



# Airthinx Solutions For Healthy & Safe Buildings



## See The Clean Air You Breathe



### **Airthinx introduces the next level of public health & safety for the indoor environment**

In light of global pandemics, as seen with the current COVID-19 crisis where building occupants are focused on clean & healthy indoor air quality (IAQ), there is an urgent need to provide building owners & managers with a proactive solution that supports constant, real-time assessment and remediation of the indoor air throughout their premises.

Airthinx is the only currently-available solution providing complete control of the IAQ parameters, in any type of indoor space, to enhance the health of occupants and visitors. The Airthinx Air Quality Management System (AQMS) is the key to continuously detecting and effectively remediating air quality issues, while enabling IAQ visibility in real-time, a key step towards restoring public trust and rehabilitating economies.

We Make Health & Safety Standards Happen.



## Look For **Airthinx Blue**

Airthinx is an automated dynamic control system that is set to continuously and simultaneously comply with the highest global standards for each key indoor air quality parameter - defined as the **Airthinx Blue** standard, and demonstrated visually by the blue light indicator on the Airthinx IAQ device.



# Airthinx Platform & System Design

The Airthinx system is based on a sophisticated Internet Of Things (IoT) backbone. Using its own operating system (Airthinx OS), it enables scalable, secure, and reliable deployment, anywhere in the world. Airthinx OS also presents the ability to integrate seamlessly with any third-party mechanical system, allowing it to become part of Airthinx AQMS - the digitized IAQ management & control system for buildings.

Airthinx's 360-degree solution combines a superior data management process and an automated remediation process, activated as needed by Airthinx OS.

## System Operation

- Dynamically activate remediation devices according to air quality
- Effectively remediate all air quality indicators

## Data Management

- Continuous & accurate IAQ monitoring & analysis
- Real-time reporting & display of AQ status

