: Range: -40°C ~ 125°C; Resolution: 0.01 °C; Accuracy: ±0.2°C
- Humidity: Range: 0~100%RH; Resolution: 0.01%RH; Accuracy: ±1.8%RH
- Carbon Dioxide (CO_2): Range: 0~5000PPM; Resolution: 1PPM; Accuracy: ± (50 ppm + 5 % of reading)
- PM1/PM2.5/PM10: Range:0 ~ 1000 μg/m3 ; Resolution: 0.3μm; Accuracy: < ±10%
- TVOC: Range: 0.00 ~ 10.00PPM; Resolution: 1PPB; Accuracy: < ±4%
- Formaldehyde (HCHO) : Range: 0 ~ 2000PPB; Resolution: 1 PPB Accuracy: ±10 %
- Ozone (O3): Range: 0~10PPM; Resolution: 1PPB; Accuracy: < ±2%
- Carbon Monoxide (CO): Range: 0 ~ 1000PPM; Resolution: 1PPM; Accuracy: < ±3%

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Specification

Wireless Transmission		
Technology		LoRaWAN®
Frequency		CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power		16 dBm (868 MHz)/22 dBm (915 MHz)/19 dBm (470 MHz)
Sensitivity		-137dBm @300bps
Mode		OTAA/ABP Class A
Sensors		
Temperature	Temperature Range	-40°C to + 125°C
	Accuracy	±0.2°C
	Resolution	0.01°C
Humidity	Humidity Range	0% to 100% RH
	Accuracy	±1.8%RH
	Resolution	0.01% RH
Carbon Dioxide (CO2)	Carbon Dioxide (CO2) Range	0 to 5000 ppm
	Accuracy	±(50 ppm + 5 % of reading)
	Resolution	1 ppm
Particulate Matter (PM 1.0 / 2.5 / 10)	PM Range	0 ~ 1000 µg/m3
	Accuracy	< ±10%
	Resolution	0.3µm
(Total Volatile Organic Compound) TVOC	TVOC Range	0.00 ~ 10.00PPM
	Accuracy	< ±4%
	Resolution	1 ppb
Nitrogen Dioxide (NO2)	Nitrogen Dioxide (NO2) Range	0~ 10PPM
	Accuracy	±3%
	Resolution	1 ppm
Formaldehyde (HCHO)	Formaldehyde (HCHO) Range	0 ~ 2000 ppb
	Accuracy	±10 %
	Resolution	1ppb
Carbon Monoxide (CO)	Range	0 – 1000ppm
	Accuracy	±3%
	Resolution	1ppm
Ozone (O3)	O3 Range	0~10PPM
	Accuracy	< ±2%
	Resolution	1 ppb
Physical Characteristics		
Power Supply		Type-C
Dimension		125 × 125 × 28.5 mm
Installation		Wall Mounting