Nanoenvi IAQ® Datasheet

Nanoenvi IAQ

envira IOT

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Chapter 1. REVISION CONTROL

Revision	Changes
V1.2.1	First version
V1.2.3	Noise sensor specifications added
V1.3.2	Minor fixes and product information added

Chapter 2. PRODUCT DESCRIPTION

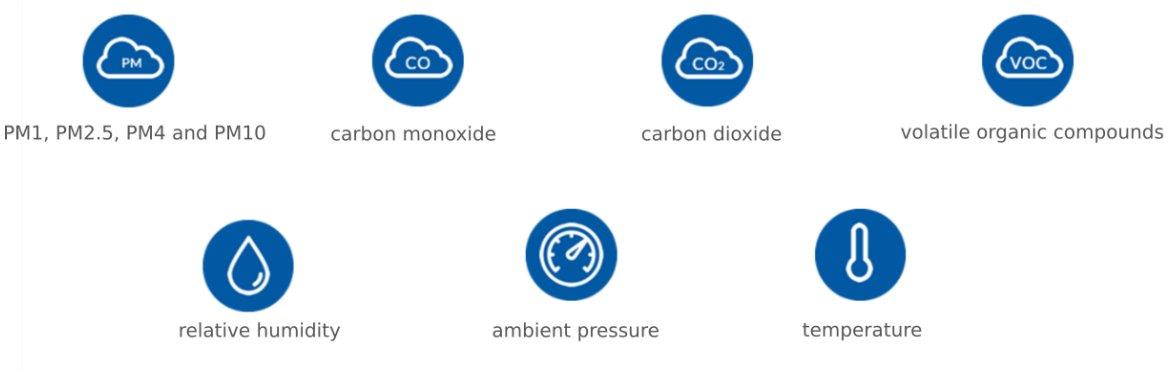
2.1. Description

2.1.1. Air quality measurement to improve people's lives

Nanoenvi IAQ™ is a device designed and manufactured by Envira Sostenible S.A. with the aim of helping building managers or owners make decisions to improve people's comfort, well-being and health based on real data on air quality. Nanoenvi IAQ™ allows you to create wireless networks of indoor air quality sensors to know, in real time, information about the air we breathe. Nanoenvi IAQ™ is indicated for placement in homes, work centers, classrooms, hospitals, conference rooms, garages, laboratories, cinemas, theaters, means of transport and ultimately, any interior space where people spend their time.

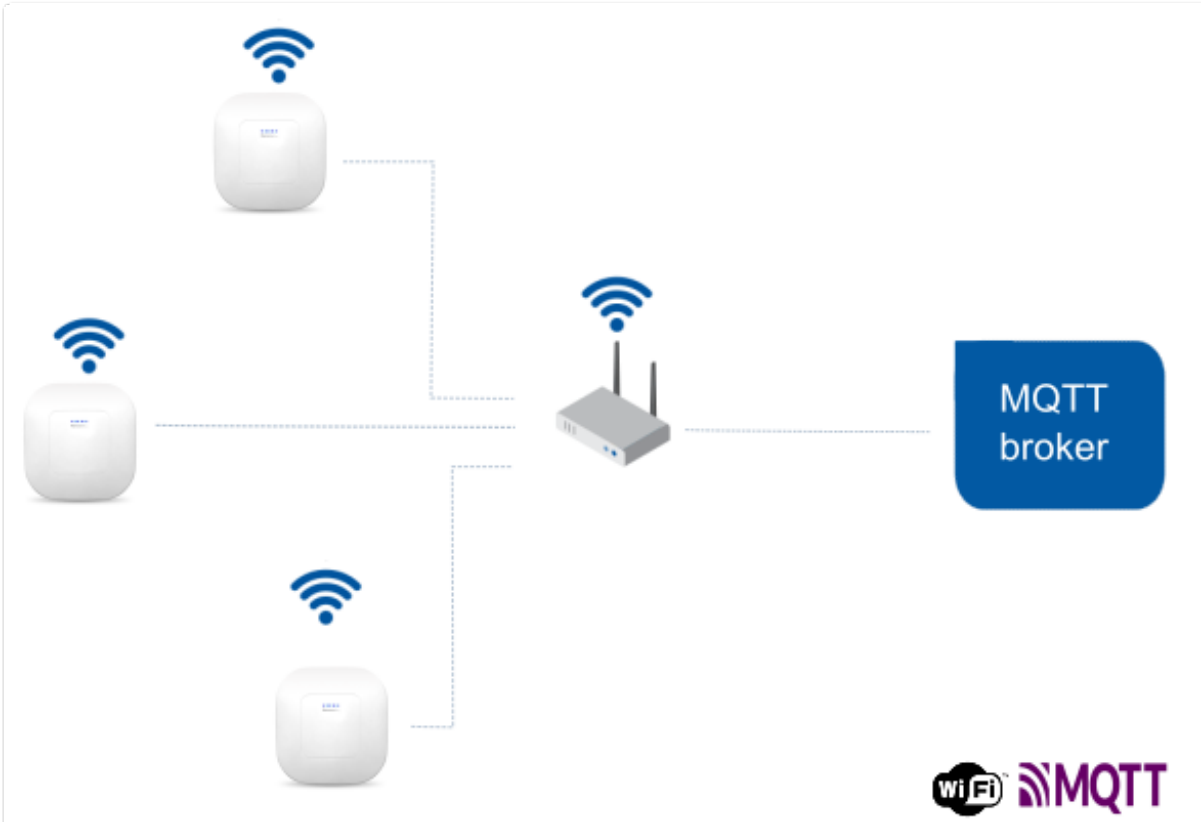
2.1.2. Measurement of up to 10 variables with a single device

