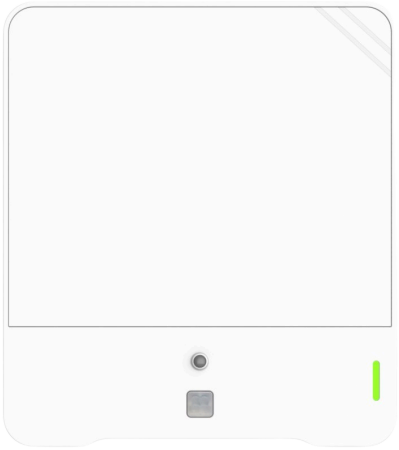
INDOOR AIR QUALITY

LoRaWAN Air Quality (9-in-1 IAQ Sensor)

CO_2, TVOC, particulates, climate, light and occupancy from one wall-mounted sensor.





Overview

The LoRaWAN Air Quality (9-in-1 IAQ Sensor) measures carbon dioxide, TVOC, PM2.5, PM10, temperature, humidity, barometric pressure, light level and motion in one compact indoor sensor. Every reading travels over LoRaWAN to ioX-Pulse, where you see live values and history for each room and get alerts when air quality slips.

An NDIR CO_2 sensor, a laser-scattering particulate sensor and a MOX TVOC sensor cover the air itself, while the passive infrared sensor shows whether the space is occupied. A traffic-light LED and buzzer warn people in the room when a threshold is crossed, and up to 18,000 readings are stored on the device and resent after a network outage.

Key Features

- **One sensor per room.** CO_2, TVOC, PM2.5, PM10, temperature, humidity, pressure, light and motion, reported together.
- **Alerts in the room and remotely.** Traffic-light LED and buzzer on site; email, SMS or in-app alerts from ioX-Pulse.
- **No gaps in your data.** Stores up to 18,000 readings and resends them after a network outage.
- **Battery or USB power.** Four replaceable 2,700 mAh batteries, or continuous 5 V power over USB Type-C.

Applications

- **Offices and meeting rooms.** Match ventilation to how many people are actually in the room.
- **Schools and universities.** Track CO_2 and particulates in classrooms and lecture halls.
- **Healthcare.** Clinics, waiting rooms and staff areas that need logged indoor air data.
- **Retail and hospitality.** Keep stores, hotel rooms and public spaces comfortable.
- **Facilities and property.** Compare rooms and floors to plan HVAC and filter work.
- **Light industrial spaces.** Watch dust and ventilation in workshops and indoor work areas.

MODEL
LRW-COM-AQS02

FREQUENCY BAND
US915 for the United States; other bands on request

ORDER
hardware.iox-connect.com/products/lorawan-air-quality-9-in-1-iaq-sensor

Technical Specifications

Air Quality	
CO_2	NDIR, 400 to 5,000 ppm, ±(30 ppm + 3 % of reading) from 0 to 50 °C (32 to 122 °F) and 0 to 85 %RH, 1 ppm resolution
PM2.5 and PM10	Laser scattering, 0 to 1,000 µg/m³, 1 µg/m³ resolution
PM accuracy	±10 µg/m³ from 0 to 100 µg/m³; ±10 % from 100 to 500 µg/m³ (-10 to 60 °C, 14 to 140 °F)
TVOC	MOX, IAQ rating 1.00 to 5.00, ±1, 0.01 resolution
Climate	
Temperature	-20 to 60 °C (-4 to 140 °F), 0.1 °C (0.2 °F) resolution
Temperature accuracy	±0.3 °C (±0.5 °F) from -20 to 0 °C; ±0.2 °C (±0.4 °F) from 0 to 60 °C
Humidity	0 to 100 %RH, ±2 %RH at 25 °C (77 °F), 0.5 %RH resolution
Barometric pressure	260 to 1,260 hPa, ±0.5 hPa, 0.1 hPa resolution
Light and Occupancy	
Light	Photodiode, 0 to 60,000 lux, reported as level 0 to 5
Motion	Passive infrared (PIR), 80° horizontal, 55° vertical, 3 m (9.8 ft); vacant or occupied
Wireless	
Protocol	LoRaWAN 1.0.2 and 1.0.3, Class A, OTAA or ABP
Frequency bands	US915, AU915, EU868, IN865, KR920, AS923, RU864, CN470
RF output	22 dBm (915 MHz)
Receive sensitivity	-137 dBm at 300 bps
Antenna	Internal
Reporting	Every 10 minutes by default, configurable from 1 to 1,080 minutes
Device Features	
On-site alerts	Traffic-light LED (green, yellow, red) and buzzer
Alarms	Configurable thresholds
Data storage	Up to 18,000 readings, with retransmission after a network outage
Calibration	Value offsets and CO_2 calibration
Configuration	Remote configuration by LoRaWAN downlink; button lock
Power	
Batteries	4 x 2,700 mAh ER14505 Li-SOCl2, replaceable
External power	5 V / 1 A over USB Type-C
Battery life	About 1.3 years (SF7) or 1 year (SF10), US915, 10 minute reporting at 25 °C (77 °F)
Physical	
Operating conditions	-20 to 60 °C (-4 to 140 °F), 10 to 90 %RH non-condensing
Ingress protection	IP30, indoor use
Housing	PC+ABS (V0), white
Dimensions	100.8 x 114 x 22 mm (3.97 x 4.49 x 0.87 in)
Weight	222.6 g (7.85 oz) with batteries
Mounting	Wall mount with 3M tape or screws
Certifications	FCC, ISED, CE, CE (RED), RoHS

ioX-Pulse

Connect this sensor to ioX-Pulse to see live readings and history on your dashboards, and get email, SMS or in-app alerts when conditions drift.

Start Your Free Trial

BUY ONLINE
hardware.iox-connect.com

TALK TO AN IOT SPECIALIST
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LEARN MORE
www.iox-connect.com

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