



AirNode Datasheet

AirNode is a low-cost, low-power, compact ambient air monitoring device. It is designed to operate in the field with little onsite support, provide high-precision and nearly real-time air quality readings in different environmental conditions.

The node automatically sends data to the data platform AirIntel. Data from the AirNode can be accessed either through AirIntel with graphical presentation by location, pollutant, date and time, or API.

AirNode Specifications

Dimensions	150 mm x 195 mm x 55 mm
Weight	< 1 kg
Air quality measurements	Temperature, Humidity, CO ₂ , NO ₂ *, O ₃ *, PM ₁ , PM _{2.5} , PM ₄ , PM ₁₀ Optional: SO ₂ *and CO*
Principal of method	Electrochemical/semiconductor, NDIR, OPC
Communication	WiFi, LoRa
Sampling frequency	1 min to 60 min
Power	5V and 2W via USB type C cable (length 1m)
Operating conditions	-25°C to 65°C, 1 to 95% humidity, 800 to 1200 mbar
Enclosure	Outdoor ready
Calibration	Delivered calibrated.
Additional Features	Suitable for solar powered deployment; Easy to mount; Vertical and Horizontal mounting; Docking Station approach; Swap & Sense - easy to replace the node using only one key

* two to four toxic gas sensors in an AirNode

Sensor performance characteristics

Parameter	Technology	Range	Resolution	Precision	Accuracy
PM	Laser-based scattering	0 - 1000 $\mu\text{g}/\text{m}^3$	1 $\mu\text{g}/\text{m}^3$	<100 $\mu\text{g}/\text{m}^3$: 10 $\mu\text{g}/\text{m}^3$ >100 $\mu\text{g}/\text{m}^3$: 10%	$\pm 5\%$
NO ₂ /O ₃	Electrochemical	0 - 1000 ppb	1 ppb	3 ppb	20 ppb
CO ₂	NDIR	400 - 10 000 ppm	10 ppm	10 ppm	30 ppm + 3%
Temperature	MEMS	-20 - 70°C	0.1°C	0.1°C	0.3°C
Humidity	MEMS	0 - 100 %RH	0.1%	0.1 %RH	2 %RH