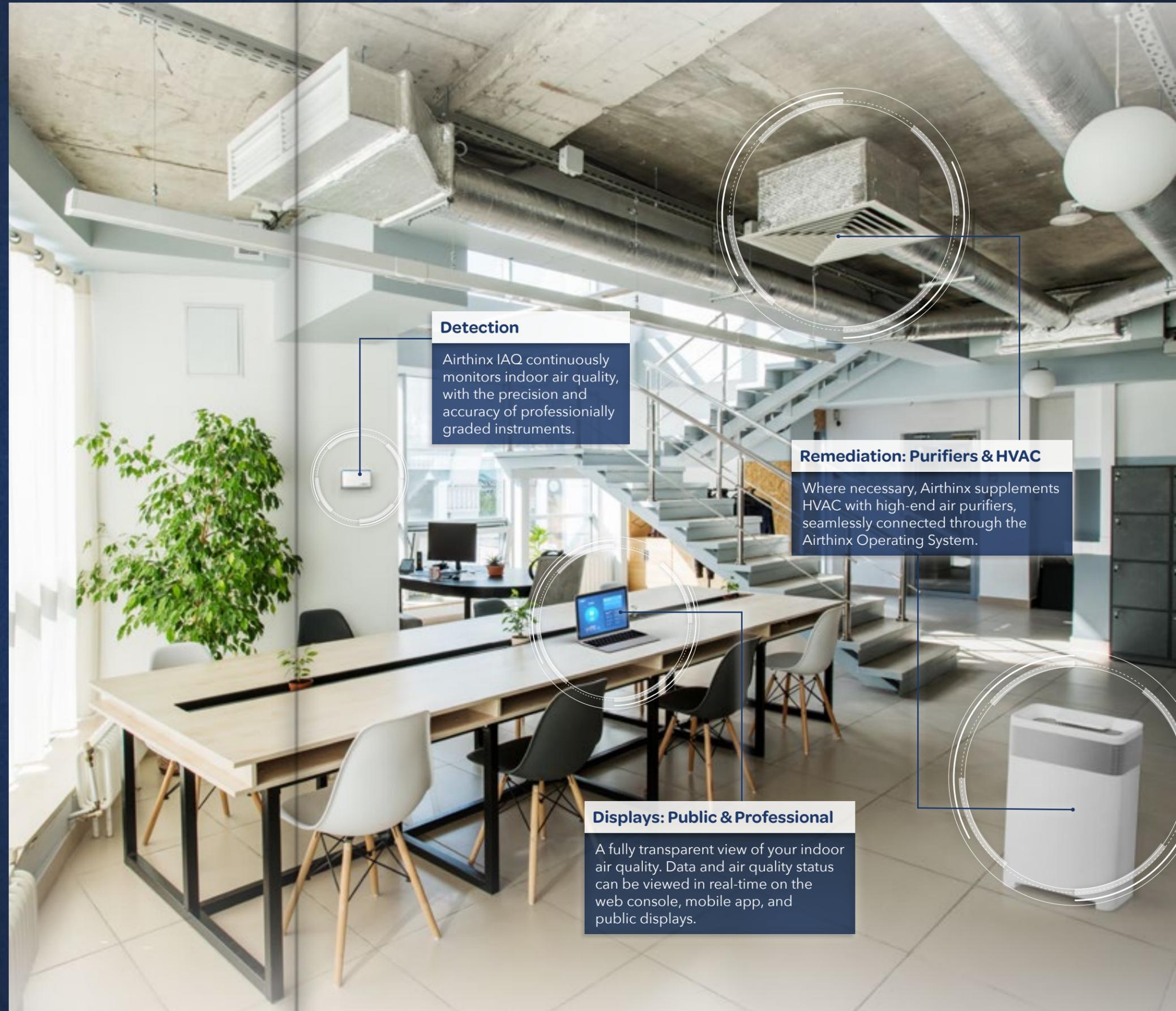
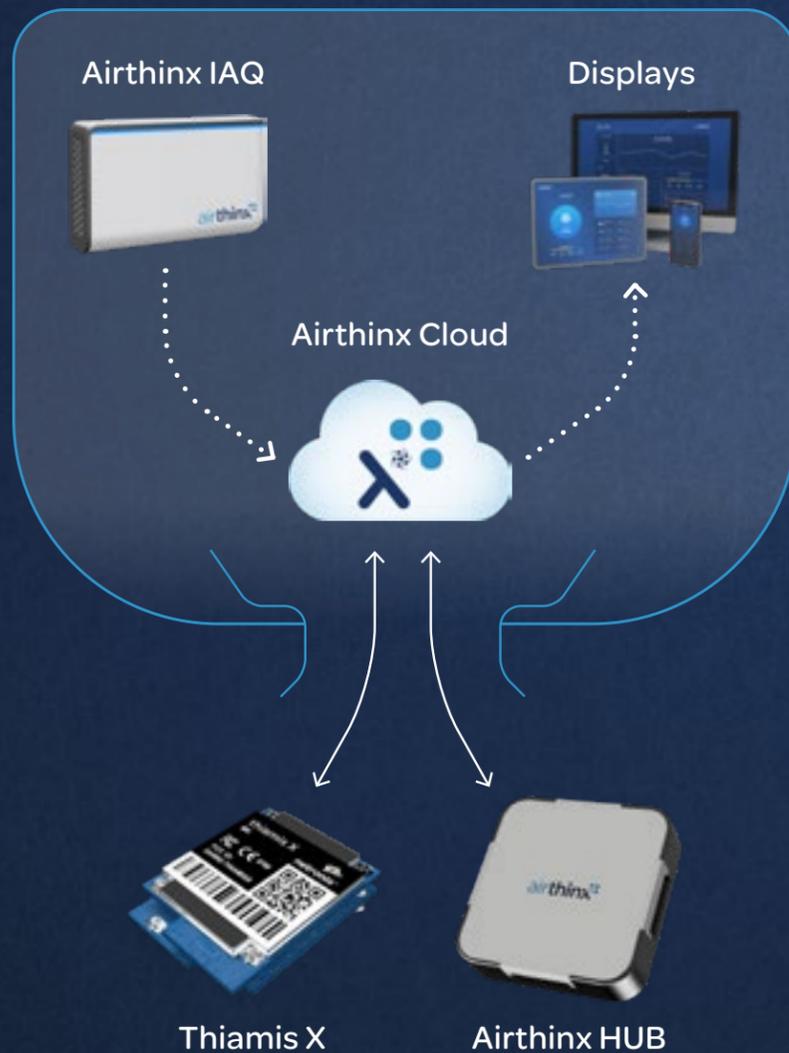
Airthinx offers a global, enterprise-secure solution for dynamic air quality management through easily connected devices and systems, without retrofitting.





# How does the system work?

The AirthinX system carries out a comprehensive 'Detect - Remediate - Display' process that introduces the only 24/7 automated air purification for indoor spaces. The system utilizes smart sensor technology incorporated in the different monitoring devices to capture and process data locally, while communicating the results to the AirthinX cloud, via a secure & reliable IoT platform. Simultaneously, the system uses the latest proven methods for air filtration and disinfection to adaptively clean the indoor environment based on contamination levels.



### Detection

AirthinX IAQ continuously monitors indoor air quality, with the precision and accuracy of professionally graded instruments.

### Remediation: Purifiers & HVAC

Where necessary, AirthinX supplements HVAC with high-end air purifiers, seamlessly connected through the AirthinX Operating System.

