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	5000 hours
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.		
Light Intensity	OZUV_1*	Up to 1,00,000 Lux	1 Lux	1 Lux	N.A.	Photoconductivity	3 Years
UV Radiation		0.1-100,000 uW/cm²	0.1 uW/cm²	0.1 uW/cm²	N.A.		
Visible Light Intensity		Up to 5000 Lux	0.1 Lux	0.1 Lux	N.A.		

** 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

Accurate Air Quality Monitoring And Advanced Data Analytics

Get in touch

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