atomsenses

LoRaWAN®

LoRaWAN 4-in-1 Temp / Humidity / CO2 / TVOC

Indoor Air Quality GAS Sensor

SKU: AS-203

The Atomsenses AS-203 is designed to measure the surrounding environment parameters include: TVOC(Total Volatile Organic Compound) as well as CO2, temperature and relative air humidity, and then upload to IoT server via LoRaWAN wireless protocol.

The sensor has an Ultra-low Power design and smart firmware, allowing it to last up to 5 years with three AA-type batteries. 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
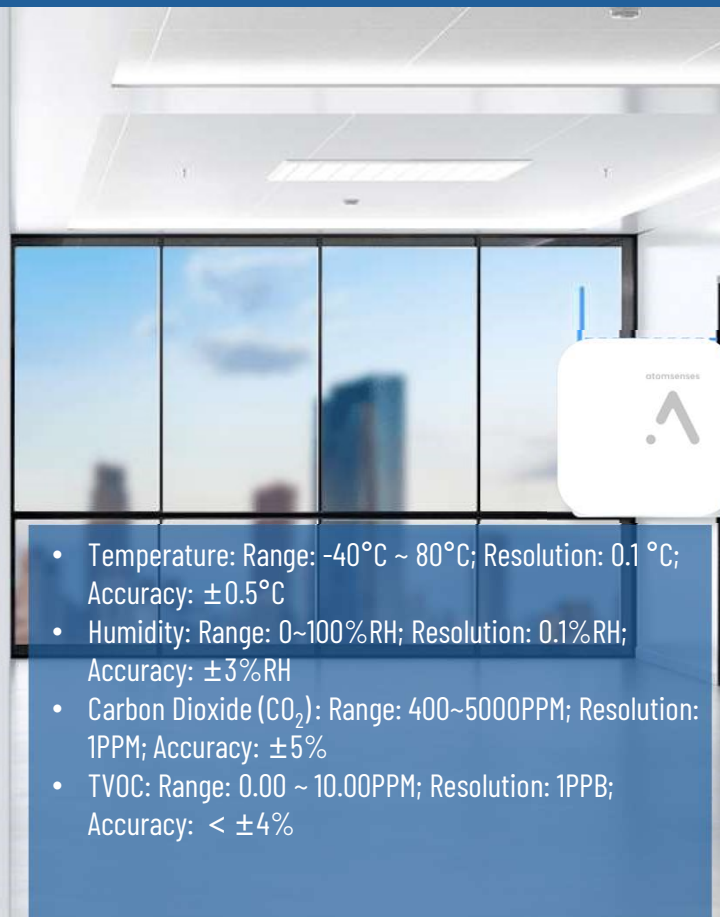
⊘ Industrial Grade High Accuracy

Advanced ultrasonic sensor to deliver high accuracy and stable measurement

⊘ Supports ODM & OEM

- Temperature: Range: -40°C ~ 80°C; Resolution: 0.1 °C; Accuracy: ±0.5°C
- Humidity: Range: 0~100%RH; Resolution: 0.1%RH; Accuracy: ±3%RH
- Carbon Dioxide (CO_2): Range: 400~5000PPM; Resolution: 1PPM; Accuracy: ±5%
- TVOC: Range: 0.00 ~ 10.00PPM; Resolution: 1PPB; Accuracy: < ±4%

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Specification

Wireless Transmission	
Technology	LoRaWAN®
Frequency	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	-20°C to + 70°C
	Accuracy	0°C to + 70°C (+/- 0.3°C), -20°C to 0°C (+/- 0.6°C)
	Resolution	0.1°C
Humidity	Humidity Range	0% to 100% RH
	Accuracy	10% to 90% RH (± 3%), below 10% and above 90% RH (± 5%)
	Resolution	0.5% RH
Carbon Dioxide (CO2)	Carbon Dioxide (CO2) Range	400 to 5000 ppm
	Accuracy	± (50 ppm + 5 % of reading)
	Resolution	1 ppm
TVOC	TVOC Range	0.00 ~ 10.00PPM
	Accuracy	< ±4%
	Resolution	1 ppb

Physical Characteristics	
Power Supply	4 × 2700 mAh ER14505 Li-SOCl2 Replaceable Batteries | Type C
Battery Life	Up to 5 Years
Operating Temperature	-20°C to +60°C
Relative Humidity	0% to 95% (non-condensing)
Ingress Protection	IP30
Dimension	98 × 98 × 29.5 mm
Installation	Wall Mounting