

PRODUCT SPECIFICATIONS

LoRaWAN[™] Sensor Device MODEL: ATRS0005

Version: V1.2



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Introduction:

ATRS0005 is designed to measure Carbon Dioxide (CO₂), Temperature and Humidity by LoRa[®] long-range and low-power wireless connectivity. It is integrated LoRa[®] wireless technology, CO₂ sensor knowhow and high-performance MCU solution for various IoT markets usage. With calibrated CO₂ sensor module and compensated Temperature/ Humidity sensor integration, the data is ready for use. It is perfect for monitoring air quality in schools, office buildings, greenhouses, factories, hotels, hospitals, transportation lines and anywhere high levels of carbon dioxide are generated.

Product Features:

- LoRaWAN[™] compliant
- High Receiver Sensitivity, Long Range Solution
- Integrated with calibrated CO₂ Sensor

Accuracy: ±50 ppm, ±3% of reading Range: 0 ~ 10,000 ppm

- Integrated with Compensated Temp/ RH Sensor
- Wide range DC power-in, 8~24V /or Micro-USB DC power-in, 5V
- Display CO₂ concentration, Temp/ RH
- Alarm LED indicator



Specifications

WirelessLoRa® ModuleLoRa Alliance® certified module LM-130HSensitivity-132 dBm @ 980 bpsTx PowerUp to 100mWStandard/ ProtocolComply with LoRaWAN® protocolLoRa® AntennaExternal Omni Antenna 824 - 960 MHz 2 dBi SMA Male connectorB63 ~ 870 MHz (EU) 902 ~ 928 MHz (US) 920 ~ 928 MHz (ROA)Sensor OperationEC2: Gold-plated infrared (NDIR) wave-guide technology with Automatic Baseline Correction (ABC) and passive gas diffusion (no moving parts) Temperature & Humidity: CMOS sensorResponse TimeCO2: Gold-plated infrared (NDIR) wave-guide technology with Automatic Baseline Correction (ABC) and passive gas diffusion (no moving parts) Temperature: min. 3 sec. ; max. 30sec. at T 63% Humidity: < 8 sec. at T 63% Humidity: < 8 sec. at T 63% Humidity: < 8 sec. at T 63%Accuracy (at 25°C)Temperature: ± 0.3°C Humidity: ± 5.%RHResponse TimeCO2: ± 20 ppm / ± reading * 1%) Temperature: ± 0.3°C Humidity: ± 0.3 %RHZero DriftCO2: < 10 ppm/yr. with Automatic Baseline Correction (ABC) Temperature: ± 0.3°C Humidity: ± 0.3 %RHMeasurement Range*CO2: 0 - 10,000 ppmMeasurement Range*Temperature: 40 ~ +125 °C Humidity: 0 ~ 85 %RH Non-condensed, 0 to 50°CSystem OperationIo ~ +60 °C Humidity: 0 ~ 85 %RH Non-condensed, 0 to 50°CStorage Temperature10 ~ +60 °CHumidity0 ~ 85 %RH Non-condensed, 0 to 50°CStorage Temperature-20 ~ +70 °C.	opecifications	
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Humidity 0 ~ 85 %RH Non-condensed, 0 to 50°C	System Operation	
	Temperature	-10 ~ +60 °C
Storage Temperature -20 ~ +70 °C.	Humidity	0 ~ 85 %RH Non-condensed, 0 to 50°C
	Storage Temperature	-20 ~ +70 °C.



Specifications	
Warm-up Time	\leq 1 min. (at full specs \leq 15 minutes.)
LED Indicator	Orange LED x 1 (by threshold setting, default is 800 ppm)
	Red LED x 1 (by threshold setting, default is 1000 ppm)
Power Supply	DC 8 ~ 24 V or Micro-USB DC 5 V
Power Consumption	TBD
Installation	Wall-mount
Dimension (mm)	Wall-mount: 113.57(H) x 80(W) x 28.79(D) mm
Weight	101 ± 2 g
Case Material	ABS
Accessory	
Standard	LoRa [®] Antenna (External Omni Antenna) x 1
Optional	Sensor Programmable Cable (Micro USB to UART)

The specifications are subject to change without notice.