### Displays: Public & Professional

A fully transparent view of your indoor air quality. Data and air quality status can be viewed in real-time on the web console, mobile app, and public displays.



# How we control the changing environment on-site

The answer lies at the core of Airthinx platform architecture. It was designed to control all hazardous elements in the air by separately monitoring and remediating each of the 9 key IAQ parameters (viral, chemical & environmental) according to their actual status on-site. Although the remediation process is executed at the individual IAQ element level in a specific space, the system provides an integrated presentation at any facility level (single room, multi facilities Etc.)

Meeting Room

Parameter	Value	Status
Air Quality Index	82	Good
PM2.5	15.0 µg/m³	Good
PM10	25.0 µg/m³	Good
VOC	0.15 mg/m³	Good
CO2	400 ppm	Good
Temperature	22.5 °C	Good
Humidity	55.0 %	Good
Light	100 lux	Good
Sound	45.0 dB	Good

Reception Area

Parameter	Value	Status
Air Quality Index	82	Good
PM2.5	15.0 µg/m³	Good
PM10	25.0 µg/m³	Good
VOC	0.15 mg/m³	Good
CO2	400 ppm	Good
Temperature	22.5 °C	Good
Humidity	55.0 %	Good
Light	100 lux	Good
Sound	45.0 dB	Good

Open Workspace

Parameter	Value	Status
Air Quality Index	82	Good
PM2.5	15.0 µg/m³	Good
PM10	25.0 µg/m³	Good
VOC	0.15 mg/m³	Good
CO2	400 ppm	Good
Temperature	22.5 °C	Good
Humidity	55.0 %	Good
Light	100 lux	Good
Sound	45.0 dB	Good



# How does the system secure occupant's health on-site?

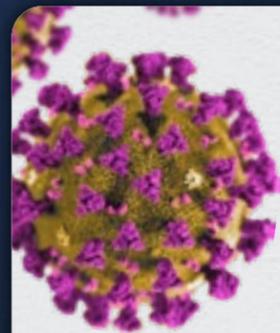
The air in indoor areas contains invisible particles that pose a significant health risk.

Factors such as the concentration of particles, humidity and ventilation enhance the transmission of viruses, especially in confined spaces where people congregate for long periods of time.

The recent COVID-19 crisis has highlighted just how dangerous this can be.

Ironically, our increased efforts to sanitize our surroundings also result in harmful chemicals being released into the air, contributing to the risk of poisoning.

Airthinx is an automated dynamic control system that continuously monitors and remediates the air on-site, enabling all key air quality indicators (CO<sub>2</sub>, PM, Toxins, Temperature & Humidity) to be continuously and simultaneously compliant with the **Airthinx Blue** standard (highest global IAQ standards) - the key to mitigating airborne hazards in confined spaces today and into the future.



## Viruses

PM and CO<sub>2</sub> are 2 key parameters that increase the chance of virus transmission. Airthinx combats airborne viruses, including ultrafine particles, by reducing and controlling the levels of CO<sub>2</sub> and remediating Particulate Matter on-site.

PM 5 mg/m<sup>3</sup>

Carbon Dioxide 100 ppm

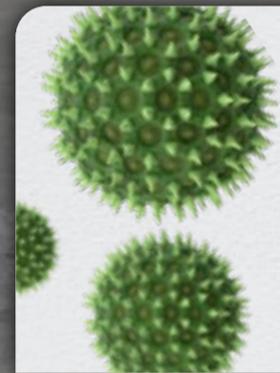


## Toxins

Airthinx sensor technology can detect toxic threats. Airthinx detects disturbances in the air and the system immediately activates remediation processes. Alerts or notifications can also be sent to third parties like first responders and fire departments.

Formaldehyde 0.03 mg/m<sup>3</sup>

VOC 0.35 ppm



## Allergens

Airborne pollutants can aggravate allergy symptoms, leaving people who suffer from allergies struggling to breathe. Airthinx solutions continuously optimize indoor air quality by controlling the parameters which affect allergies.

