

Indoor air quality monitors

Ensure safe and healthy indoor air conditions with sensor monitoring

Indoor air quality monitors are designed to measure and evaluate various parameters and pollutants. Dedicated sensors continuously monitor and report on air conditions in real time, allowing for timely actions to mitigate health risks from poor indoor air quality and enhance overall comfort. Air quality monitors typically measure Particulate Matter, CO₂, volatile organic compounds (VOC), Formaldehyde and temperature and humidity.

Target customers:

- Indoor air quality monitor manufacturers (OEMs & ODMs)
- Climate control solution providers



Application challenges

- 1 Quick time to market and high cost pressure
- 2 Sensor lifetime in dusty environments
- 3 Compliance with building standards



Sensirion's solutions

- 1 Straightforward design-in with standardized form factor and connectors and with all relevant algorithms and compensation engines
- 2 All SEN6x variants are equipped with the patented sheath flow technology, protecting the PM laser and photoreceptors cells for settling dust particle
- 3 Scan the QR code below to find out which sensors are WELL, RESET, CA24, USGBC & ASHRAE compliant

Sensirion sensor solution:



SEN66:
Sensing platform for simplified
indoor air quality measurements

Size (LxWxH): 55.5 x 25.6 x 21.5 mm³

Key sensor features

- Integrated temp. compensation algorithm and acceleration engines
- All sensors included for simplified design-in compared to discrete sensors
- Identical mechanical interface for all SEN6x variants
- Dust protection and long life-time
- One of the smallest combo modules on the market

FAQs

- **What parameters does SEN6x measure, and do I have to buy the module with all parameters?**

SEN6x measures PM1, PM2.5, PM4, PM10, RH, T, VOC, NOx, CO₂, or HCHO. It is modular, so you can choose what works best for your application:

- SEN60 – PM
- SEN65 – PM, RH&T, VOC & NOx
- SEN66 – PM, RH&T, VOC & NOx, CO₂
- SEN68 – PM, RH&T, VOC & NOx, HCHO

- **What use cases can I enable using an all-in-one solution?**

The data generated by the SEN6x can be used to power smart features, such as presence detection, IAQ prediction, notifications for exposure to pollen and viral infection risk.

- **Do I need to add a microcontroller?**

No, the SEN6x has a microcontroller integrated with features such as temperature acceleration algorithms, temperature compensation engines and VOC / NOx indexes.

Other applications

- Air purifiers
- VAV controllers
- HVAC control
- Smart home systems
- Vape and smoke detectors

- **What do I need to consider for a successful integration?**

Sensor module orientation, sealing, good coupling to ambient air without restrictions, isolation from heat sources. Scan the QR code at the bottom of this page to get access to the mechanical design and assembly guide.

- **What is the ideal position of the sensor in the device?**

Close to the lower edge of the housing with a good ambient air coupling, good internal sealing and far away from any heat sources. Make sure you start considering positioning at a very early stage of the design process.

- **Do the sensor components have different lifetimes and how do I cope with that?**

All components will last at least 10 years with sheath flow protecting them from contaminants.

Getting started



SEK-SEN66

Useful documents



Datasheets, application notes, handling instructions, sample codes, step files, certificates

Related sensors

↗STCC4
↗SCD41

↗SHT40

↗SGP41

↗SEN60

SENSIRION