



Aeronode A101NL

Introduction

The A101NL is an indoor air quality monitor that supports connectivity via 1NCE IoT SIM cards, compatible with NB-IoT and LTE-M networks. Simply insert a 1NCE card to establish network connection. With multiple power supply and communication options, the A101NL is well-suited for a variety of building environments.

Key Features

- 1NCE SIM card for seamless connectivity and global coverage
- Modular sensor capsules to adapt to various project needs
- Supports up to 16 environmental measurements in a single device
- Multiple power supply options for flexible deployment
- Versatile connectivity for easy system integration
- Aeropulse App: A straightforward tool for device configuration and data access
- Aeropulse Dashboard: A free and feature-rich data platform for viewing real-time data, creating kiosks, and more

Specifications

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 - 10,000 ppm	± 30 ppm $\pm 2\%$ of reading	1 ppm	Non-dispersive Infrared
TVOC Index	1 - 500	$\leq \pm 15$	1	MOx(MEMS)
NOx Index	1 - 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
Formaldehyde (HCHO) (selective)	0-1ppm	±5%F.S	0.001ppm	Solid Polymer Electrochemical

Connectivity and Power Supply

- Wi-Fi: 2.4&5 GHz 802.11 b/g/n
- Modbus RTU/IP
- BACnet MSTP/IP
- MQTT
- API
- 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

Certifications

- CE, FCC, RoHS, REACH