

AirCarto

NebuleAir

**OPEN SOURCE
ADAPTER
FOR MEASURING
OUTDOOR AIR
QUALITY**

NebuleAir

Open source and educational device for measuring air quality. The NebuleAir sensor measures particulate matter (PM10, PM 2.5 and PM1), temperature and humidity. The sensor requires a stable and permanent WIFI connection to send data to AirCarto servers and thus enrich a citizen network for measuring air quality.

Made in France

NebuleAir sensors are manufactured in France, in Marseille by the company AirCarto created in 2021. The sensors are produced in small series in a low-tech spirit: technological simplicity, technical viability, repairability and sharing of know-how.

Open Source

The NebuleAir is an open source device. The source code which runs the electronic components and in particular the microcontroller (an ESP32 from Espressif) is available for free access on GitHub. The data collected by the connected NebuleAir is also freely accessible and can be downloaded.

Awareness

AirCarto with its partners (AtmoSud, Fédération l'Air et Moi, AirCitoyen, FNE13) organizes sensor assembly workshops around the NebuleAir device to introduce people to electronics and the issues related to measuring air quality.

NebuleAir

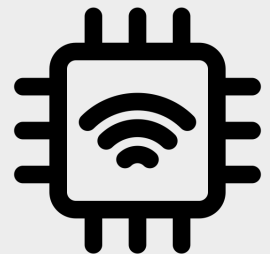
PARTICULATE MATTER (PM)

To measure PM, the NebuleAir is equipped with the **NextPM** probe from Tera Sensor. This is an optical meter (laser diffusion principle) which measures PM10, PM2.5 and PM1.

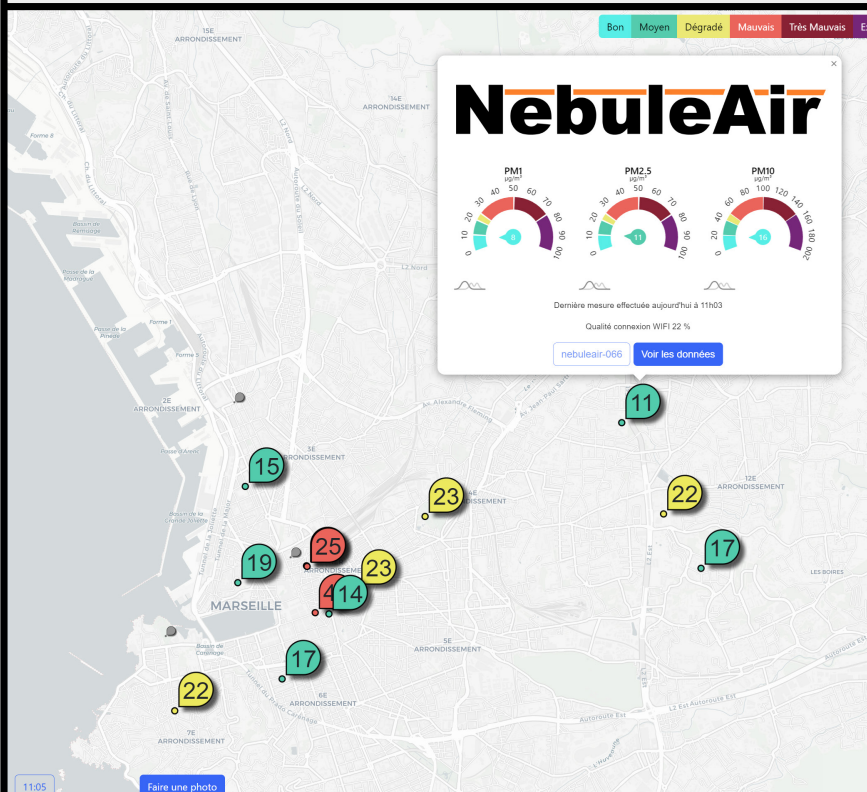
Unit of measurement: $\mu\text{g}/\text{m}^3$.
Measuring range 0 - 1000 $\mu\text{g}/\text{m}^3$.

Microcontroller:
Connexion:
Screen:
Size:
Weight:
Power:
Measuring interval

ESP-32
WIFI 2,4 GHz
non présent
14x9x5cm
200gr
chargeur USB 5V 2A
2 min



OPENAIRMAP.FR



The sensor data is available on an online platform which provides a live visualization of the air quality in the city. Users can freely download their data or compare it with other stations.

NebuleAir

CONTACTS



AirCarto SAS
49 rue Nau, 1300 Marseille
Paul Vuarambon
paulvuarambon@aircarto.fr
0788508856

The logo for AtmoSud, featuring the word "AtmoSud" in a blue sans-serif font. A yellow swoosh underline is positioned below the text.

AtmoSud

Inspirer un air meilleur

AtmoSud
149 rue Paradis, 13006 Marseille
Mathieu Iazard
mathieu.izard@atmosud.org