Dustroid® Max

OIZOM®
REDEFINING RESOURCES

Industrial Dust Monitor

Dustroid® Max is an Industrial Grade Particulate Monitoring system to measure the concentration of dust particles in the ambient air. It is capable of monitoring various particulate size ranging 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). It works on Active Sampling method to count particulate matters using a highly accurate laser beam.

Dustroid® Max can be used to monitor dust levels in areas with high-dust-laden activities like Construction, Mining, Quarrying, Ports, and Metallurgic processes. The data gathered from Dustroid® can assist in dust suppression automation, for instance, to activate suppressants at the location once the threshold is breached.

Product Features

- Ultimate Durability
- Weather Resistant
- Flow Sampling Control
- Temperature Pre-Treatment
- Real-Time Data
- Compact and Lightweight
- Network Agnostic
- Over-The-Air Updates

Our Technology

Dustroid® Max is technologically equipped and works on the Active Sampling method to count particulate matters using a highly accurate laser beam. Additionally, it has a heated inlet for dehumidification of air-sample. Its Anti static inlet avoids loss of particulate during sampling. It offers remote calibration capabilities along with auto device firmware updates. It also has built-in flow sampling control to make the particulate measurement suitable for critical applications. The intelligent optical particle counter can measure data with high accuracy and transmit the same through various data communication modules like GSM, WiFi, etc. The data is transmitted to the Oizom® cloud in real-time.

Product Usecases

Mining and Quarrying

Dust monitoring at mining sites helps to ensure a safe workplace, protect the environment, and prevent health hazards.

Industrial Process Monitoring

Dustroid® provides real-time data on dust generated from industrial processes. Tracking PM levels helps industries maintain clean air and comply with regulations.

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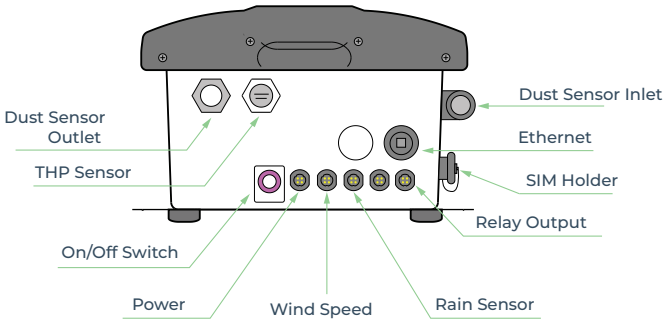
General Specifications

Size	360mm (H) x 328mm (W) x 200mm (D)
Weight	8 Kg (instrument weight)
Material	Aluminum Magnesium Alloy, Mild-steel (With Powder Coating), FRP
Certifications	CE, NEMA 4X, IP66, RoHS, MCERTs



	Connectivity Options	Specification
Wireless	GSM	Global 2G / 3G / 4G
	LTE	CAT-M1
	Wifi	AP Mode and Station Mode
	STARLINK	Satellite
Wired	Ethernet	Static / DHCP Configuration
	Relay Output	2 Channel

Technical Specifications

Avg. Power Consumption	Upto 60 Watt (Actual consumption depends upon the number of parameters)
Power Input Options	External 110-230V AC 50-60Hz
Operating Temperature	-20 °C to 60 °C

Sensing Parameters

Parameter	ID	Range	Resolution	Min. Det.	Working Principle	Expected Sensor Life
Particulate Matter (PM_1, $PM_{2.5}$, PM_{10}, PM_{100})	OZPM_2	Upto 5000 µg/m³ for PM_1, $PM_{2.5}$, PM_{10} ; Upto 30,000 µg/m³ for PM_{100}	0.1 µg/m³ for PM_1, $PM_{2.5}$, PM_{10} ; 1 µg/m³ for PM_{100}	1 µg/m³	Laser Scattering	2 Years
Temperature	OZTEMP_1*	-40 to 125°C	0.01°C	-40 °C	Resistive /Photoacoustic	2 Years
Humidity	OZHUM_1*	100% Rh	0.10%	0.10%		
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 (Light Intensity)	1 Lux	1 Lux	Photoconductivity	2 Years
		0.1-100,000 uW/cm² (UV Radiation)	0.1 uW/cm²	0.1 uW/cm²		
		Upto 5000 Lux (Visible Light)	0.1 Lux	0.1 Lux		
		0-12 (UV Index)	-	-		

Note: Expected Sensor Life can vary, subject to actual concentration on-site. In the interest of continued product improvement, we reserve the right to change design features and specifications without prior notification.The data contained in this document is for guidance only, Oizom® accepts no liability for any consequential losses, injury or damage resulting from the use of this document or the information contained within.

External Modules (optional)

1. 

Anemometer
OZWSD_1*, OZWSD_2
Wind Speed: 0-40 m/s; 0-80 m/s
Wind Gust: 0-40 m/s
Wind Direction: 0-359°
Working Principle: Ultrasonic

2. 

Rain Gauge
OZRAIN_1, OZRAIN_2*
Resolution: 0.25 mm; 0.10mm
Working Principle: Tipping Bucket

3. 

Noise Sensor
OZN_2*
Working Principle: Capacitive
Range: Upto 140 dB

4. 

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.*

Changing the way Industries monitor air quality

Get in touch

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