Nanoenvi IAQ™ is capable of measuring temperature, humidity, atmospheric pressure and concentration of CO2, CO (optional), noise level (optional), VOCs, PM1, PM2.5, PM4 and PM10.



2.1.3. Privacy and freedom of integration

Unlike other products of its class,Nanoenvi IAQ™ does not force the customer to send the data to third parties nor does it require the installation of a mobile app.



Nanoenvi IAQ™ uses the MQTT protocol, a standard and widely used data sending protocol. When the device is installed, you can configure the MQTT server to which it will send the data. In this way, the user can decide where the data will be sent, own it and use it for their own purposes. This opens the door to an unlimited number of applications and the freedom of integration without sacrificing privacy. Some of the most common solutions are:

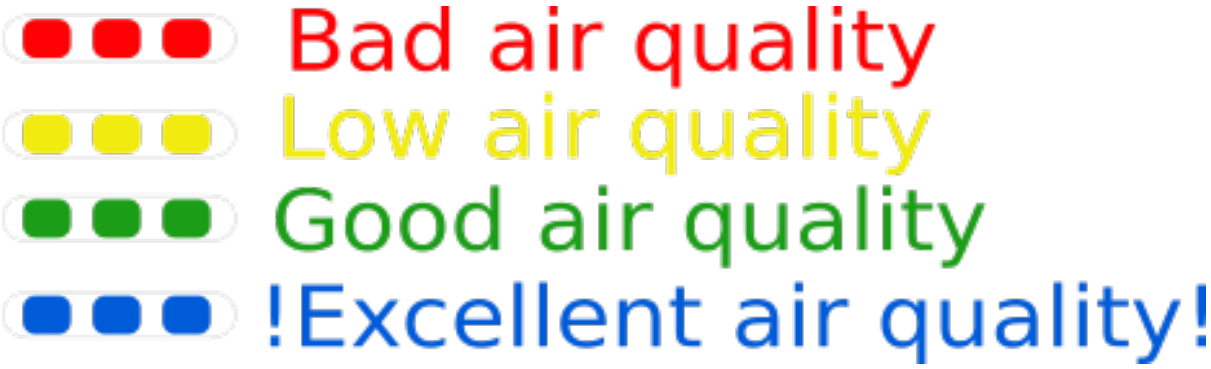
- Integration with BMS.
- Generation of air quality reports.
- Ventilation control.
- Capacity control.

- Support in environmental or energy efficiency consulting.

If you have questions about the visualization or how to use the data collected by Nanoenvi IAQ™, contact your distributor.

