

# Maintaining cleaner indoor air

for people, equipment, and the environment



ENVIRONMENTAL SENSORS  
FROM AXIS

**AXIS**<sup>®</sup>  
COMMUNICATIONS



# Why indoor air quality matters

We spend most of our lives indoors, where the air we breathe can have a profound impact on our health, well-being, and productivity. Despite its importance, indoor air quality is often overlooked. Poor indoor air quality can have serious consequences, from mild discomfort and allergies to serious health issues like respiratory and cardiovascular diseases. In addition, poor indoor air quality can harm cognitive performance, affect mood, and reduce overall quality of life.







# Air quality sensors provide valuable insights

In recent years, there's been growing awareness of the importance of indoor air quality, driven in part by technological advances and a greater focus on the need for healthier buildings. One key tool in addressing this is air quality sensors, a type of environmental sensor that can detect and measure various pollutants and parameters, providing valuable insights into indoor air quality.





It's essential to ensure the air we breathe is clean and healthy, and air quality sensors can help organizations maintain good indoor air quality.



# What Axis air quality sensors measure

Air quality sensors can measure a wide range of pollutants and parameters that affect indoor air quality.

Axis offers air quality sensors that detect and measure:

Pollutants and parameters		Description	Health impacts
	Particulate matter (PM)	PM refers to tiny particles suspended in the air, such as dust, pollen, and smoke.	Exposure to high levels of PM can cause respiratory problems, aggravate asthma, and increase the risk of heart disease.
	Nitrogen oxides (NOx)	NOx are colorless, odorless gases produced by combustion engines, industrial processes, and natural sources.	Exposure to NOx can cause respiratory problems, headaches, and dizziness.
	Carbon dioxide (CO <sub>2</sub> )	CO <sub>2</sub> is a naturally occurring gas present in exhaled breath, but elevated levels can indicate poor ventilation.	High CO <sub>2</sub> levels can cause drowsiness, headaches, and decreased cognitive function.
	Volatile organic compounds (VOCs)	VOCs are chemicals released by paints, cleaning products, furniture, and other household items.	Exposure to VOCs can trigger allergies, irritate eyes and skin, and contribute to respiratory problems.
	Vape and cigarette smoke	Vapes, e-cigarettes, and cigarettes.	Vaping and smoking pose serious health risks, including respiratory problems, cardiovascular issues, and increased cancer risk, as well as neurological problems and reproductive complications. Secondhand exposure to vape and cigarette smoke also puts others at risk, particularly vulnerable people like children and those with pre-existing conditions.
	Temperature	Temperature is typically measured in degrees Celsius (°C) or Fahrenheit (°F).	Temperature affects human comfort, productivity, and health.
	Relative humidity (RH)	Relative humidity is the percentage of water vapor present in the air compared to the maximum amount the air can hold at a given temperature. Relative humidity gives a more accurate measure of moisture levels, as it considers both the amount of water vapor and the air's capacity to hold it at a specific temperature.	Humidity influences mold growth, dust mite populations, and human comfort. Low humidity can dry out mucous membranes, while high humidity can foster mold and bacterial growth.

By measuring these parameters, air quality sensors provide a comprehensive picture of indoor air quality, helping organizations identify areas for improvement and take proactive steps to maintain healthy environments.



# Multipurpose...

Air quality sensors support health, safety, and environment (HSE), improve operational efficiency, and provide business insights. As maintaining healthy indoor environments is essential to people and the planet, these sensors are relevant across segments ranging from commercial real estate and retail to data centers, education, and healthcare.

## Health, safety, environment (HSE)

Air quality sensors detect hazardous gases, particulate matter, and other pollutants, enabling early warnings and prompt actions to prevent exposure and reduce risks. This creates healthier indoor spaces and improves the experience for occupants.

## Operational efficiency

Real-time monitoring enables prompt action through automated alerts and adjustments. It also enables optimized energy efficiency and improved space utilization.

## Business intelligence

Using air quality data for business intelligence involves collecting, analyzing, and interpreting long-term sensor data to support strategic decisions that drive business value.



# ...for the health of people, equipment, and the environment

## Ensure healthy indoor air quality

Monitoring indoor air quality helps you stay ahead of emerging concerns and detect anomalies that may go unnoticed by occupants. Sensors track key indicators, such as CO<sub>2</sub> levels, and trigger automated or manual alerts and events when readings exceed your set limits. For example, they may inform occupants of insufficient air quality or adjust ventilation to restore optimal air quality.

## Analyze historical data and metadata for informed decisions

Sensors collect historical data and provide metadata to help you identify patterns and make smart decisions on, for example, ventilation and how to design your space.

## Comply with regulations

By installing air quality sensors, you can document and prove adequate management of indoor air quality.

## Maintain good indoor environments

Monitoring temperature and relative humidity helps detect anomalies, extend equipment life, and ensure stable environments. Alerts notify you when it detects levels outside your preset range, so you'll know when you need to, for example, adjust ventilation.