PM 5 mg/m<sup>3</sup>

Humidity 38.3%

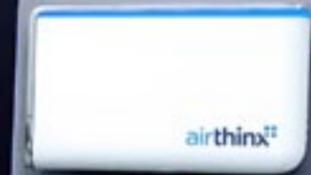
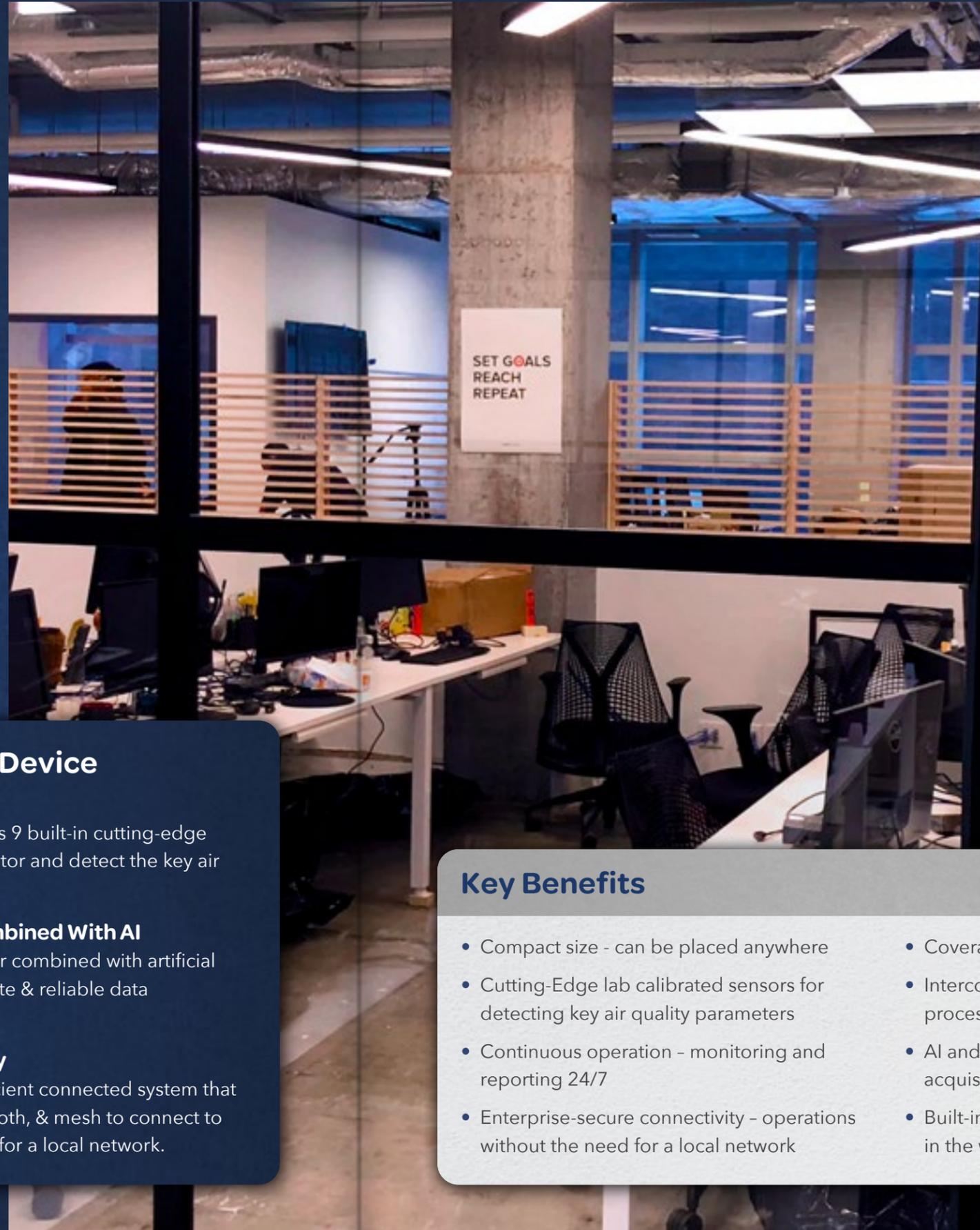


# Indoor Monitoring & Detection

A sophisticated standalone system, with its own cellular connectivity, that continuously monitors on-site air quality, neutralizes the environmental parameters that enhance the transmission of viruses, and eliminates toxic chemicals introduced into the environment by our increased sanitization efforts. All devices are seamlessly connected and controlled by the AirthinxOS, where data regarding air quality can be viewed in real-time.

## Airthinx IAQ

The award-winning air quality monitoring solution that has been adopted by professionals for continuous IAQ monitoring. Deployed in 35 countries during the last three years.



### Smart Monitoring Device



- **Cutting-Edge Sensors**  
A fully calibrated device uses 9 built-in cutting-edge sensors that accurately monitor and detect the key air quality parameters on-site.
- **Powerful Processor Combined With AI**  
Airthinx's powerful processor combined with artificial intelligence provides accurate & reliable data acquisition and analytics.
- **Standalone Connectivity**  
An independent & self-sufficient connected system that utilizes 3G/4G, Wi-Fi, Bluetooth, & mesh to connect to the cloud, without the need for a local network.

