airthinx

Good air quality keeps you happy, well-rested and productive

THE LUNG IS THE MOST COMMON SITE OF AIRBORNE INJURY

- Global air pollution claims 7 million lives annually
- The air indoors can be 10-100x worse than indoors
- We take between 17,000 and 23,000 breaths in a single day
- Up to 65% of all asthma cases are related to indoor air quality

INDOOR AIR INFLUENCES HEALTH

- Exposure to indoor pollutants, like microscopic dust particles, mold, carbon dioxide, VOCs, and formaldehyde, can trigger asthma, allergies and respiratory diseases.
- In schools, controlling exposure to indoor environmental factors like dust and pollen could prevent 13.8 million missed school days each year.

airthinx is an **award-winning** air quality monitoring solution designed to improve the health of a building & the health of it's people by creating safe & energy-efficient indoor spaces everywhere in the world

the airthinx IAQ solution

This is a story about how to feel safe and healthy in a home, school, work, factory, hospital, hotel room, airplane or any built environment because of a new trademark in health & wellness technology.

Airthinx, is the 1st data-driven **internet-of-things (IoT)** solution for continuous air quality monitoring with the precision & accuracy of professionally graded instruments, at a fraction of the cost, designed to improve occupant health and create safe & energy-efficient spaces, in every room, everywhere in the world. Each smart device connects via cellular network & WiFi, monitors key parameters of air quality in real-time using 9 built-in sensors (PM 1, PM 2.5, PM 10, CO_2, CH_2O, VOCs, Temperature, Humidity & Pressure) & detects critical events like smoking, fire, or mold contamination with artificial intelligence.

Building managers, employers, and residents access their data anytime, anywhere via the user-friendly app or the professional console on the web, ensuring the safest environment and most energy efficient use of systems. Utilizing the measurements as a nutrition label for air quality, or the LED visual alerts on the device, every user has the ability to see the moment air quality is unhealthy, unsafe or toxic, forcing stakeholders to ask the question: *how can I create a healthy indoor space?* The fully calibrated device can easily be deployed in multiple locations and communicates with building automation systems to quickly mitigate the environmental impacts of indoor air pollution.

airthinx introduces the third dimension of health and wellness allowing you to **see the air you breathe**

how does airthinx work?

1 Air travels into the airthinx where 9 sensors evaluate its quality.

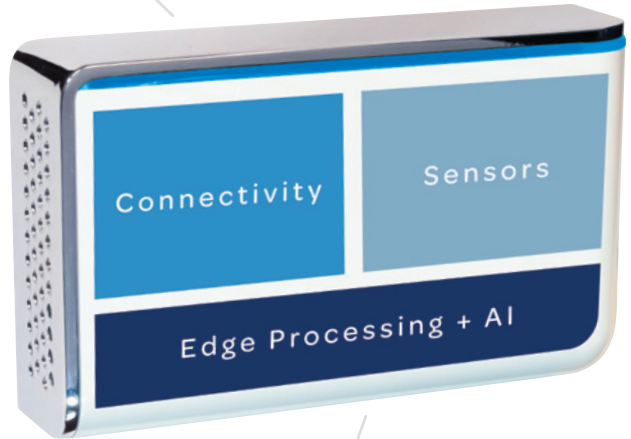
3 The LED light indicates blue, yellow, or red to show air quality.

2 The airthinx wirelessly sends the data to the cloud, where it can be accessed anytime, anywhere.

Compact, Lightweight & Elegant Design

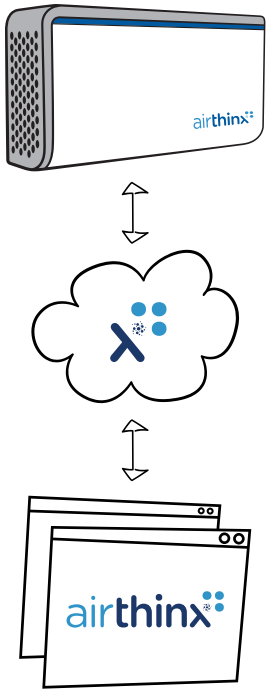
5G/4G/3G | GPRS | WiFi | Mesh | LoRA | NB-IoT | Bluetooth

CO_2 | PM 1 | PM 2.5 | PM 10 | TVOC | Barometer | CH_2O | Temperature | Humidity



Powerful processor combined with **artificial intelligence (AI)** to offer accurate, and reliable data acquisition, analytics and communication to the cloud

an a–z platform



Airthinx IAQ utilizes smart sensor technology to continuously capture data processed locally and then pushed to the cloud via a secure & reliable connection.

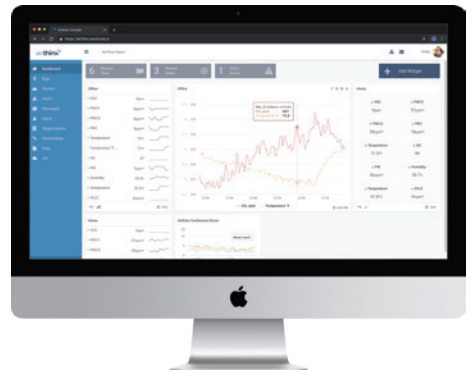
Airthinx is designed with integration and interoperability in mind. The cloud is the mastermind of the whole operation. The hub enables monitoring of all the devices on the field and manages all the connections to applications and 3rd party solutions such as, SAP, Nest and more.

