



sensorbee

Sensorbee Air Quality Monitoring Solution



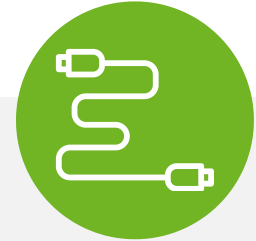
Reliable Data in a Compact Design

Sensorbee's air quality system comes with high-accuracy sensors that offer dependable data. The device has a built-in buffer to store data during network or power outages. Weighing just 0.5 kg, it's easy to fit into various urban environments.



Easy to Connect & Solar-Powered

Our low-energy design and rechargeable batteries make it simple to power the device with a solar panel or street light. We use energy-efficient GSM technologies like NB-IoT and LTE-M to ensure reliable long-distance coverage.



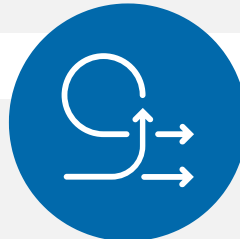
Versatile Connectivity

Sensorbee's air quality solutions easily integrate with different systems using Modbus RS-485, as well as LTE-M and NB-IoT connectivity. This makes our technology versatile and suitable for a wide variety of applications and environments.



Easy to Use

Sensorbee's user-friendly web interface allows you to easily manage your air quality system. Set up remote data collection, view real-time information, and receive crucial alerts, all from your web browser. Adding a new Sensorbee unit is simple—just scan its QR code using an Android/iOS device or computer.



Flexible Expansion Options

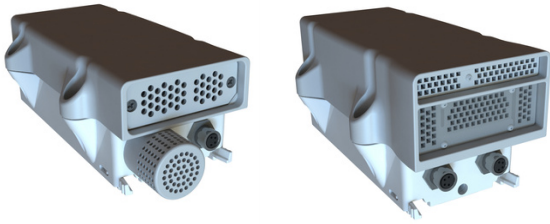
Both the Sensorbee Air Pro and Modbus Pro units feature an expansion port for connecting external sensors. This allows you to easily integrate a variety of sensor types, like weather station sensors, to improve your system's functionality.



Ambient Noise

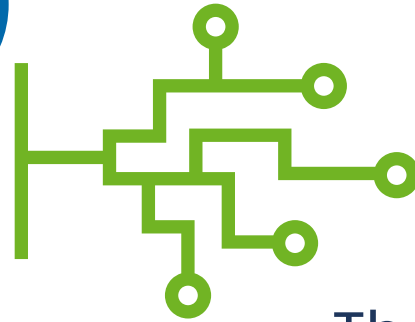
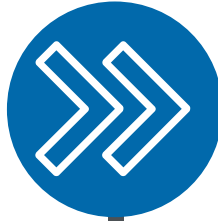
Sensorbee's Ambient Noise Enhancer is a software update for your Air Quality Sensors that adds real-time noise level measurement in dBA. Now you can monitor both air quality and noise levels using your existing Sensorbee devices, expanding your environmental monitoring capabilities.

How does it work?



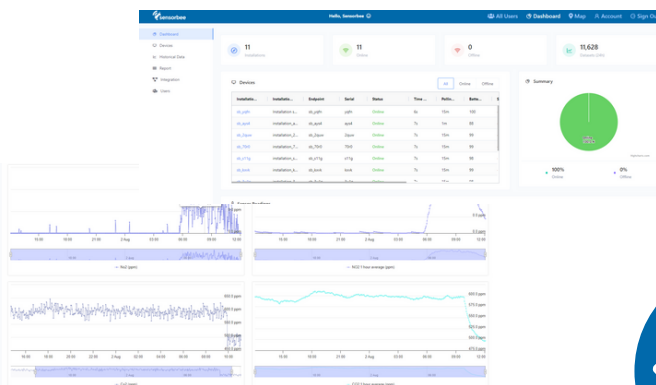
The Sensors

Our sensors runs on solar power or external power.



The data

Real-time pollutant data transmitted over cellular network.



Cloud Services

Sensors and data can be managed and stored either in Sensorbee's cloud services or on customer-specific cloud servers.



Access your data

You can access and utilize your data through the Sensorbee Web Interface or via the API for third-party integration.



Sensorbee Cloud and Apps

The Sensorbee cloud platform is a robust solution for handling IoT devices and their data. It offers an easy-to-use interface for setting up devices, monitoring their status, and viewing sensor readings.