### Key Benefits

- Compact size - can be placed anywhere
- Cutting-Edge lab calibrated sensors for detecting key air quality parameters
- Continuous operation - monitoring and reporting 24/7
- Enterprise-secure connectivity - operations without the need for a local network
- Coverage ~ 1000 sqft of space per monitor
- Interconnectivity - for collecting and processing data in larger areas
- AI and ML - for accurate & reliable data acquisition and analytics
- Built-in Global SIM for deployment anywhere in the world



# Outdoor Environment Monitoring

Airthinx PRO is always connected & collecting data, providing wide-range professional air quality monitoring for outdoor environments where the early detection of toxic threats can be life-saving. This can include the detection of natural gas, smoke, or airborne chemicals.

## Airthinx PRO

For professional customized pollutant detection, the Airthinx PRO offers the first data-driven IoT solution for continuous monitoring of air quality outdoors, and in harsh indoor environments, in real-time. In buildings the data from Airthinx PRO communicates to HVAC or BMS to control outdoor air intake.



## Fully Customizable sensor setup to fit any building's air quality requirements

Each Airthinx PRO includes a six-channel particle sensor, high accuracy environmental sensors, a sound pressure sensor, and up to six gas sensors of your choice. Choose the gas sensors that are right for your specific situation, and get the data you need with the quality and precision of an Airthinx solution.

## Key Benefits

- Lower maintenance costs
- Lower energy cost
- Healthier IAQ
- Cutting-Edge Lab Calibrated Sensors for detecting key air quality parameters
- Continuous operation - monitoring and reporting 24/7
- Longer HVAC equipment life cycle
- AI and ML - for accurate & reliable data acquisition and analytics
- Enterprise-secure connectivity - operations without the need for a local network
- Built-in Global SIM for deployment anywhere in the world



# Air Quality Automated Remediation

The remediation process is carried out by any high level third-party mechanical system (like air purifiers, HVAC, ventilation systems, and more), all seamlessly connected through the Airthinx Operating System (AirthinxOS) and automatically activated as needed, based on the real-time air quality status on-site.

There are two options for third-party mechanical systems to become Airthinx enabled:

Option One

## Purification Devices

Airthinx Thiamis X is integrated into portable or centralized purification systems. Connecting those devices with the IAQ monitoring system immediately activates the remediation process on-site.



Option Two

## Industrial Purification Systems

Airthinx HUB is used to externally connect all types of Industrial & commercial building systems to the Airthinx platform, to activate the dynamic mitigation process on-site.



# Airthinx Air Remediation High End Air Purifiers

Integrated portable and centralized air purifiers are able to capture and kill pathogens and bacteria.

## Key Benefits

- Placement - anywhere indoors
- Out of the box - deployed and connected in minutes
- Coverage per unit - up to 3500 SQFT
- Building retrofitting - not required
- 4x the filter loading capacity \*
- Half the pressure drop\*
- Higher CADR (Clean Air Delivery Rate)\*
- Technologies: VOC Adsorption, Photo Catalytic Oxidation, UV, DFS (Disinfection Filtration System)

*\* As compared to conventional HEPA Filtration*

Healthway air purifiers with DFS technology have been integrated and successfully operating as part of Airthinx's full solution.



	DFS Technology	HEPA Filters	MERV 16	MERV 14-15	MERV 11-12
Efficiency	99.99%	99.97-99.99%	95%	50-85%	20-50%
Particle Size	0.007 $\mu\text{m}$	0.3 $\mu\text{m}$	0.3-1.0 $\mu\text{m}$	0.3-1.0 $\mu\text{m}$	0.3-1.0 $\mu\text{m}$
Air Pressure Requirement	✿	✿✿✿✿✿	✿✿✿✿✿	✿✿✿✿	✿✿

