

packetSENSE

Outdoor Air Quality Sensor

with Solar Panel



The **packetSENSE Outdoor Air Quality Sensor w/ Solar Panel** is a low-power, LoRaWAN®-compatible device that monitors air quality-related data, such as dust level (PM1, PM2.5, and PM 10), temperature, and humidity. The device keeps track of the previously mentioned factors through specified time intervals. Furthermore, users can view the accumulated data and generate reports via Packetworx's software, packetVIEW, or any third-party platform.

The **packetAIR Outdoor with Solar Panel** has a backup power system that lasts up to 7 days. The design guarantees easy installation and operation at low power to reduce carbon footprint. A periodic check is needed on vents for possible contaminations and blockages.

Features

- LoRaWAN®-compatible
- Optimized as IoT End-Node
- Periodic Status Update
- Temperature, Humidity and Dust Level Sensor
- Backup Power System (Battery)
- Fit for Outdoor Installation

Applications

- Air Quality Monitoring
- Smart City
- Pollution Control
- Weather Stations
- Industrial Automation
- Carbon Emission Monitoring

Technical Specification

Data Communication Supported

Technology	LoRaWAN®
Frequency	EU868/AS923-3
Tx Power	25dBm

Sensors

Temperature

Range	x1
Accuracy	±0.8 °C @ 15 °C - 35 °C ±1.5 °C @ -10 °C - 60 °C
Repeatability	±0.1 °C

Humidity

Range	0% - 100% RH
Accuracy	±6% RH @ 15 °C - 35 °C with 20 %RH - 65 %RH ±9% RH @ -10 °C - 60 °C with 0 % RH- 100% RH
Repeatability	±0.4% RH

PM 1.0

Range	0 - 1µg/m³
Accuracy	±15%
Resolutions	0.1µg/m³

PM2.5 & PM10

Range	0 - 1000µg/m³
Accuracy	±10% @100-500µg/m³, ±10µg/m³ @0-100µg/m³
Resolutions	1µg/m³

SO2

Range	0-20 ppm
Resolutions	0.1 ppm

O3

Range	10-10,000 ppb
Resolutions	10 ppb

CO

Range	0-500 ppm
Resolutions	0.1 ppm

CO₂

Range	0 - 40'000 ppm
Accuracy	±(50 ppm + 5% of reading) @ 400 ppm - 2'000 ppm
Resolutions	±10 ppm

Electrical

Power Supply	5V/2A (Solar-charged)
Backup System	3.6V, 19.2Ah LiFePO4 Battery Pack

General Specifications

Operating Temperature	-20 °C - 60 °C
Relative Humidity	10% - 90% (non-condensing)
Ingress Protection	IP65
Dimension	100 x 70 x 50 mm ³ (3.94 x 2.75 x 1.97 in ³)
Mounting	Wall Mounting Outdoor: Aluminum shroud attachment

packetworx
WE CONNECT THINGS

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