Polludrone® Pro

Air Quality Monitoring Equipment

Polludrone is a Continuous Ambient Air Quality Monitoring System (CAAQMS). It is capable of monitoring various environmental parameters related to air quality, noise, odour, weather, radiation. It measures the particulate matter and gaseous concentrations in the ambient air in real-time. Using external probes, it can also monitor other auxiliary parameters like traffic, disaster and weather monitoring.

- Ultimate Durability
- Weather Resistant
- Compact and Lightweight
- Solar Powered
- Retrofit Design
- Real-Time Data
- Tamper Proof
- Network Agnostic
- Over-The-Air Updates
- 3-level Calibration

Our Technology

The air pollution monitoring equipment has all the air quality sensor modules integrated into a single enclosure. Each sensor module works on different technologies. Our sensing technology works on proven working principles such as NDIR, Electrochemical Analysis, Semiconductor, Optical Measurement, and Laser-Scattering. As a part of our proprietary 'Micro Active Sampling' (e-breathing technology), we also have a sophisticated suction-and-exhaust system for air sample collection and monitoring inside a controlled environment. In other words, this isolates the effect of the external environment on measurement to achieve 13% higher accuracy than the industry standards.

Polludrone® Usecases

Airports

Industries

Parameters

Sensor		ID	Range	Resolution	Min. Detection	Drift	Working Principle	Expected Sensor Life
Suspended Particulate Matters with size less than 2.5µ ($PM_{2.5}$)		OZPM_1*	Upto 5000 µg/m^3	0.1 µg/m^3	1 µg/m^3	N.A.	Optical Particle Counter	18 Months
Suspended Particulate Matters with size less than 10µ (PM_{10})								
Ultra Fine Particulate Matters with size less than 1µ (PM_1)								
Total Suspended Particulates (TSP) (PM_{100})			Upto 30 mg/m^3					
Carbon Monoxide (CO)		OZCO_1*	0-5 ppm	0.01 ppm	0.01 ppm	< 1ppm / year	Electrochemical	2 years
		OZCO_4	0-50 ppm	0.05 ppm	0.05 ppm	< 2% / Month		
		OZCO_2	0-100 ppm	0.1 ppm	0.1 ppm	< 2% / Month		
		OZCO_3	0-1000 ppm	0.75 ppm	0.75 ppm	< 2% / Month		
Carbon Dioxide (CO_2)		OZCO2_1*	0-5000 ppm	1 ppm	400 ppm	±5 ppm / Year	Non Despersive Infrared	
Nitric Oxide (NO)		OZNO_1*	0-5 ppm	0.001 ppm	0.01 ppm	< 2% / Month	Electrochemical	
		OZNO_2	0-100 ppm	0.5 ppm	0.5 ppm	±50 ppb / Year		
Nitrogen Dioxide (NO_2)		OZNO2_1*	0-10 ppm	0.001 ppm	0.01 ppm	±20 ppb / Year		
		OZNO2_2	0-100 ppm	0.2 ppm	0.2 ppm	< 2% / Month		
		OZNO2_3	0-500 ppm	0.5 ppm	0.5 ppm	< 2% / Month		
Ozone (O_3)		OZO3_1*	0-10 ppm	0.001 ppm	0.01 ppm	±20 ppb / Year		
Hydrogen Sulfide (H_2S)		OZH2S_1*	0-1.5 ppm	0.001 ppm	0.01 ppm	±100 ppb / Year		
		OZH2S_2	0-50 ppm	0.05 ppm	0.05 ppm	< 2% / Month		
		OZH2S_3	0-200 ppm	0.2 ppm	0.2 ppm	< 2% / Month		
		OZH2S_4	0-2000 ppm	2 ppm	2 ppm	< 2% / Month		
Sulfur Dioxide (SO_2)		OZSO2_1*	0-10 ppm	0.001 ppm	0.01 ppm	±20 ppb / Year		
		OZSO2_2	0-100 ppm	0.2 ppm	0.2 ppm	< 2% / Month		
		OZSO2_3	0-2000 ppm	5 ppm	5 ppm	< 2% / Month		
Ambient Noise		OZN_1*	Upto 140 dB	1 dB	0.5 dB	N.A.	Capacitive	
Temperature		OZTEMP_1*	-40 to 125°C	0.01°C ppm	-40 °C	N.A.	Solid State Semiconductor Sensing	
Humidity		OZHUM_1*	100% Rh	0.10% ppm	0.10%	N.A.		
Barometric Pressure		OZPRES_1*	300-1100 hPa	0.18 Pa	300 hPa	N.A.		
Pyranometer Solar Radiation 300 - 1100 nm	Light Intensity	OZUV_1	Up to 1,00,000 Lux	1 Lux	1 Lux	N.A.	Photoconductivity	3 Years
	Visible Light		Upto 5000 Lux	0.1 Lux	0.1 Lux	N.A.		
	UV Radiation		0.1-100,000 uW/cm²	0.1 uW/cm²	0.1 uW/cm²	N.A.		
	UV Index		0-12	-	-	N.A.		

External Modules

Anemometer
OZWSD_1*
Wind Speed: 0-40 m/s
Wind Direction: 0-359°
Working Principle: Ultrasonic

Rain Gauge
OZRAIN_1*
Resolution: 0.25 mm
Working Principle: Tipping Bucket

Vibration Sensors
PPV: +/- 2G
Range frequency: 0.5 - 250 Hz
Range velocity: ±50 mm/s (±2 in/s)
Working Principle: MEMS

** Indicates standard delivery timeline*

Specifications

Size	360mm (H) x 328mm (W) x 200mm (D)
Weight	7.2 Kg (instrument weight)
Material	Aluminum Magnesium Alloy, Mild-steel (With Powder Coating), FRP
Certifications	CE, FCC, NEMA 4X, IP66, RoHS

Changing the way Industries monitor air quality

House No.2, Garden View Corporate House,
Opp. Bodakdev Auda Garden, Ahmedabad, India
contact@oizom.com / connect@oizom.com
+91 88666 60025 / 39