2.1.4. Air quality traffic light

Nanoenvi IAQ™ lights change color based on air quality. This allows people to know the quality of the air immediately and carry out adequate and efficient ventilation.

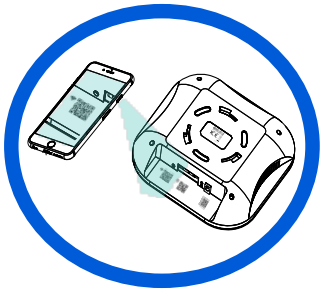


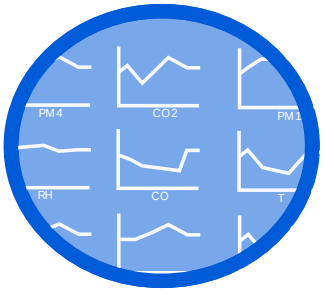
2.1.5. Quick install

Nanoenvi IAQ™ is designed for quick and easy installation. It has two modalities of operation: configuration and communication.

When the device is installed, it starts in configuration mode: it creates a WiFi network and generates a Web page to configure the WiFi network and the MQTT broker to which it will connect, when in communication mode, to send the measurement data. In this way, Nanoenvi IAQ™ can be configured from a smartphone or PC.

Once configured and installed, the device will start working in communication mode: it will measure the air quality continuously and you no longer need to worry about the device.





2.1.6. Zero maintenance

Nanoenvi IAQ™ does not require specific maintenance. In addition, it implements configuration messages that allow you to know the status of the device, perform software updates or change its configuration remotely. In this way, building managers or integrators can have control over the installed devices without travel or extra costs.

2.1.7. Accuracy and reliability

Nanoenvi IAQ™ integrates the latest technology for measuring indoor air quality. For this, Envira Sostenible S.A. trusts and relies on European manufacturers that offer cutting-edge technology, with the highest quality standards.

2.2. Product reference

NE_IAQ_WALL_WIFI_CO

Placement
WALL: wall placement

Communication module
WIFI: WiFi communication
LORA: LoRaWAN communication

Sensor types
CO: CO sensor
NOISE: noise level sensor

2.3. Package content

Nanoenvi IAQ® includes:

1. Nanoenvi IAQ®
2. Universal power supply with adapters:
   - Type G (UK)
   - Type B (USA)
   - Type C (Europa)
   - Type I (Australia)
3. Pacakging
4. Wall bracket

