

# Polludrone<sup>®</sup> 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<sup>®</sup> 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 <sub>2.5</sub> )	OZPM_1*	Upto 5000 µg/m <sup>3</sup>	0.1 µg/m <sup>3</sup>	1 µg/m <sup>3</sup>	N.A.	Optical Particle Counter	18 Months	
Suspended Particulate Matters with size less than 10µ (PM <sub>10</sub> )								
Ultra Fine Particulate Matters with size less than 1µ (PM <sub>1</sub> )								
Total Suspended Particulates (TSP) (PM <sub>100</sub> )		Upto 30 mg/m <sup>3</sup>						
Carbon Monoxide (CO)	OZCO_1*	0-5 ppm	0.01 ppm	0.01 ppm	< 1ppm / year	Electrochemical		
	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 <sub>2</sub> )	OZCO2_1*	0-5000 ppm	1 ppm	400 ppm	±5 ppm / Year	Non Dispersive Infrared		
Nitric Oxide (NO)	OZNO_1*	0-5 ppm	0.001 ppm	0.01 ppm	< 2% / Month	Electrochemical	2 years	
	OZNO_2	0-100 ppm	0.5 ppm	0.5 ppm	±50 ppb / Year			
Nitrogen Dioxide (NO <sub>2</sub> )	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 <sub>3</sub> )	OZO3_1*	0-10 ppm	0.001 ppm	0.01 ppm	±20 ppb / Year			
Hydrogen Sulfide (H <sub>2</sub> S)	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 <sub>2</sub> )	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/cm <sup>2</sup>	0.1 uW/cm <sup>2</sup>	0.1 uW/cm <sup>2</sup>	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**



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