## Achieve sustainability goals

By installing air quality sensors, you can gather data to help you follow up on sustainability goals and communicate your efforts.

## Detect vaping and smoking

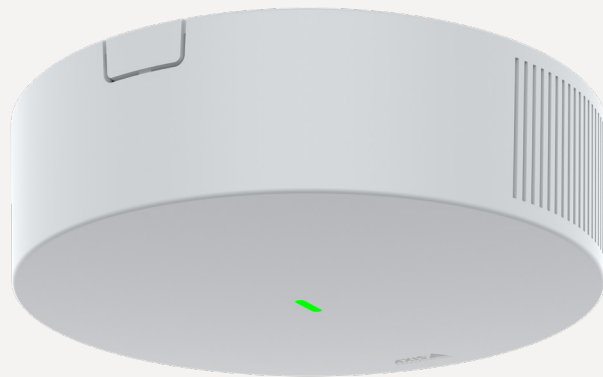
Sensors can detect unauthorized vaping or smoking and trigger appropriate responses to help enforce policies and maintain good air quality. For instance, they can send an audio or visual alert, start a video recording, or inform personnel.





# Our solutions

Axis environmental sensor portfolio consists of indoor air quality sensors that monitor multiple air quality parameters, including vaping and smoking. They enable efficient and appropriate responses to air quality issues and proactive management and optimization of air quality in indoor environments.



## AXIS D6210 Air Quality Sensor

AXIS D6210 makes it easy to manage the air quality in your indoor environment. It works with selected Axis IP devices and can detect vaping and smoking as well as various pollutants and air quality parameters. It uses [portcast technology](#) to simplify connection to compatible Axis devices, which also makes it easy to add this sensor to existing systems without the need for additional IP addresses, switch ports, or power.



## AXIS D6310 Air Quality Sensor

AXIS D6310 is an all-in-one standalone device that can detect vaping and smoking as well as various pollutants and air quality parameters. It also has other capabilities such as two-way audio including AXIS Audio Analytics, a PIR sensor for presence detection, four multicolor LEDs for visual alerting, and PoE passthrough for connecting another IP network device.

### Designed with privacy in mind

Axis air quality sensors safeguard privacy and make it easy to comply with privacy regulations in areas where privacy must be kept, such as bathrooms and changing rooms. Our portcast sensor requires a host device such as a camera or strobe siren. If a camera is used, masking can be easily enabled to protect privacy, and it can be installed up to 100 m (330 ft) away from the sensor. Our standalone sensor doesn't need another device, and the built-in microphone and AI-based audio analytics can be definitively disabled, ensuring privacy is always safeguarded.



# A portfolio to suit your needs



	AXIS D6210 Air Quality Sensor	AXIS D6310 Air Quality Sensor
Standalone vs. portcast device	Based on portcast technology (requires a host IP network device)	Standalone IP network device (runs on AXIS OS)
Measures	<ul style="list-style-type: none"> <li>PM (particulate matter) 1.0, 2.5, 4, 10</li> <li>RH (relative humidity)</li> <li>Temperature (Celsius and Fahrenheit)</li> <li>VOC (volatile organic compounds)</li> <li>NOx index (nitrogen oxides)</li> <li>CO<sub>2</sub> ppm range (1-40,000)</li> </ul>	<ul style="list-style-type: none"> <li>PM (particulate matter) 1.0, 2.5, 4, 10</li> <li>RH (relative humidity)</li> <li>Temperature (Celsius and Fahrenheit)</li> <li>VOC (volatile organic compounds)</li> <li>NOx index (nitrogen oxides)</li> <li>CO<sub>2</sub> ppm range (1-40,000)</li> </ul>
Detects	Vaping and smoking	Vaping and smoking
LED	One LED (red, amber, green, blue). Visual alerts based on detections.	Four LEDs (red, yellow, green, blue). Visual alerts based on detections.
Power forwarding	-	Class 3 passthrough. Easily connect another IP device for lower TCO.
Virtual stream	-	Yes. Easy viewing of real-time data in live device dashboard.
Two-way communication	-	Yes
Speaker	-	Built-in network speaker <ul style="list-style-type: none"> <li>Play audio content/alerts/messages</li> <li>Broadcast live voice messages to the area</li> </ul>
Microphone	-	Built-in microphone that can be disabled with a physical switch. Hear what's happening in the area.
Analytics	-	AXIS Audio Analytics <ul style="list-style-type: none"> <li>AI-based audio analytics for actionable sights based on advanced audio detection</li> <li>Detect sound in the area</li> </ul>
PIR (passive infrared sensor)	-	Yes. Presence detection.
Vandal-resistant	-	Yes. IK08, tamper-resistant screws.



