

Communication

Data Interval	2-30 minutes (configurable)
Data-push Protocol	HTTP post request to host-server
Data-pull	HTTP request on device IP
Firmware Updates	Over-The-Air Firmware Update
Standby Connectivity	GSM (2G/3G/4G) for remote diagnosis, FOTA updates, and cloud calibration

Power

Avg. Power Consumption	5 Watt (Actual consumption depends upon the number of parameters)
Power Input Options	External 110-230V AC 50-60Hz, 40Watt Monocrystal Solar Panel
SMPS Specs	24V, 2Amps output UL-62368 & CAN/CSA C22.2 Certified
Battery Backup Time	12 Hours
Battery Specs	Lithium iron phosphate (LiFePO4) battery cell with rated voltage 12.8V Capacity 6Ah

Technical Specification

Processor	Quad Core ARM Cortex
Memory	2GB RAM / 8GB eMMC ROM
Device Interface	On-device Software / API
Operating Temperature	-20 °C to 60 °C
Operating Humidity	0-95% RH

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
Wired	Wifi	AP Mode and Station Mode
	Ethernet	Static / DHCP Configuration
	Modbus	RS485 RTU / TCP
	Relay Output	2 Channel

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 2.5µ (PM _{2.5})	Upto 5000 µg/m ³	0.1 µg/m ³	1 µg/m ³	N.A.	Optical Particle Counter	Active Sampling	1 L/min	5000 hours			
OZPM_2	Suspended Particulate Matters with size less than 10µ (PM ₁₀)											
OZPM_3	Ultra Fine Particulate Matters with size less than 1µ (PM ₁)											
OZPM_4	Total Suspended Particulates (PM ₁₀₀)	Upto 30 mg/m ³										
OZCO2_1	Carbon Dioxide (CO ₂)	0-5000 ppm	1 ppm	400 ppm	±5 ppm / Year	NDIR	Electrochemical	325 mL per sample	2 years			
OZCO_3	Carbon Monoxide (CO)	0-1000 ppm	0.75 ppm	0.75 ppm	< 2% / Month							
OZSO2_1	Sulfur Dioxide (SO ₂)	0-20 ppm	0.001 ppm	0.01 ppm	±20 ppb / Year							
OZNO_1	Nitric Oxide (NO)	0-20 ppm	0.001 ppm	0.01 ppm	±50 ppb / Year							
OZNO2_1	Nitrogen Dioxide (NO ₂)	0-20 ppm	0.001 ppm	0.01 ppm	±20 ppb / Year	Capacitive	Passive Monitoring	N.A.	3 years			
OZO3_1	Ozone (O ₃)	0-20 ppm	0.001 ppm	0.01 ppm	±20 ppb / Year							
OZH2S_1	Hydrogen Sulfide (H ₂ S)	0-10 ppm	0.001 ppm	0.01 ppm	±100 ppb / Year							
OZN_1	Ambient Noise	Upto 140 dB	1 dB	0.5 dB	N.A.	Photo-conductivity				Solid state semi conductor sensing	2 years	
OZLL_1	Light Intensity	Up to 1,00,000 Lux	1 Lux	1 Lux	N.A.							
OZUV_1	UV Radiation (0-12 UVI)	0.1-100,000 uW/cm ²	0.1 uW/cm ²	0.1 uW/cm ²	N.A.	Solid state semi conductor sensing	Passive Monitoring	N.A.	2 years			
OZVLL_1	Visible Light Intensity	Up to 5000 Lux	0.1 Lux	0.1 Lux	N.A.							
OZTEMP_1	Temperature	-40 to 125°C	0.01°C	-40 °C	N.A.	Solid state semi conductor sensing				Passive Monitoring	N.A.	2 years
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.	Solid state semi conductor sensing	Passive Monitoring	N.A.	2 years			

External Modules

(optional)



1

Rain Sensor

- Tipping Bucket
- In mm / inch



2

Wind Sensor

- Ultrasonic sensor
- 360°, 0-40 m/s



3

Flood Sensor

- Ultrasonic sensor
- Upto 765 cm