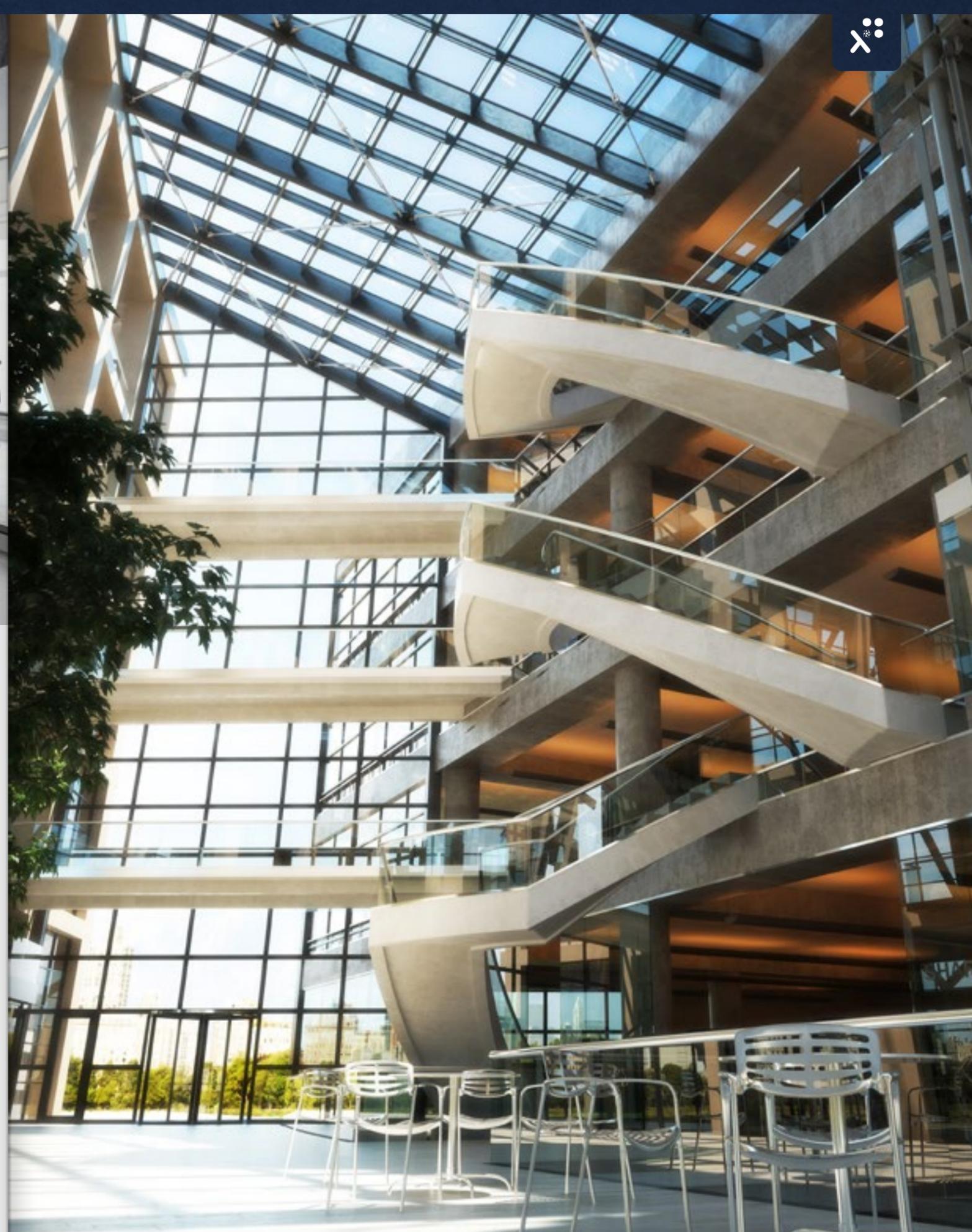
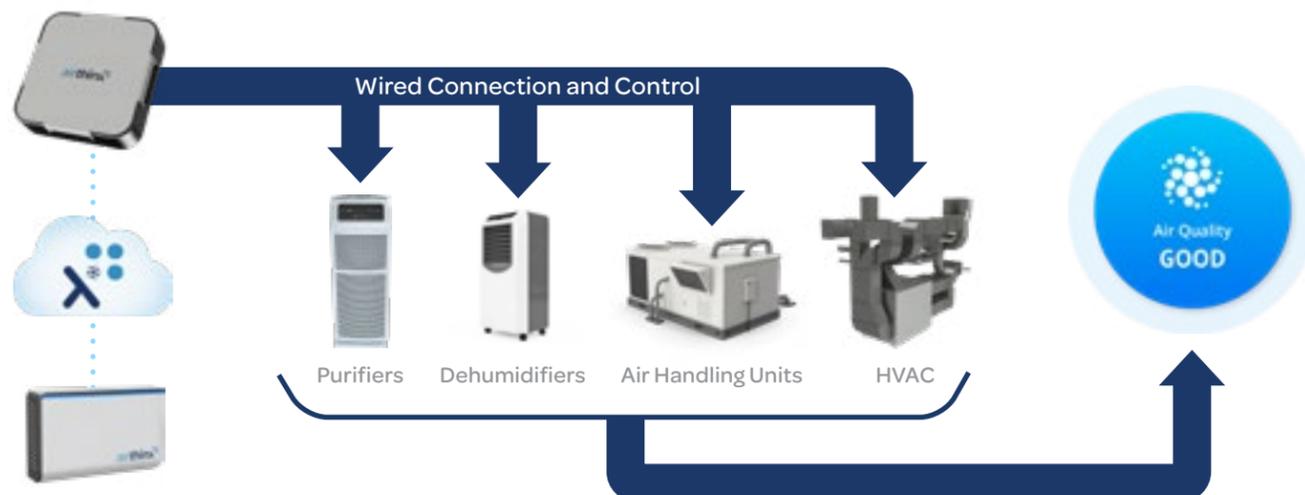
# Airthinx Air Remediation AHU Enhancement



