

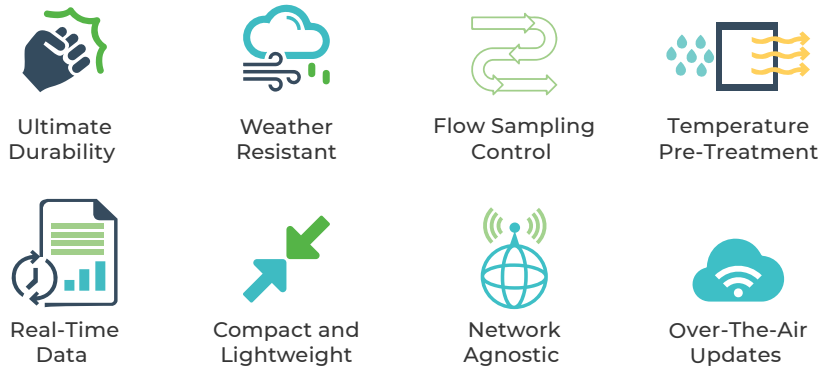
Industrial Dust Monitor



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



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, LoRa, 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.

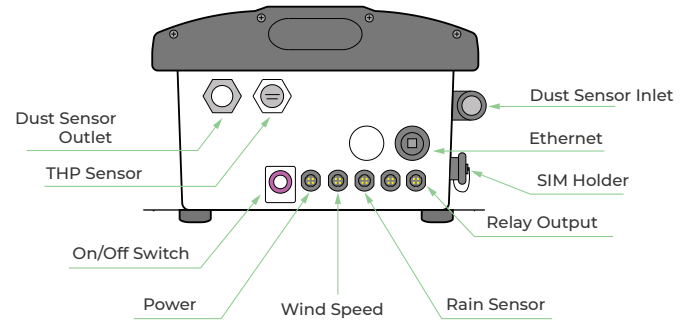


Industrial Process Monitoring

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

General Specifications

Size	360mm (H) x 328mm (W) x 200mm (D)
Weight	8.5 Kg (instrument weight)
Material	Aluminum Magnesium Alloy, Mild-steel (With Powder Coating), FRP
Certifications	CE & FCC Certified, PTCRB Certified Communication Module



Connectivity Options		Specification
Wireless	GSM	Global 2G / 3G / 4G
	LoRa	868 MHz / 915 MHz
	LTE	CAT-M1
	NB-IoT	CAT-NB1
	Sigfox	868 to 869 MHz, 902 to 928 MHz
	Wifi	AP Mode and Station Mode
Wired	Ethernet	Static / DHCP Configuration
	Relay Output	2 Channel

Technical Specifications

Avg. Power Consumption	Upto 24 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

ID	Parameter	Range	Resolution	Min. Detection	Error	Working Principle	Measurement Principle	Flow Rate	Expected Sensor Life
PM ₁	Ultra-fine Particulate Matters with size less than 1µ	0-5000 µg/m ³	0.1 µg/m ³	1 µg/m ³	Upto ± 10%	Optical Particle Counter (with heated inlet)	Continuous Flow Active Monitoring	1 L/min	18 Months
PM _{2.5}	Suspended Particulate Matters with size less than 2.5µ								
PM ₁₀	Suspended Particulate Matters with size less than 10µ								
PM ₁₀₀	Total Suspended Particulates (TSP)	0-30,000 µg/m ³							
Temp	Temperature	-40 °C to +125 °C	0.01 °C	-40 °C	N.A.	Solid State Semiconductor Sensing	Passive Monitoring	N.A.	3 years
Hum	Humidity	Up to 100% Rh	0.1 %	0.1 %	N.A.				
Bmp	Barometric Pressure	300-1100 hPa	0.18 Pa	300 hPa	±1.0 hPa / Year				

External Modules (optional)

1 **Anemometer**
OZWSD_1*
Wind Speed: 0-40 m/s
Wind Direction: 0-359°
Working Principle: Ultrasonic

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

3 **Noise Sensor**
OZN_1*
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

Changing the way Industries monitor air quality



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