Beyond device management, the platform also comes with data analytics tools and options for integration. Users can effortlessly configure Realtime-Push or GET APIs to receive the data they need.

In summary, Sensorbee's cloud services offer a versatile and efficient way to manage both IoT devices and the data they generate.

Access to System

Web

Device/Back-end protocol

LWM2M

API Sensorbee cloud

PUSH API

REST API

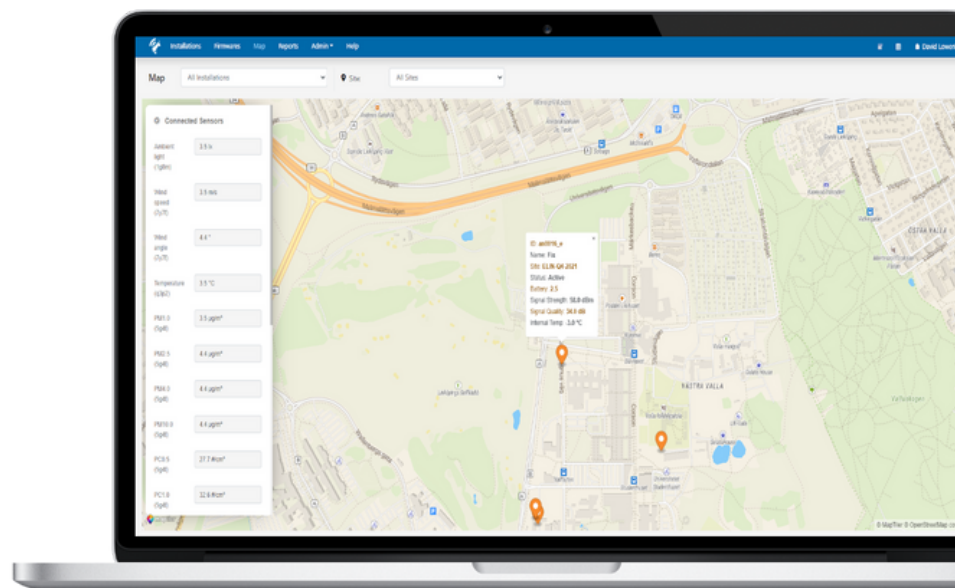
Sensor Data Download

CSV file

Notifications

Email

SMS



Sensorbee Air Pro Cellular

Sensorbee Air Pro is a flexible air quality monitoring system. The modular system can measure particles, temperature, humidity, and up to three different gases. You can also expand its capabilities by connecting sensors for noise, wind, rain, and more to meet your specific needs.

With real-time data transmission over mobile networks, NB-IoT, and LTE-M, our solution is easy to install and cost-effective to own. Its compatibility with solar panels also makes it an eco-friendly monitoring option.



SB3323 – Air Pro (Generic)
SB3324 – Air Pro (Sub-Zero)

Communication & Remote Management:

LTE-M or NB-IoT (Nano SIM)

Sensorbee Cloud (LWM2M ≥1.1)

Dimensions, weight & material:

140 x 80 x 65 mm, 0.4 kg

Polycarbonate & Polyamide

Operating Temperature & Humidity:

-20 °C to +60 °C, 0 to 99 %RH

Power Input: 5 - 15 VDC

Regulatory Compliance: CE

Mounting: Pole/Wall mounting bracket

External Sensor Connector: 1

Internal Battery

SB3323 for use in general climate
(3.4Ah batteries)

SB3324 for optimal battery function
in sub-zero degree climates (2.8Ah)

Modules Supported

3 Sensorbee gas modules(not included)

Included Module (SB3516):

Particle Sensor:

Type : Optical particle counter

Mass size Range: PM1, PM2.5, PM10

Number size Range: PM0.5, PM1, PM2.5, PM10

Temperature & Humidity Sensor:

-40 °C to +60 °C ±0.3 °C, 0-100 %RH ±3 %RH

VOC: 0 - 1000 ppm (VOC Index 0 - 500)

NOX: 0 - 10000 ppb (NOX Index 0 - 500)

Pressure: 300 - 1250 hPa ±0.5 hPa

Noise Meter (extra license required):

20 Hz - 10 kHz: 55 - 100 dBA ±4 dBA

Module Operational Life: 2 Years

Sensorbee Air Lite Cellular

Sensorbee Air Lite, a cost-effective air quality monitoring solution for mass deployment. Ideal for monitoring particulate matter, temperature, humidity, and noise via a software add-on license.

