AiroCheck.

Eco Monitor 3 in 1 Wireless

Battery-operated duct sensor.

Measures air and thermal comfort with a single sensor.

Product Overview

AiroCheck Eco Monitor is a customizable and compact wireless indoor air quality sensor designed to measure and monitor various parameters in the air to assess the quality of the air we breathe.

These sensors are valuable tools for detecting and quantifying environmental conditions, pollutants, and particulate matter, providing near real-time or periodic data on air quality conditions.

The **Eco Monitor 3 in 1 Duct sensor** delivers and transmits highly accurate data wirelessly through low-power long-range communication. The sensor data and dashboards help monitor and report air quality performance.

The sensors within **Eco Monitor** can also be customized and configured to parameters to measure Dust, PM1, PM2.5, PM 10, Formaldehyde (HCHO), Carbon Dioxide (CO_2), Temperature, Humidity, Atmospheric Pressure, TVOC, Ozone (O_3), Oxygen (O_2), Hydrogen Sulfide (H_2S), Methane (CH_4), Carbon Monoxide (CO), Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2), Hydrogen Gas (H_2), Ammonia (NH_3) and THI for swift assessment of environmental conditions that may affect microbial activity such as bacteria and fungi.

Product Features

Customizable sensor configuration based on application requirement.

Wireless data transmission Option through LoRaWAN®, and/or WIFI wireless protocol

Secure operation with top-down encryption

Easy Performance Management through MachineSens IoT Platform

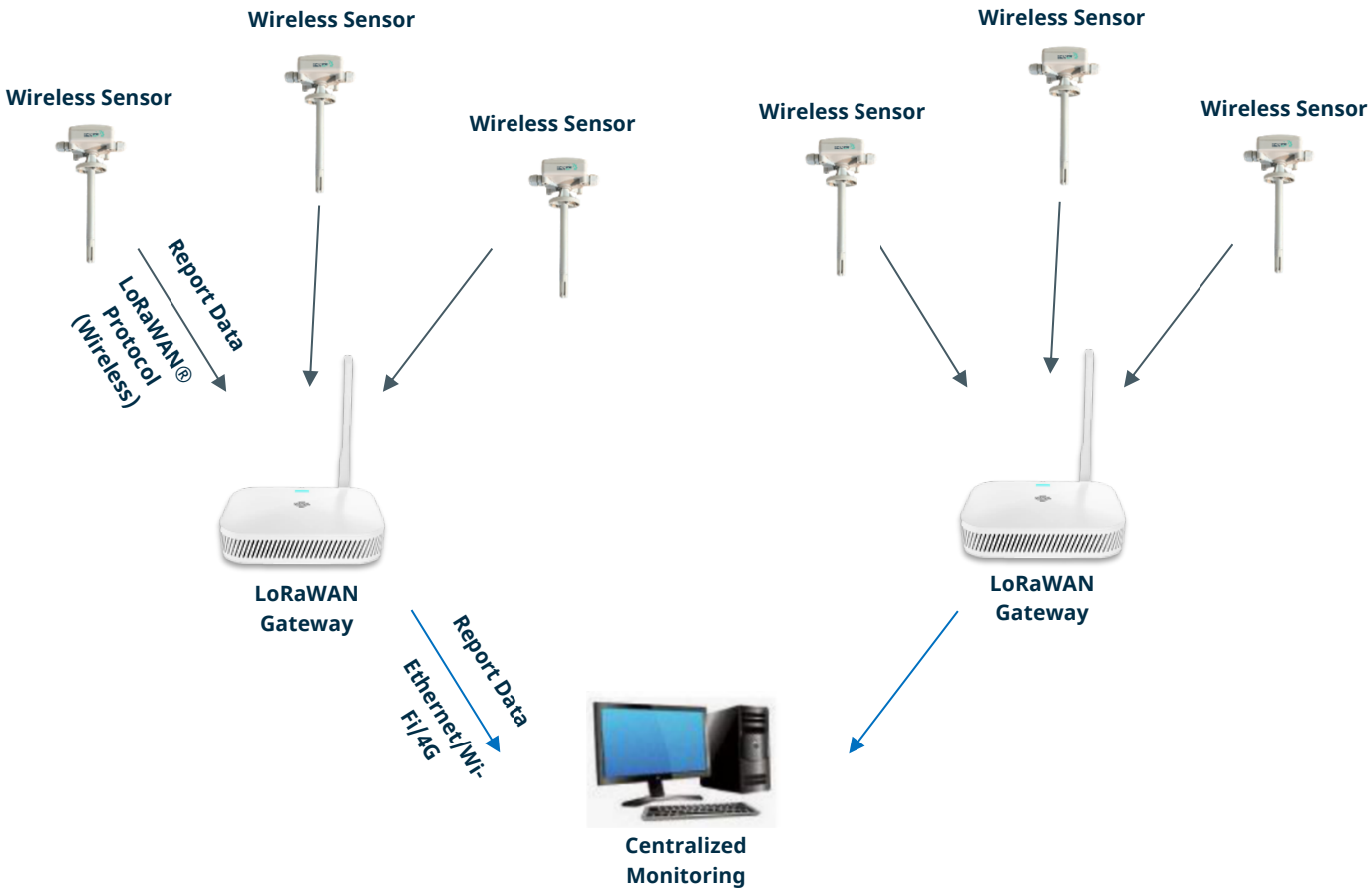
Battery Operated (Rechargeable)

Integration with Building Management System through protocol converters

Communication Technology

The **AiroCheck Eco Monitor** air quality sensors employs cutting-edge communication technology, LoRaWAN which provides low power consumption as well as long range signal propagation to enable real-time control and monitoring.

Our smart gateway receives near real-time data from all the wireless sensors within range, converts the raw data into an easy-to-use JSON format, and then publishes it using MQTT protocol. Data can be sent to any local or cloud MQTT broker via Ethernet, LTE (4G), or WIFI.



Our smart gateway receives near real-time data from all the valves within range, converts the raw data into an easy-to-use JSON format, and then publishes it using MQTT protocol. Data can be sent to any local or cloud MQTT broker via Ethernet, LTE (4G), or WIFI.

Specifications

General	
Detection Parameters	Temperature (T), Humidity (RH), Carbon Dioxide (CO_2)
Measuring range	Temperature: -20 °C to +60 °C
	Humidity: 0 to 100%RH
	Carbon Dioxide: 400 ~ 5000ppm
Measuring accuracy - Temperature	±0.5 °C @ -20 °C to +60 °C
Measuring accuracy - Humidity	±3.5% RH (within 30%RH to 80% RH range @ 25 °C)
Measuring accuracy – Cabon Dioxide	± (50ppm + 5% Reading value)
IP Class	IP54
Environment	Indoor
Housing Material	Polycarbonate base, cover, immersion rod and filter cap
Operating temperature	-10 °C to +55 °C
Storage temperature	-20 °C to +70 °C
Relative Humidity	10% to 95% (non-condensing)
Installation	On to a duct or AHU
Power Supply	3.7V LiPo Battery (Rechargeable)
Wireless Communication	
Technology	LoRaWAN®
Frequency	EU868 (868 Mhz)
Transmit Range	500m inside Building, 2KM Open Air
Security	128 AES Encryption
Data Format	JSON
Device Class	Class A
Activation Method	OTTA (Over-The-Air-Activation)
Certifications	
Regulatory	CE
Environmental	RoHS

Dimensions