## Key Benefits

- Healthy air
- Healthy building
- Energy savings
- CO<sub>2</sub> reduction
- Predictive maintenance

Airthinx HUB connects externally to all types of mechanical systems in commercial buildings, controlling the IAQ parameters, including the capture and elimination of pathogens and bacteria found on-site.

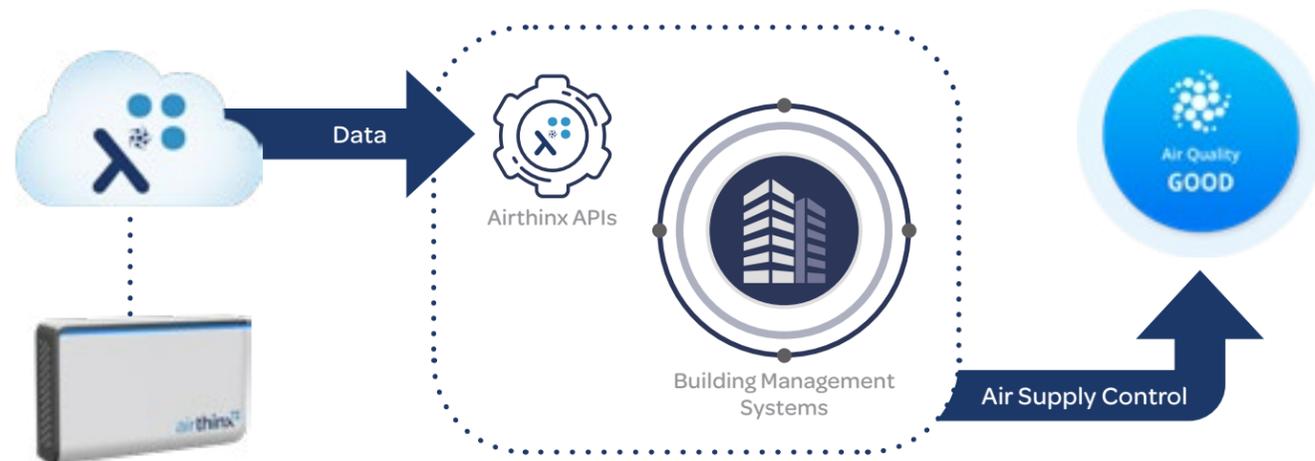


# Airthinx Air Remediation Integration with BMS

Airthinx is a stand alone system that can be integrated with existing data-driven systems, as it enables the transfer of the IAQ building information from Airthinx's system to the local BMS, facilitating a broad view of resource & cost management.