Airthinx is also designed with the developer in mind. The **airthinx web console** and the **airthinx app** provide the tools to access data while the suite of developer tools include APIs and SDKs to create applications and services.

Unlike conventional systems, airthinx carries IoT in its DNA

AIRTHINX CONSOLE

The console is web-based and designed with the professional in mind. It provides a plethora of tools for data analytics, alerts & notifications, device management, user management, collaboration tools between organizations and users, and the ability to view and manage 3rd party instruments in addition to airthinx devices for more comprehensive monitoring.



AIRTHINX APP

The App offers the ability for anyone to better understand their air quality in any environment in the most intuitive way. See the classification of the air quality (AQ) – **Good**, **Moderate** or **Poor** based on data collected by airthinx and advanced algorithms. You can easily identify parameters that contribute heavily on the deterioration of air quality, utilizing data trends and visual alerts.

a new kind of bottom line

Sensors

	airthinx	Awair	Foobot	Particle Plus	TSI	MiniRAE
PM 1	●	X	X	●	●	X
PM 2.5	●	●	●	●	●	X
PM 10	●	X	X	●	●	X
tVOC	●	●	●	●	X	●
CO_2	●	●	●	●	X	●
CH_2O	●	X	X	X	X	●
Temperature	●	●	●	●	X	X
Humidity	●	X	●	●	X	X
Pressure	●	X	X	X	X	X

Prior to airthinx, an end user had to decide between something affordable or a professional instrument that costs thousands of dollars. *Enter airthinx,* a professional instrument with a comprehensive solution in the price range of premium electronic products. With airthinx, everyone can see the air they breathe.

Connectivity & Integration

	airthinx	Awair	Foobot	Particle Plus	TSI	MiniRAE
3G/4G	●	X	X	X	X	X
WiFi	●	●	●	●	X	X
Bluetooth	●	●	X	●	●	X
LoRA	●	X	X	X	X	X
GPS	●	X	X	X	X	X
Mesh	●	X	X	X	X	●
Visual Alerts	●	●	●	X	X	●
Developer Tools (SDKs, APIs)	●	●	●	X	X	X

Professional Application

	airthinx	Awair	Foobot	Particle Plus	TSI	MiniRAE
Mobile App	●	●	●	X	X	X
User Management	●	●	X	X	X	●
Dashboard	●	●	X	X	X	●
Device Management	●	X	X	X	X	X
Alerts (SMS, Email)	●	X	X	X	X	X
Collaboration Tools	●	X	X	X	X	X
Analytics Tools	●	X	X	X	X	X
Integration 3rd party Devices	●	X	X	X	X	X

a trademark for health & wellness in any space

A PROFESSIONAL INSTRUMENT, NOT A GADGET

- Continuous and ongoing monitoring of indoor air pollutants
- Critical event detection for smoke, fire, and mold
- Reduces exposure to environmental triggers

PROVEN TO CREATE HEALTHIER INDOOR SPACES

- Improved health & well being
- Better sleep quality
- Heightened productivity
- More energy
- Heart rate
- Dietary rhythms
- Hormone balance
- Respiratory patterns

The first affordable professional solution for monitoring air quality in every room

temperature | pressure | humidity

To ensure a big picture of your air quality, the airthinx IAQ device measures 3 environmental conditions: temperature, pressure & humidity. Spikes in humidity may result in mold growth on any substance which can happen within 48 hours of contact with a surface. Heat stress may cause mental fatigue during performance of sustained-attention tasks that demand greater cognitive resources. And differences in pressure can increase the flow of infectious particles. Optimal environmental conditions are 68-74 degrees Fahrenheit, with relative humidity below 50%, and low pressure differentials.

particulate matter

The airthinx IAQ Device measures 3 different size particulates PM 1.0, PM 2.5, and PM 10. To give an idea about just how invisible these particles may be, a single strand of human hair is 50 microns in diameter. The smaller the particle, the worse it is and the more likely it is to increase infection rates and cause respiratory illnesses. Particulate Matter is commonly in dust, allergens and pollen. Cooking, smoking, crumbs and dirt will cause PM to spike. LEED recommends PM 10 levels below 50 μg/m³ and PM 2.5 levels below 15 μg/m³.

PM

volatile organic compounds

There are up to 300 VOCs and emissions indoors are now equal to what comes out of the tailpipe of your car. The EPA classified volatile organic compounds as carcinogens and can be found in everyday cleaning products and paints.

