

## MacSense Gen2 Overview :

The MacSense Gen2 Sensor is a high-precision, low-power indoor air quality monitor engineered for enterprise, industrial, and smart-infrastructure deployments.

It continuously monitors Temperature, Relative Humidity, CO<sub>2</sub> concentration, PM2.5, PM10, and TVOCs, providing a real-time AQI score and actionable environmental insights.



### Sensors

Temperature

Humidity

CO<sub>2</sub>

TVOCs

PM2.5

Atm. Pressure

PM10

## Features

### Wireless Technology



#### High-Precision Multi-Parameter Sensors

For accurate AQI sensing

#### LoRaWAN® Class A & C communication

Communication for flexible uplink strategies

#### IP66-Rated Enclosure (Sensor)

Designed for industrial & outdoor environments

#### Supports periodic, threshold-based, & event-driven uplinks

#### BLE Support

Easy local configuration and diagnostics with Maya

#### Ultra-long-range transmission

Up to 08 km line of sight

#### Supports Macnman Beam Protocol

Direct control, & local device-to-device actions

#### Secure onboarding with pre-flashed DevEUI / AppEUI / AppKey

#### Optional Onboard Data Buffering

To prevent data loss in case of network downtime

#### Compatible with all LoRaWAN® network servers & gateways

## Specifications

### Measurement

Parameter	Range	Accuracy	Resolution
Ambient Temperature	-40°C to +85°C	±0.2°C @ 25°C	0.01°C
Relative Humidity	0% to 100% RH	±3% RH(@90 %RH)	0.01% RH
CO <sub>2</sub>	400 ppm – 2'000 ppm	5% of reading	± 10 ppm
TVOCs	0~60000 ppb	±10 % of reading	1 ppb
Atm. Pressure	500–1100 hPa	±0.5 hPa (25°C)	0.1 hPa
PM2.5	0~1000µg/m³µg/m³	±15µg/m³	1µg/m³
PM 10			

### Wireless Transmission

Technology	LoRaWAN® (v1.0.4), Macnman MacTalk D2D Protocol
Antenna	Internal high-efficiency antenna
Supported Bands	IN865 / RU864 / EU868 / US915 / AU915 / KR920 / AS923-1/2/3/4
Tx Power	23 dBm @ 868 MHz
Sensitivity	-137 dBm @ 300 bps
Activation	OTAA
LoRaWAN® Class	Class A (default), Configurable to Class C via Maya

## Led Status

LED Type	3 Internal Multi-Color LED
Solid Blue	Device is connected with Maya App
Flashing Blue	OTA (Over-the-Air) update in progress
Slow Blinking Green	Attempting to connect to the LoRaWAN® network
Single Red Blink	A confirmed parameter of MacSense is being modified

## Configuration

Configuration	Via Macnman Maya Android App
Maya Fatures	Threshold / Trigger / Sample based alarm triggers
Stored Records *	30,000 Records (accessible via Maya)
Remote Configuration	Yes - JSON format Data

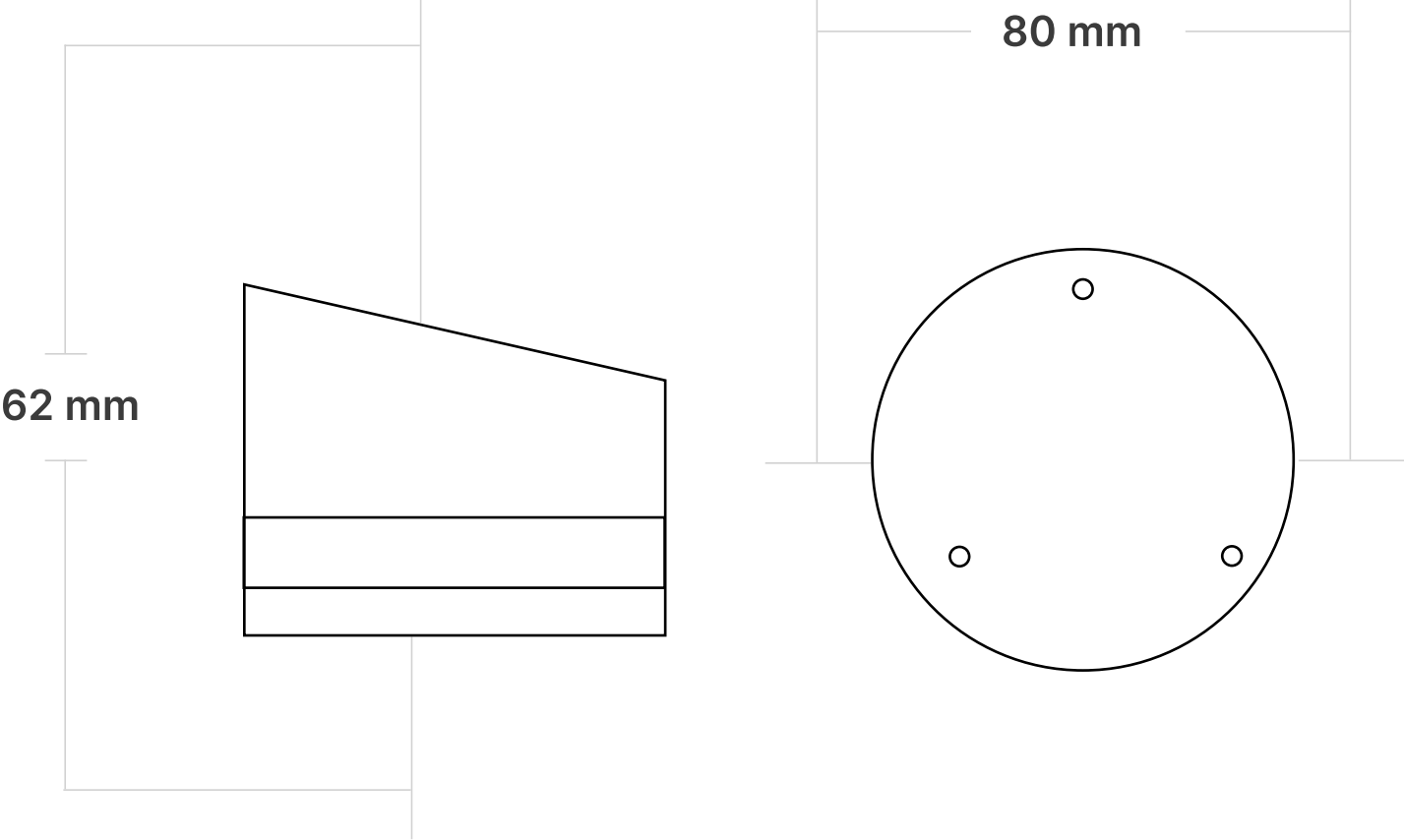
## Physical Characteristics

Power Supply	230 AC (Type C) / DC *
Solar Panel *	Solar Panel (Monocr ystalline)
	Power : 0.5W to 1 W - 1 2 V
Operating Temp	- 40° C to +80° C
Humidity Range	0% to 1 00% RH (non- condensing)
Ingress Protection	IP 35 standard (IP 65 optional variant Outdoor)
Housing Material	Glass Field Nylon
Color	Matte W hite
Weight	~240g

Dimensions	Approx. 80 mm X 62 mm ( customisable branding available )
Mounting Options	Standard Product is Table Top
	Mounting Bracket options can be customized
Charging Cable	Type C
IP Rating(MacSync)	IP35

### Certifications

Regulatory	WPC , CE (Sensors)
Environmental	RoHS compliant



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## Say Hello 🙌

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