



Aeronode A102 Series

Introduction

The Aeronode A102 series is Aeropulse's LoRa-enabled device, capable of measuring up to 16 pollutants in a single unit. Sensor data is transmitted via LoRaWAN technology, enabling users to manage air quality data remotely through the Aeropulse Dashboard and a LoRaWAN gateway.

The device features two replaceable capsules—one for the sensor and one for the battery. Depending on the use case, both capsules can either be sensors (for additional measurements) or batteries (for extended battery life).

Ideal for indoor environments such as offices, schools, stores, and hospitals, the Aeronode A102 series ensures accurate environmental monitoring.

Key Features

- LoRaWAN connectivity
- Replaceable capsules
- Sensor and battery capsules are interchangeable
- Up to 16 measurements in one device
- Multiple connectivity options
- Flexible power supply options
- Over 1.5 years of local data storage
- Minimalist design

Specifications

Model Variants

- A102C for CN470
- A102E for IN865/EU868/US915/AU915/KR920/AS923

Wireless Transmission

- Technology: LoRaWAN
- Frequency: CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923

Sensors and Measurement Parameters

Sensor Type	Range	Accuracy	Resolution	Technology
PM2.5	0 - 1000 $\mu\text{g}/\text{m}^3$	0-100 μg (± 10 $\mu\text{g}/\text{m}^3$), 100-1000 μg ($\pm 10\%$)	1 $\mu\text{g}/\text{m}^3$	Light Scattering
PM10	0 - 1000 $\mu\text{g}/\text{m}^3$	0-100 μg (± 10 $\mu\text{g}/\text{m}^3$), 100 - 1000 μg ($\pm 10\%$)	1 $\mu\text{g}/\text{m}^3$	Light Scattering
Carbon Dioxide (CO ₂)	400 - 3000 ppm	± 40 ppm $\pm 3\%$ of reading	1 ppm	Non-dispersive Infrared
TVOC Index	0 - 500	$\leq \pm 15$	1	MOx(MEMS)
NOx Index	0 - 500	$\leq \pm 15$	1	MOx (MEMS)
Temperature	-40°C - 125°C	$\pm 0.2^\circ\text{C}$	0.1°C	Digital CMOSens® technology (MEMS)
Humidity	0% - 100% RH	$\pm 1.8\%$ RH	0.01% RH	Digital CMOSens® technology (MEMS)
Light	0.01 - 83,000 lux	$\pm 0.2\%$	0.01 lux	Photodiode
Noise	36 - 95 dB	$\pm 3\text{dB}$ @ 23 $\pm 5^\circ\text{C}$	1 dB	Digital
Air Pressure	300 - 1100 hPa	± 1 hPa	0.01 hPa	Piezoresistive Absolute Pressure Sensor (MEMS)

Ozone (O ₃) (selective)	0 - 5 ppm	±5%F.S	0.001ppm	Solid Polymer Electrochemical
Nitrogen Dioxide (NO ₂) (selective)	0 - 5 ppm	±5%F.S	0.001ppm	Solid Polymer Electrochemical
Carbon Monoxide (CO) (selective)	0 - 1000 ppm	±5 ppm or ±10%	5 ppm	Micro Fuel Cell

Connectivity and Power Supply

- LoRaWAN
- Power Supply: 10-30V DC, 24V AC, PoE, Type-C

General Specifications

- Dimension: 150*112*32mm
- Weight: 235g
- Operating Temperature: 0°C - 50°C
- Operating Humidity: 10% - 90% RH (non-condensing)
- Data Storage: 1-minute data average, with over 1.5 years of storage capacity
- Installation: Wall or ceiling mount

Certification

- CE, FCC, RoHS, REACH, WELL