With real-time data transmission over mobile networks, NB-IoT, and LTE-M, our solution is easy to install and cost-effective to own. Its compatibility with solar panels also makes it an eco-friendly monitoring option.



SB3331 – Air Lite

Communication & Remote Management:

LTE-M or NB-IoT (Nano SIM)
Sensorbee Cloud (LWM2M ≥1.1)

Dimensions, weight & material:

150 x 80 x 55 mm, 0.3 kg
Polycarbonate & Polyamide

Operating Temperature & Humidity:

-20 °C to +60 °C, 0 to 99 %RH

Power Input: 5 - 15 VDC

Regulatory Compliance: CE

Mounting: Pole/Wall mounting bracket

Internal Battery: 3400 mAh

Particle Sensor:

Type : Optical particle counter

Mass size Range: PM1, PM2.5, PM10

Number size Range: PM0.5, PM1, PM2.5, PM10

Temperature Sensor:

-40 °C to +60 °C ±1 °C

Humidity Sensor:

0 - 100 %RH ±5 %RH

Noise Meter (extra license required):

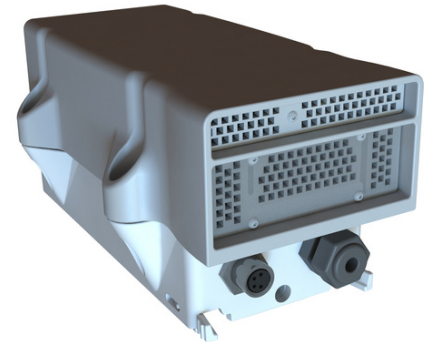
20 Hz - 10 kHz: 40 - 100 dBA ±4 dBA

Sensors Operational Life: 2 Years

Sensorbee Air Pro Modbus

Sensorbee Air Pro is a flexible air quality monitoring system. The modular system can measure particles, temperature, humidity, and up to three different gases. You can also expand its capabilities by connecting sensors for noise, wind, rain, and more to meet your specific needs.

With Modbus RTU over RS-485 communication, easy installation, and low ownership costs, it's the ideal solution for air quality measurement in various industrial applications.



SB3353 – Air Pro Modbus

Communication & Configuration:

RS-485 (Modbus RTU)

USB (configuration)

Dimensions, weight & material:

140 x 80 x 65 mm, 0.4kg

Polycarbonate & Polyamide

Operating Temperature & Humidity:

-20 °C to +60 °C, 0 to 99 %RH

Power Input: 5V - 35 VDC

Regulatory Compliance: CE

Mounting: Pole/Wall mounting bracket

External Sensor Connector: 1

Termination: Internal switch for on/off

Modules Supported

3 Sensorbee gas modules(not included)

Included *Module (SB3516):*

Particle Sensor:

Type : Optical particle counter

Mass size Range: PM1, PM2.5, PM10

Number size Range: PM0.5, PM1, PM2.5, PM10

Temperature & Humidity Sensor:

-40 °C to +60 °C ±0.3 °C, 0-100 %RH ±3 %RH

VOC: 0 - 1000 ppm (VOC Index 0 - 500)

NOX: 0 - 10000 ppb (NOX Index 0 - 500)

Pressure: 300 - 1250 hPa ±0.5 hPa

Noise Meter (extra license required):

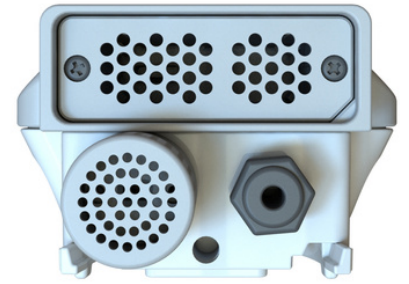
20 Hz - 10 kHz: 55 - 100 dBA ±4 dBA

Module Operational Life: 2 Years

Sensorbee Air Lite Modbus

Sensorbee Air Lite, a cost-effective air quality monitoring solution for mass deployment. Ideal for monitoring particulate matter, temperature, humidity, and noise via a software add-on license.

With Modbus RTU over RS-485 communication, easy installation, and low ownership costs, it's the ideal solution for air quality measurement in various industrial applications.



