

Dustroid[®] Smart

Ambient Dust Monitor



Dustroid is an Online Particulate Monitoring system to measure the concentration of dust particles in the ambient air. It is capable of monitoring various particulate size ranging from 1 micron to 100 microns such as Ultrafine Suspended Particulate Matter (UFPM), Suspended Particulate Matter (SPM), Respiratory Suspended Particulate Matter (RSPM) and Total Suspended Particulates (TSP).



Ultimate
Durability



Weather
Resistant



Compact and
Lightweight



Retrofit
Design



Real-Time
Data



Network
Agnostic



Over-The-Air
Updates



Tamper
Proof

Our Technology

Dustroid Smart is technologically equipped and works on the Active Sampling method to count particulate matters using a highly accurate laser beam. Its Anti-static inlet avoids loss of particulate during sampling. It offers remote calibration capabilities along with auto device firmware updates. The intelligent optical particle counter can measure data with high accuracy and transmit the same through various data communication modules like GSM, WiFi, LoRa, Satellite, etc. The data is transmitted to the Oizom cloud in near real-time.

Dustroid[®] Usecases



Construction



Mining And Quarrying

Parameters

Sensor	ID	Range	Resolution	Min. Detection	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	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)						
Ambient Noise	OZN_1	Upto 140 dB	1 dB	0.5 dB	Capacitive	2 years
Temperature	OZTEMP_1	-40 to 125°C	0.01°C	-40 °C	Solid State Semiconductor Sensing	
Humidity	OZHUM_1	100%Rh	0.10%	0.10%		
Barometric Pressure	OZPRES_1	300-1100 hPa	0.18 Pa	300 hPa		
Pyranometer Solar Radiation 300 - 1100 nm	OZUV_1	Up to 1,00,000 Lux	1 Lux	1 Lux	Photoconductivity	3 years
		Upto 5000 Lux	0.1 Lux	0.1 Lux		
		0.1-100,000 uW/cm ²	0.1 uW/cm ²	0.1 uW/cm ²		
		0-12	-	-		

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



Noise Sensor
OZN_1*

Working Principle: Capacitive
Range: Upto 140 dB



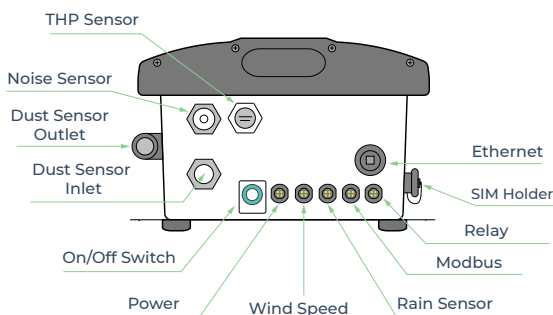
Vibration Sensors

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

*Indicates standard delivery timeline.

NOTE: Vibration & Class I Noise sensors are available as optional features upon specific customer request.

Specifications



Size	360mm (H) x 328mm (W) x 200mm (D)
Weight	6.5 Kg (instrument weight)
Material	Aluminum Magnesium Alloy, Mild-steel (With Powder Coating), FRP
Certifications	CE & FCC Certified, PTCRB Certified Communication Module

Changing the way Industries monitor air quality



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