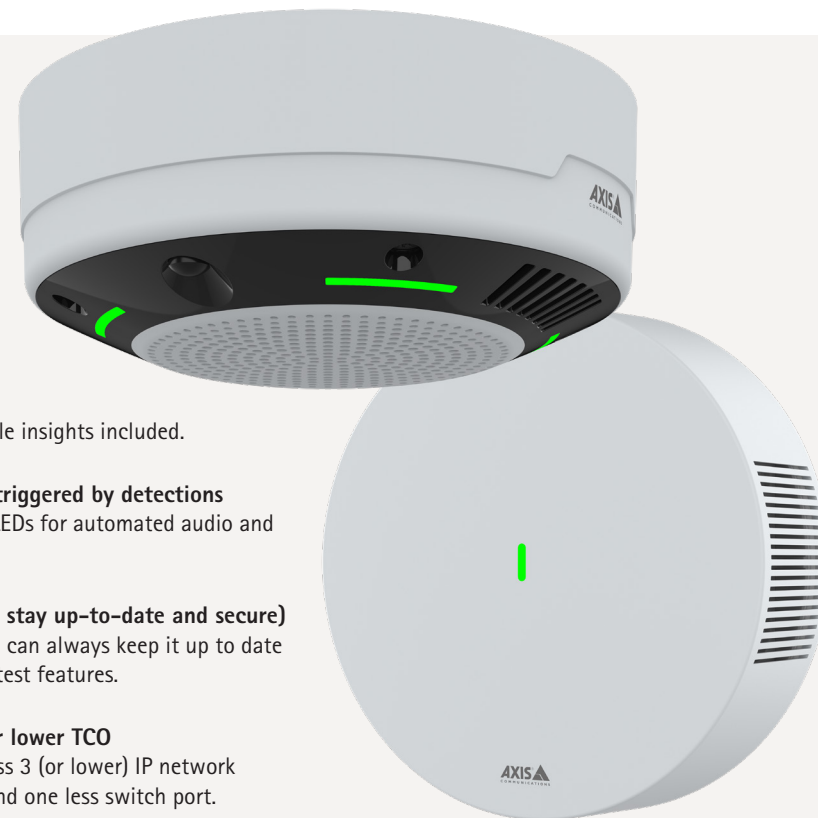
# Why choose Axis?

## AXIS D6210

- Simple integration**  
 Thanks to Axis portcast technology, it's simple to integrate AXIS D6210 as it uses the same IP address and interface as the device it's connected to.
- Visual alerts triggered by detections**  
 One multicolor LED for automated visual responses to detections.
- Plug and play installation**  
 Thanks to Axis portcast technology, AXIS D6210 can easily be installed by simply connecting it between the host device and the power source.
- Easy to retrofit**  
 Thanks to Axis portcast technology, AXIS D6210 can be added to existing systems without the need for additional IP addresses, switch ports, or power.
- Easy to manage**  
 AXIS D6210 is easy to manage as it uses the same IP address as the host device it's connected to.
- Cost-efficient**  
 All of this makes it a relatively cost-efficient product with easy installation.

## AXIS D6310

- AXIS Audio Analytics**  
 AI-based audio analytics for actionable insights included.
- Automated audio and visual alerts triggered by detections**  
 Built-in speaker and four multicolor LEDs for automated audio and visual responses to detections.
- Easy lifecycle management (easy to stay up-to-date and secure)**  
 Thanks to being built on AXIS OS, you can always keep it up to date with the highest cybersecurity and latest features.
- Easily connect another IP device for lower TCO**  
 PoE passthrough for connecting a class 3 (or lower) IP network device, which means one less cable and one less switch port.
- Easy viewing of live device dashboard**  
 Virtual stream - the dashboard will be streamed to, for example, the VMS, VLC, etc.
- Ensure privacy**  
 The microphone can be disabled with a physical switch to ensure privacy is safeguarded.



## Shared benefits

- Access data with no extra charge (no license fee)**  
 Data is stored on the device - access for free.
- Easy to integrate with Axis portfolio and other systems**  
 Open platform for easy integration and access to the air quality data.



# Maintain healthy indoor environments

With Axis air quality sensors, you can create healthier, more sustainable environments that benefit people, equipment, and the planet. By monitoring and managing indoor air quality, you can improve occupant well-being, increase productivity, and reduce energy consumption – all while supporting your organization's sustainability goals.

**EXPLORE AXIS ENVIRONMENTAL SENSORS**



# About Axis Communications

Axis enables a smarter and safer world by improving security, safety, operational efficiency, and business intelligence. As a network technology company and industry leader, Axis offers video surveillance, access control, intercoms, and audio solutions. These are enhanced by intelligent analytics applications and supported by high-quality training.

Axis has around 5,000 dedicated employees in over 50 countries and collaborates with technology and system integration partners worldwide to deliver customer solutions. Axis was founded in 1984, and the headquarters are in Lund, Sweden.