Advanced, Accurate and Affordable Air Quality Monitoring

Robust, Compact, and Real-time
Continuous Ambient Air Quality Monitoring Micro-station

PATENT PENDING

Developed in collaboration with the Southern Ontario Centre for Atmospheric Aerosol Research (SOCAAR), University of Toronto.

> Setting the standard for real-time air quality monitoring, AirSENCE is a proven solution backed by cutting-edge technology with 35+ years of expertise in signal and data processing. Trusted by customers across five (5) continents, AirSENCE fulfills the needs of Smart Cities, Industries, and beyond

AirSENCE redefines air quality monitoring by overcoming sensor drift and degradation through innovative fast-response, multi-parameter sensor array architecture. Enhanced by robust machine learning and data fusion, AirSENCE delivers performance comparable to conventional monitoring stations at just a fraction of the cost. Its compact footprint, onboard processing, and user-friendly operation make AirSENCE ideal for integrating into IoT networks, delivering real-time ambient air monitoring with unmatched efficiency and accuracy.

Customizable, Intuitive, Real-time Visualization

Key Advantages

Accurate & Precise [1]	**Real-time Data & Alerts**	**Zero Calibration**
Active Sampling	**On-board Processing**	**Low Maintenance**
Cost Effective	**Long Sensor Lifespan (2yrs)**	**Weather-Proof Measurements**
Remote Access	**Local Data Storage (5yrs)**	**Global IoT SIM Card**
Data Integrity [2]	**Direct Data Transfer (Device to Customer)** [3]	

1. Aligns with EU and US EPA standards
2. Serialized binary messages preserve data in transit
3. Send data to customer without intermediary servers

Applications

Urban

Real-time air quality alerts for residents, particularly to those sensitive to air pollution

Academic & Research

Fuel groundbreaking research with precise, hyper-local data, empowering scientists, researchers, and students

Industry

Analyze emission patterns of pollutants and provide a safe and healthy work environment

Wildfire

Detect and localize wildfires early by monitoring airborne markers, ensuring community safety and enabling rapid response

Specifications

Air Quality Parameters	AQI/AQHI, CO, CO_2, H_2S, NO, NO_2, O_3, PM_1, $PM_{2.5}$, PM_4, PM_{10}, TSP, TPC, SO_2, VOC, CH_4, NH_3, & more
Environmental Parameters	Temperature, Humidity, Pressure, Light, Noise, Wind, Rainfall
Power Supply	12 or 24 VDC, PoE support, Solar & Battery (optional)
Power Consumption	3.5W (typical), 5W (max)
Dimensions & Weight	264 x 213 x 183 mm; 2.2 kg
Communication	Ethernet, Wi-Fi, Cellular, LoRaWAN, Modbus over RS485 or TCP/IP
Enclosure	Polycarbonate, NEMA 4/4X with IP65
Certification	$C \epsilon$
Operating Environment	Outdoor or large enclosed environments

Currently deployed in 23 countries across 5 continents

Deployments

Join AirSENCE as a distributor, project partner, channel partner, or other collaborator, to reduce GHG emissions, improve air quality, and create a better and sustainable future.

AirSENCE technology is validated against standard reference analyzers for high accuracy.

We're social! Follow us

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