SB3352 – Air Lite Modbus

Communication & Configuration:

RS-485 (Modbus RTU)
USB (configuration)

Dimensions, weight & material:

150 x 80 x 55 mm, 0.3kg
Polycarbonate & Polyamide

Operating Temperature & Humidity:

-20 °C to +60 °C, 0 to 99 %RH

Power Input: 5V – 35 VDC

Regulatory Compliance: CE

Mounting: Pole/Wall mounting bracket

Termination: Internal switch for on/off

Particle Sensor:

Type : Optical particle counter

Mass size Range: PM1, PM2.5, PM10

Number size Range: PM0.5, PM1, PM2.5, PM10

Temperature Sensor:

-40 °C to +60 °C ±1 °C

Humidity Sensor:

0 – 100 %RH ±5 %RH

Noise Meter (extra license required):

20 Hz – 10 kHz: 40 – 100 dBA ±4 dBA

Sensors Operational Life: 2 Years

Sensorbee Air Quality Front Module

The Air Quality Front Module includes multiple sensors for measuring particles, temperature, humidity, air pressure, VOCs, and NOx. An ambient noise sensor, measured in dBA, can be activated with a separate license.



SB3516 – Air Quality Front Module

Particle Sensor:

Type: Optical particle counter

Mass Concentration Range:

0 - 1000 $\mu\text{g}/\text{m}^3$

Mass Concentration Size Range:

PM1.0: 0.3 - 1.0 μm PM2.5: 0.3 - 2.5 μm

PM4: 0.3 - 4.0 μm PM10: 0.3 - 10.0 μm

Mass Concentration Precision:

PM1.0 & PM2.5:

0-100 $\mu\text{g}/\text{m}^3$: $\pm 5\mu\text{m} + 5\%$, 100-1000 $\mu\text{g}/\text{m}^3$: $\pm 10\%$

PM4 & PM10:

0-100 $\mu\text{g}/\text{m}^3$: $\pm 25\mu\text{m}$, 100-1000 $\mu\text{g}/\text{m}^3$: $\pm 25\%$

Number Concentration Range:

0 - 3000 μm

Number Concentration Size Range:

PM0.5: 0.3 - 0.5 μm PM1.0: 0.3 - 1.0 μm

PM2.5: 0.3 - 2.5 μm PM4: 0.3 - 4.0 μm

PM10: 0.3 - 10.0 μm

Number Concentration Precision:

PM0.5, PM1.0 & PM2.5:

0-1000 $\#/\text{m}^3$: $\pm 100\#/\text{cm}^3$, 1000-3000 $\#/\text{m}^3$: $\pm 10\%$

PM4 & PM10:

0-1000 $\#/\text{m}^3$: $\pm 250\#/\text{cm}^3$, 1000-3000 $\#/\text{m}^3$: $\pm 25\%$

Temperature Sensor:

-40 °C to 60 °C ± 0.3 °C

Humidity Sensor:

0 - 100 %RH ± 3 %RH

VOC:

0 - 1000 ppm (VOC Index 0 - 500)

NOX:

0 - 10000 ppb (NOX Index 0 - 500)

Pressure:

300 - 1250 hPa ± 0.5 hPa

Noise Meter (extra license required):

20 Hz - 10 kHz: 55 - 100 dBA ± 4 dBA

Module:

Dimensions: 55 x 60 x 20 mm

Weight: 40 gram

Enclosure: Polyamide

Operating Temperature: -10°C to +60°C

Operating Humidity: 0 to 95 %RH

Module Operational Life: 2 Years

Sensorbee Ambient Noise License



Compatible with both Sensorbee Air Pro and Sensorbee Air Lite units, this license provides the capability for ongoing monitoring of ambient noise levels, measured in dBA (A-weighted decibels). This ensures that you have a comprehensive view of your environment's auditory landscape, alongside air quality metrics.

SB1101 – Ambient Noise License

The Sensorbee Ambient Noise License is a cutting-edge software upgrade tailored for the Sensorbee Air Pro and Lite units.

This license enhances the capability of your existing Sensorbee Pro or Lite unit to continuously measure, analyze, and report ambient noise levels, in addition to air quality metrics.

The license remains valid for the entire lifetime of your Pro or Lite unit, even when sensor modules are replaced or upgraded.

We offer three convenient methods for purchasing and installing our license tokens:

1. Order your unit with the noise license included; the license will be pre-installed at the factory and will automatically activate if you are using Sensorbee Cloud services.
2. Enable the license directly through Sensorbee Cloud services.
3. Receive a license token generated specifically for your base unit and manually install it using a terminal.

The accuracy of the ambient noise sensor varies by product.

For detailed information, please refer to the product specifications for Sensorbee Pro Front Module as well as Sensorbee Lite.