2.4. Product overview

Figure 2.1. Front view of Nanoenvi IAQ with wall bracket

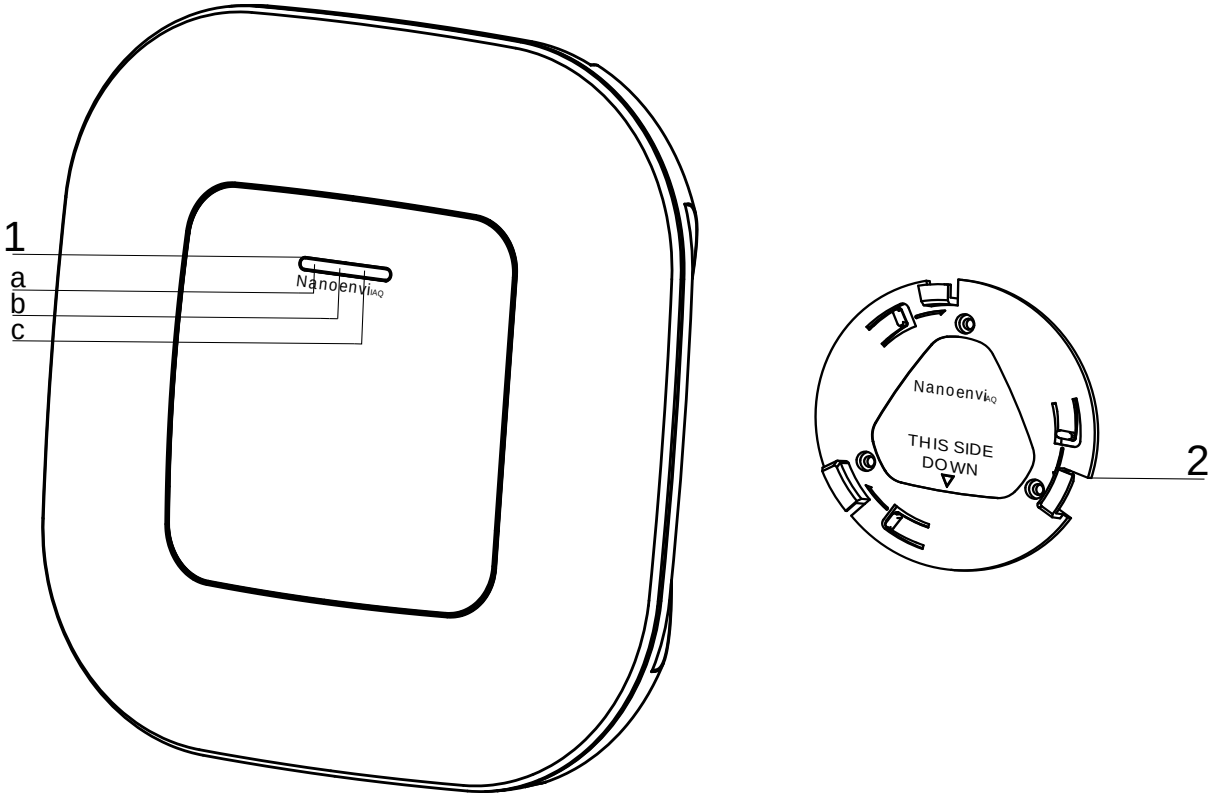
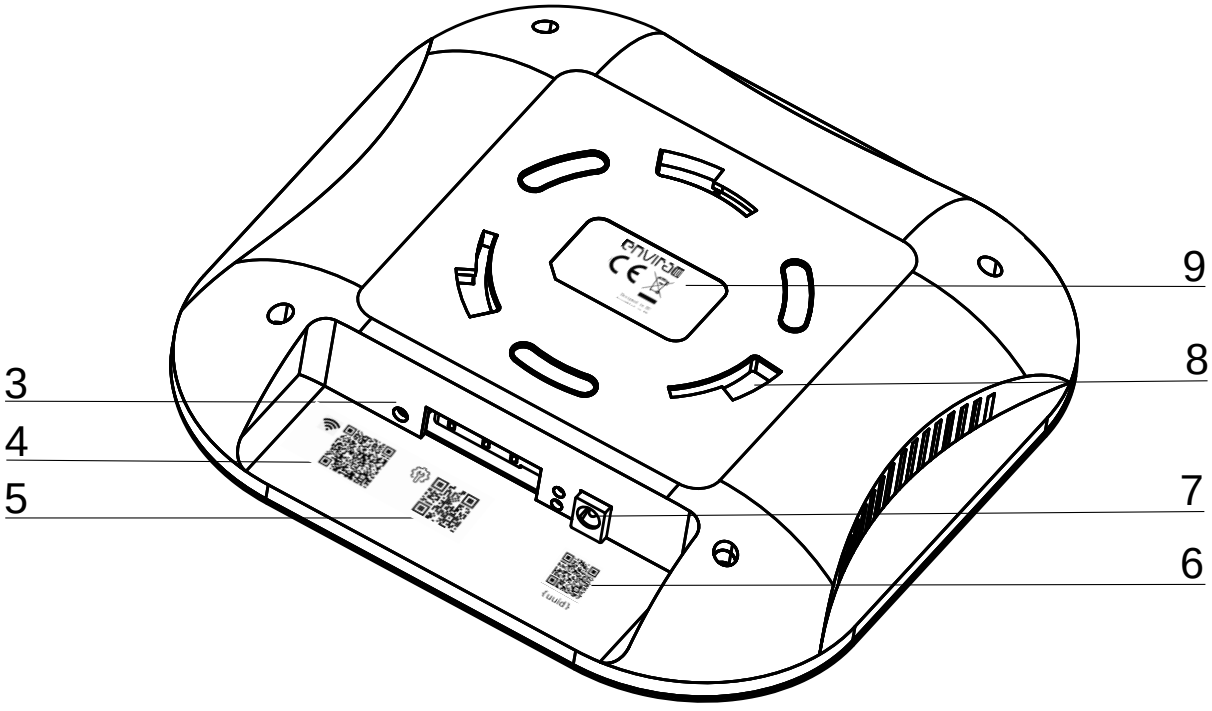


