

Outdoor Air Quality Monitor

AirGradient Open Air Max

Open Air Max is an outdoor air quality monitor designed for professionals. It measures CO₂, PM_{2.5}, TVOCs, NO₂, O₃, temperature and humidity. It's open source hardware, and features high-quality sensors for accurate measurements.



Technical Data

Specification	Description
Model	O-M-1PPSTON-CE (AirGradient Open Air Max)
Microcontroller	ESP32-C6-WROOM-1
WiFi	2.4GHz IEEE 802.11 b/g/n-compliant
Bluetooth	Bluetooth LE: Bluetooth 5, Bluetooth mesh
Cellular	4G connectivity (LTE Cat 1)
Extensions	Broken out on PCB: I2C, 3 GPIO
Peripherals	Status LED, Push Button, Power Button, USB C Connector
External Hardware Watchdog	Texas Instruments TPL5010
Particle Sensor Module	Dual Plantower PMS5003 (laser scattering principle). Accuracy: PM _{2.5} ±10% @ 100-500 g/m ³ , 10 ug/m @ 0-100 ug/m ³ (PM ₁₀ , and PM _{2.5} , are also measured, but PM ₁₀ has the highest accuracy).
Temperature and Humidity	Sensirion SHT40. Accuracy: Temperature 0.2°C @ -40 to +125°C, Humidity ±2% RH @ 0-100% RH
CO ₂ Sensor Module	SenseAir Sunlight (NDIR). 0 to 5,000 ppm. Accuracy: ±50 ppm ±3%
TVOC/NO _x Module	Sensirion SGP41. Accuracy: TVOC < 15 @ 0 to 500 VOC Index, NO _x < 50 @ 0 to 500 NO _x Index.

Specification	Description
NO2 Module	AlphaSense A43F (Electro-Chemical)
O3 Module	AlphaSense A431 (Electro-Chemical)
Enclosure	ASA Plastic, UV Resistant and Weather Proof
Mounting Options	Wall or pole mounting options
Solar Panel	10 watts (28 x 19.5cm)
Battery	ca. 10,000 mAh (3x18650 cells, user replacable). Might not be included due to shipping regulations.
Certifications	CE, RoHS, REACH, FCC ID: 2AC7Z-ESP32C3MIN

About AirGradient



AirGradient started as a volunteer project in a school in Northern Thailand monitoring dangerously high air pollution levels in classrooms during the “burning season.”

Our mission is to enable people to breathe healthy air by providing open-source, reliable and accurate air quality monitors and supporting organizations and citizens in understanding the air quality in their communities.



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