

Polludrone[®] Smart

Ambient Air Quality Monitoring Device



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 quality monitoring device 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 have a sophisticated suction-and-exhaust system for air sample collection and monitoring inside a controlled environment. This isolates the effect of the external environment on measurement to achieve 13% higher accuracy than the industry standards.

Polludrone[®] Usecases



Roads And Highways



Smart City

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)								
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	2 years	
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			Electrochemical
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	Solid State Semiconductor Sensing
Temperature	OZTEMP_1*	-40 to 125°C	0.01°C ppm	-40 °C	N.A.			
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	OZUV_1	Light Intensity	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 ²	0.1 uW/cm ²	0.1 uW/cm ²	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



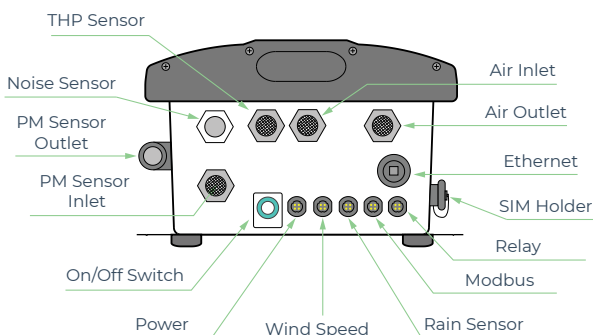
Rain Gauge
 OZRAIN_1*
Resolution: 0.25 mm
Working Principle: Tipping Bucket



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



Get in touch



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