Figure 2.2. Vista de la parte trasera de Nanoenvi IAQ



1. Status LEDs:
    a. LED1
    b. LED2
    c. LED3
2. Wall bracket
3. Configuration mode push button (also referred to as 'AP mode pushbutton').
4. QR code for connection to the device configuration WiFi network.
5. QR code to access the configuration web page.
6. UUID: device unique identifier
7. Power supply connector
8. Wall mount socket
9. CE marking

Chapter 3. TECHNICAL SPECIFICATIONS

3.1. General specifications

Paramter	Value
Supply	100-240V AC @ 50-60 Hz (power supply included)
Max. power consumption	5 W
Average power consumption	2,5 W
Operating temperature and humidity range	10 ~ 55 ° C / 5 ~ 90 % RH (non-condensing)
Storage temperature and humidity range	10 ~ 55 ° C / 5 ~ 90 % RH (non-condensing)
IP grade	IP21
Sensors	CO (optional), CO2, atmospheric pressure, TVOC, PM1, PM2.5, PM4, PM10, T and noise (optional)
Package weight	800 g
Device weight	340 g
Dimmensions	189x189x37 mm
Conformity markings	CE
Manufacured in	

3.2. Sensor specifications

3.2.1. CO sensor specification

Accuracy	± 5%
Range	0 ~ 5000 ppm
Operating range	-10 ~50 ºC, 10 ~95 % RH
Calibration	Initial factory calibration
Response time	60 seconds

3.2.2. CO2 sensor specification

Accuracy	± 30 ppm
Range	400 ~ 10000 ppm
Operating range	0 ~50 ºC, 0 ~95% RH
Calibration	Self calibration
Response time	20 s (63 %)

3.2.3. PM sensor specification

Accuracy for PM1 and PM2.5	±10 µg/m3 for measurements in range from 0 to 100 µg/m3 and ±10 % for measurements in range from 100 to 1000 µg/m3
Accuracy for PM4 and PM10	±25 µg/m3 for measurements in range from 0 to 100 µg/m3 and ±25 % for measurements in range from 100 to 1000 µg/m3
Range	0 ~1000 µg/m3
Operating range	-10 ~ 60 ºC y 0 ~ 95 % RH
Calibration	Initial factory calibration
Response time	1 s

3.2.4. Pressure sensor specification

Accuracy	±10 hPa
Range	500 hPa to 1150 hPa
Operating range	-40 a 105 ºC
Calibration	Initial factory calibration
Response time	N/A

3.2.5. Temperature sensor specification

Accuracy	± 1 º C
Range	0 ~65 ºC
Operating range	0 ~100 % RH/ -20 ~ 85 ºC
Calibration	Not required
Response time	8 s

3.2.6. Relative humidity sensor specification

Accuracy	±5 % RH
Range	10 ~95 % RH
Operating range	0 ~100 % RH/ -20 ~ 85 ºC
Calibration	Not required
Resposne time	8 s

3.2.7. TVOC sensor specification

Accuracy	30 % of measured value
Range	0 ~ 60000 ppb
Operating range	5 ~90 % RH/ 5 ~55 ºC
Calibration	Self calibration
Response time	< 30 s

3.2.8. noise snesor specification

Accuracy	Cualitative measurment, not characterized
Range	0 ~ 100 %
Operating range	0 ~ 95 % RH/ 0 ~ 60 ºC
Calibration	Initial factory calibration
Frequency range	20 - 20000 Hz

3.3. Communication specifications

3.3.1. WiFi communications

Frequency	2.4 GHz
Communication period	Configurable. 40 seconds minimum.

Chapter 4. CONTACT

4.1. Contact details

Envira IoT is a trademark of Envira Sostenible S.A.

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