

Polludrone®

Ambient Air Quality Monitoring System

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.



Patented Technology- Works on innovative e-breathing technology for higher data accuracy.



Retrofit Design- Plug and play design for ease of implementation.



Compact- Light-weight and compact system that can be installed at 12-15 feet (4-5 m) height.



Internal Storage- Internal data storage capacity of upto 8 GB or 90 days.



On-device Calibration- On-site device calibration capability using on-device calibration software.



Identity And Configuration- Each equipment carries its unique identity with geo-tagging through wireless configuration.



Tamper Proof- Comes with a security system to avoid tampering / malfunction / sabotage.



Over-The-Air Update- Automatically upgradeable from a central server without any onsite visit.



Network Agnostic- Supports a wide range of connectivity options like GSM / GPRS / WiFi / LoRa / NBIoT / Ethernet / Modbus.



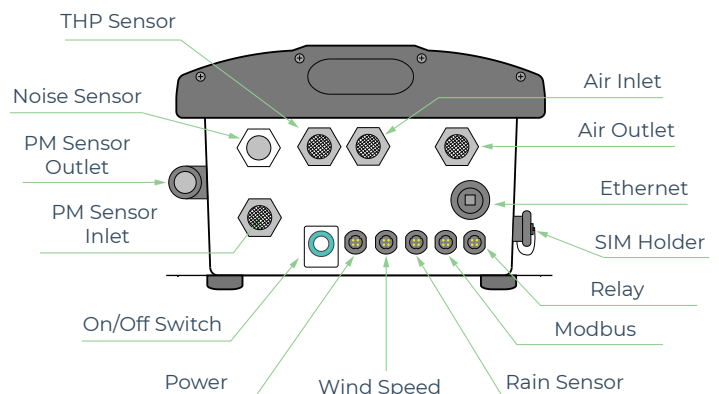
Real-Time Data- Continuous monitoring and real-time data transfer at configurable intervals.



Weather Resistant- IP66 Grade (certified) enclosure for endurance against harsh weather.



Solar Powered with Battery Backup- Compatible to charge internal battery using solar power.



Polludrone® Usecases



Smart City



Roads And Highways



Smart Campus



Airports

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 Certified, PTCRB Certified Communication Module

Parameters

ID	Parameter	Range	Resolution	Min. Detection	Drift	Working Principle	Measurement Principle	Sample Rate	Expected Sensor Life
OZPM_1	Suspended Particulate Matters with size less than 2.5 μ (PM _{2.5})	Upto 5000 μ g/m ³	0.1 μ g/m ³	1 μ g/m ³	N.A.	Optical Particle Counter	Active Sampling	1 L/min	5000 hours
OZPM_2	Suspended Particulate Matters with size less than 10 μ (PM ₁₀)								
OZPM_3	Ultra Fine Particulate Matters with size less than 1 μ (PM ₁)								
OZPM_4	Total Suspended Particulates (PM ₁₀₀)								
OZCO2_1	Carbon Dioxide (CO ₂)	0-5000 ppm	1 ppm	400 ppm	\pm 5 ppm / Year	NDIR	Electrochemical	325 mL per sample	2 years
OZCO_1	Carbon Monoxide (CO)	0-5 ppm	0.01 ppm	0.01 ppm	< 1ppm/year				
OZSO2_1	Sulfur Dioxide (SO ₂)	0-10 ppm	0.001 ppm	0.01 ppm	\pm 20 ppb / Year				
OZNO_1	Nitric Oxide (NO)	0-5 ppm	0.001 ppm	0.01 ppm	\pm 50 ppb / Year				
OZNO2_1	Nitrogen Dioxide (NO ₂)	0-10 ppm	0.001 ppm	0.01 ppm	\pm 20 ppb / Year				
OZO3_1	Ozone (O ₃)	0-20 ppm	0.001 ppm	0.01 ppm	\pm 20 ppb / Year				
OZH2S_1	Hydrogen Sulfide (H ₂ S)	0-1.5 ppm	0.001 ppm	0.01 ppm	\pm 100 ppb / Year				
OZN_1	Ambient Noise	Upto 140 dB	1 dB	0.5 dB	N.A.	Capacitive	Passive Monitoring	N.A.	3 years
OZLI_1	Light Intensity	Up to 1,00,000 Lux	1 Lux	1 Lux	N.A.	Photo-conductivity			
OZUV_1	UV Radiation (0-12 UVI)	0.1-100,000 μ W/cm ²	0.1 μ W/cm ²	0.1 μ W/cm ²	N.A.				
OZVLI_1	Visible Light Intensity	Up to 5000 Lux	0.1 Lux	0.1 Lux	N.A.	Solid state semi conductor sensing			
OZTEMP_1	Temperature	-40 to 125 $^{\circ}$ C	0.01 $^{\circ}$ C	-40 $^{\circ}$ C	N.A.				
OZHUM_1	Humidity	100% Rh	0.1%	0.1%	N.A.				
OZPRES_1	Barometric Pressure	300-1100 hPa	0.18 Pa	300 hPa	N.A.				2 years

Note - If a custom range and resolution of a sensor is required, please contact our team.

External Modules (optional)



Rain Sensor

- Tipping Bucket
- In mm / inch



Wind Sensor

- Ultrasonic sensor
- 0-359 $^{\circ}$, 0-40 m/s

Accurate Air Quality Monitoring And Advanced Data Analytics



Get in touch



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