## Key Benefits

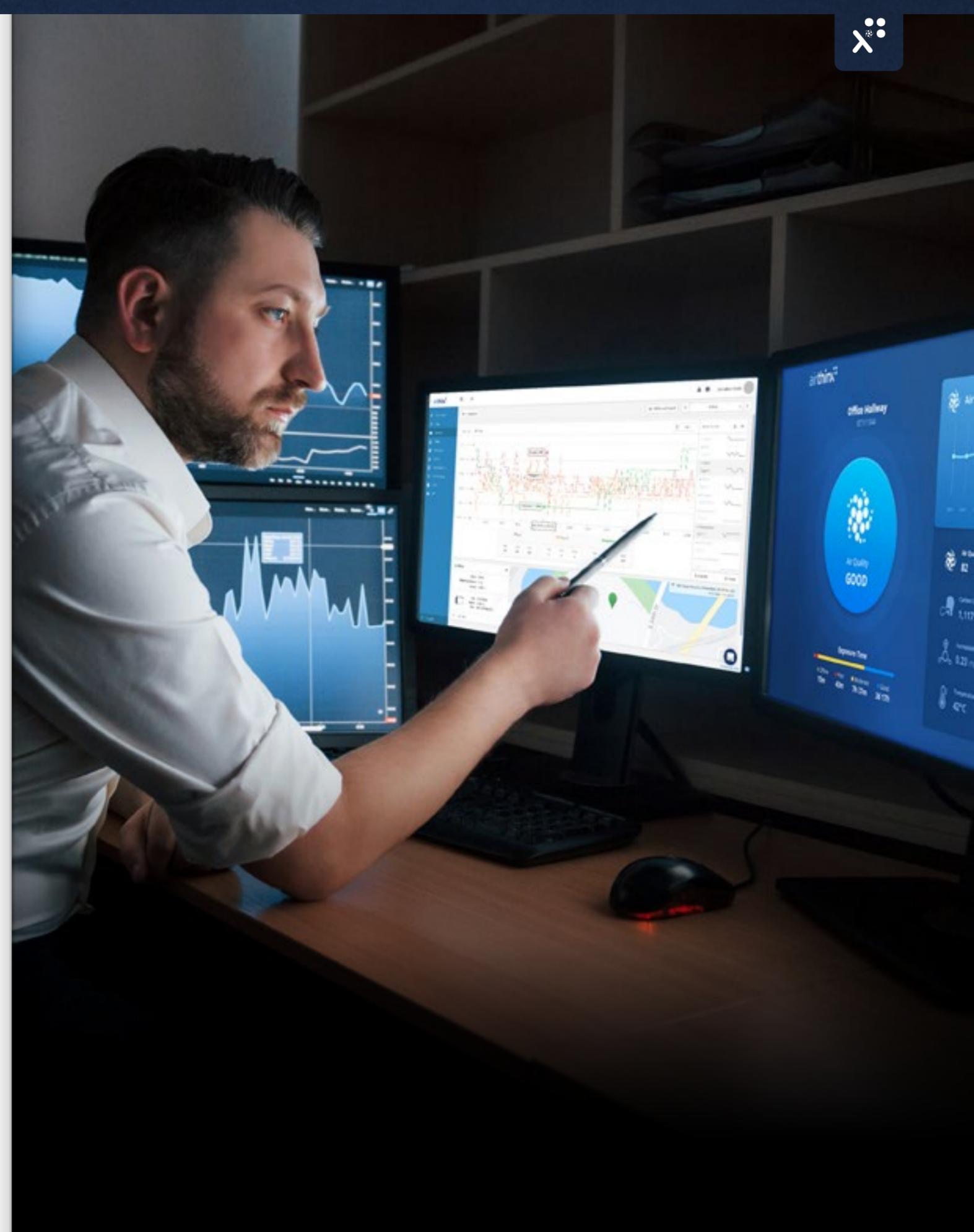
- Healthy air
- Healthy building
- Energy savings
- CO<sub>2</sub> reduction
- Predictive maintenance



# Smart Data Management Powered by AI & Machine Learning

Airthinx provides sophisticated facility management tools to monitor and analyze a building's IAQ performance. These tools enable you to 'See The Air You Breathe' in real-time, via various Airthinx displays, while building confidence with occupants and visitors by letting them know they are kept safe while on the premises.

Airthinx Console PRO is the professional tool set for facility and quality managers. The Console PRO is fully-hosted, web application that enables end users to perform real-time monitoring and historical analysis of captured data. Designed on an architecture that makes data accessible on any mobile device without compromising functionality and maintaining an outstanding UI/UX.





# Build trust & confidence Access data anytime, anywhere

Airthinx's on-site and on-line web & app tools enable building managers to provide a continuous verified healthy environment, with the transparency needed to gain occupant's trust while also building their confidence by knowing they are kept safe while on the premises.

## Consumer Display (On-site)

We enable visualization of the on-site air quality by monitoring, analyzing, and displaying key components that effect our health in every indoor space. Our visual tools can be displayed in every location to assure full transparency to everyone.



## Real-Time Status Report (On-line)

Our online web and app tools are continuously available to the community to view the real time air quality status of any space controlled by the Airthinx system, reassuring that everyone is kept safe and healthy.





# Airthinx Safe & Healthy Building Environment

## The Solution:

1

### Air Quality Management

- Clean air on-demand 24/7
- Plug & play operation
- Compact & movable
- High degree of accuracy
- Integration flexibility
- Wide coverage & scalability



2

### Data Management

- Measurable & traceable
- Analytics
- Visualization
- Verification & transparency
- Integration
- Anytime, anywhere



3

### Sustainability

- Lowering energy consumption
- CO<sub>2</sub> footprint reduction
- HVAC system enhancement
- FM predictive maintenance
- Cost optimization



## The Impact:

- Elevating building occupant's experience through IAQ transparency, healthier environment, and premium service.
- Continuous IAQ management through system integration and control of outdoor air intake.
- Improving sustainability by reducing energy consumption and lowering CO<sub>2</sub> footprint.
- Generating higher ROI and NOI through cost avoidance, risk management, and higher productivity.
- Complementing digital transformation and generating data for effective building management.



Turn Every Space Into A Safer Place