

SynAir

AIR QUALITY MONITORING SYSTEM



SYNELIXIS

SynAir

With extensive experience in the fields of information technology and automation, and through collaborations with universities and research centers, SYNELIXIS presents **SynAir**, its air quality monitoring system.

SynAir is an innovative solution for measuring and monitoring air quality, designed for smart cities, agricultural and livestock applications, and environmental monitoring.

SynAir supports a wide range of sensors that detect and measure:

- Ammonia (NH_3)
- Barometric pressure
- Carbon dioxide and monoxide (CO_2 , CO)
- Ethanol ($\text{C}_2\text{H}_5\text{OH}$)
- Particulate matter (PM1, PM2.5, PM4, PM10)
- Methane (CH_4)
- Nitrogen dioxide and Nitrous oxide (NO_2 , N_2O)
- Oxygen (O_2)
- Ozone (O_3)
- Relative humidity
- Sulfur dioxide (SO_2)
- Temperature



How SynAir works?

- Installation of air quality sensors on the **SynAir** ports.
- Connection of **SynAir** to a SynField X3 / X5 station.
- Installation of additional sensors and automation devices on the **SynField** X3 / X5 station.
- Built-in fan for improved airflow and more accurate measurements.
- **Collection of measurements** from all sensors and transmission to the SynField cloud platform.
- **Remote air quality monitoring** via the SynField platform and/or your mobile device.
- **Remote control of automation equipment** via the SynField platform and/or your mobile device.
- Receive user-defined **alerts and notifications**, e.g. for high concentrations of ammonia or methane.



Remote Monitoring
Remote Control



Wide Range of Air Quality
Sensors

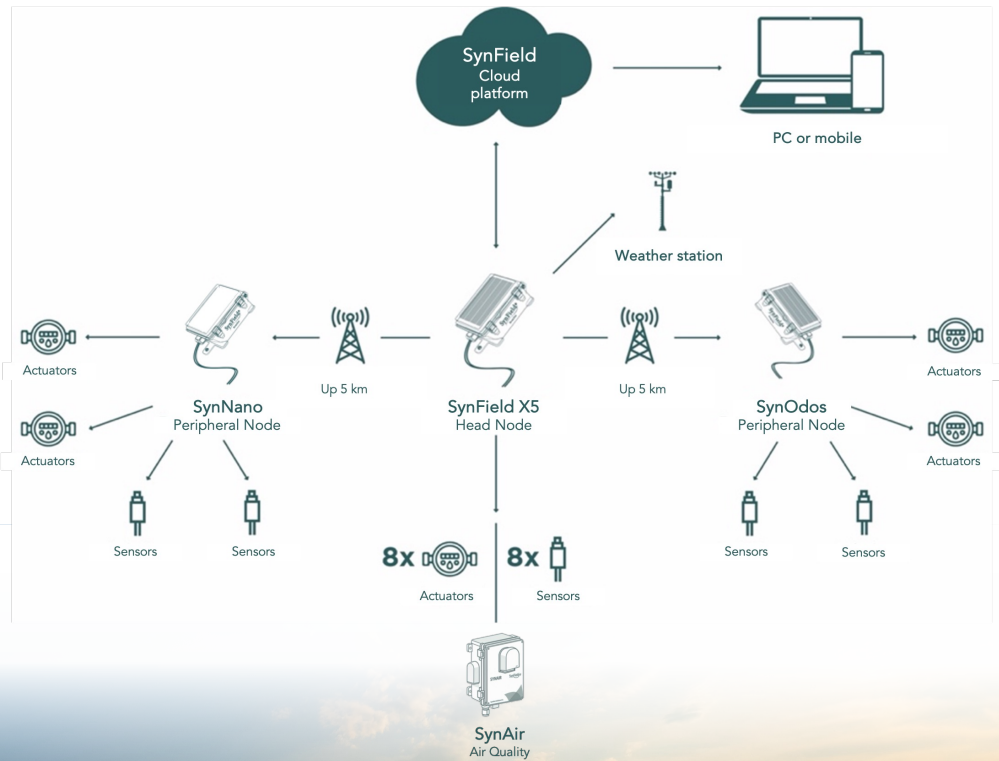


Built-in Fan for Reliable
Measurements



Energy Autonomy
Low Energy Consumption

SynField Digital Ecosystem



Which SynAir Best Fits Your Needs?

Monitoring parameter	SynAir AQI	SynAir Basic	SynAir City	SynAir City+	SynAir Gas	SynAir Gas+	SynAir Indoor
Ammonia (NH ₃)	—	—	—	—	—	—	✓
Barometric pressure	✓	✓	✓	✓	✓	✓	✓
Carbon dioxide (CO ₂)	✓	✓	✓	✓	✓	✓	✓
Carbon monoxide (CO)	✓	—	✓	✓	—	—	—
Ethanol (C ₂ H ₅ OH)	—	—	✓	✓	—	—	—
Particulate matter (PM1, PM2.5, PM4, PM10)	✓	—	✓	✓	—	✓	✓
Methane (CH ₄)	—	—	—	—	✓	✓	—
Nitrogen dioxide (NO ₂)	✓	—	✓	✓	—	—	—
Nitrous oxide (N ₂ O)	—	—	—	—	✓	✓	—
Oxygen (O ₂)	—	—	—	✓	—	—	—
Ozone (O ₃)	✓	—	—	✓	—	—	—
Relative humidity	✓	✓	✓	✓	✓	✓	✓
Sulfur dioxide (SO ₂)	✓	—	—	—	—	—	—
Temperature	✓	✓	✓	✓	✓	✓	✓

Available
SynAir
Models

Typical Use Cases



Agriculture & Greenhouses

Monitoring microclimate and air quality is an important tool for precision agriculture applications and greenhouse crop management.

SynAir enables continuous monitoring of environmental parameters, as well as additional gases and particulate matter, allowing early detection of changes in microclimatic conditions and supporting informed decision-making for managing plant growing conditions, thereby contributing to more effective management of agricultural and greenhouse operations.

Smart Cities

Continuous air quality monitoring is an important tool for managing the urban environment and developing Smart City applications.

SynAir can be installed at selected locations across urban areas, with measurements transmitted to the SynField platform, enabling the identification of areas with elevated pollution levels, monitoring air pollution trends over time, and supporting informed decision-making to improve the urban environment.



Livestock Facilities

SynAir enables the monitoring of parameters such as temperature and relative humidity, as well as the measurement of gas concentrations, providing remote monitoring and analysis of environmental conditions.

In addition, automated alerts can be configured when measured parameters exceed predefined thresholds, supporting timely intervention and more effective management of the livestock facility environment.





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