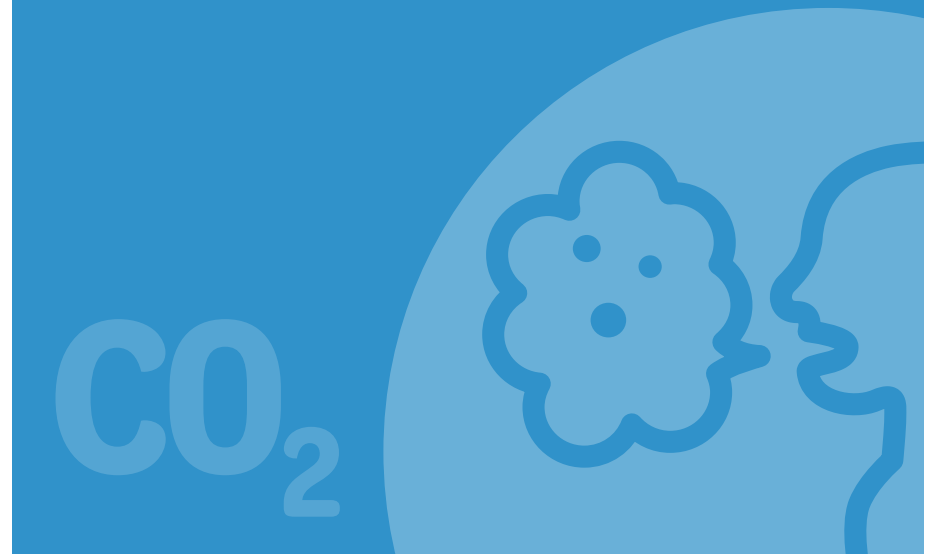
VOCs

formaldehyde

Formaldehyde can be commonly found in adhesives & glues in furniture and building materials like pressed wood, carpets, fabrics & particle board. The World Health Organization guideline for indoor air formaldehyde concentration is 0.1µg/m³.

carbon dioxide

Humans emit CO_2 with every exhale. When we sit in a densely occupied space, there is a CO_2 bubble right in front of our faces! Anytime you have an increase of people in a closed environment, levels of CO_2 will spike. Safe levels of CO_2 are around 500-600 parts per million. ASHRAE recommends levels below 1000 ppm.



all the places it can go

COMMERCIAL SPACES
The innovative cost-effective solution monitors airborne pollutants in workspace environments where air quality stability is essential for occupational health, safety, productivity and wellness.

HOTELS
The world's most luxurious hotel spaces can now be the smartest too with airthinx's continuous IAQ monitoring solution, bringing 5-star experiences and unparalleled health, wellness & comfort to every continent, in real-time.

AIRPLANES
Become the gold standard in the aviation industry by creating the safest and healthiest flight conditions, providing passengers, crew and pilots a sustainable way of flying.

HEALTHCARE SPACES
Create the most sterile environment in operating, patient, & isolation rooms to ensure the highest levels of safety and comfort for patients & staff.

HOMES
Monitor indoor air pollutants in your home that affect vital human organs like the lungs, heart and brain, causing heart attacks, cardiac arrhythmias, strokes, pulmonary disease, respiratory disease and asthma.

SCHOOLS
Achieve academic & athletic excellence in every classroom, art studio, lunchroom & gymnasium by monitoring key IAQ pollutants that impact student learning, memory, concentration, problem-solving and health.

INDUSTRIAL
Ensure compliance with OSHA regulations by monitoring air quality in real-time and seamlessly producing daily, weekly and monthly reports about 9 air quality parameters. From industrial hygienists and facilities managers, to EHS professionals, the ease of use makes the airthinx solution an industry standard.

air, the most shared resource

“Langan partnered with airthinx to leverage the use of the devices inside corporate buildings to help create a healthier and more productive environment while generating significant cost savings from maintenance and energy optimization.”

Gary Bacon
EHS Management and Compliance
Langan Engineering, usa

"This is a pretty amazing new product. I saw it first-hand several months ago, and knew that its monitoring capability, functionality and ease-of-implementation could really make it stand out in our Awards program."

Tim Hermes
Publisher
Business Sector Media, usa

"The radiotherapists are very happy, and the hospital has not spent $50,000 on a new AC system to control the air quality conditions in the room."

Simon Witts
Principal
LCI, australia

environmental LEADER PRODUCT & PROJECT AWARDS TOP PRODUCT OF THE YEAR 2018

“Real-time indoor air quality data provides a real value to customers, especially considering the potential health risks of waiting for a monitoring device to arrive or waiting for the results of a test. This is a cost-effective solution.”

Forbes

"At the appropriate times, managers or consumers are notified to shift their usage patterns. That not only cuts down on electricity bills and pollutant levels but it can also improve the performance of existing equipment."

GREEN BUILDING ALLIANCE™

"We started using the airthinx monitor to track our office’s air quality. What we first loved about the device was the ease in the activation; after setting up an account online, it was simply plugged in anywhere and able to be used. This portable monitor can be moved to any location and instantly start collecting data."

specifications

PM Sensors		**PM 1, PM 2.5, PM 10**	0.3~1.0; 1.0~2.5; 2.5~10 μm
		Effective Range	0~500 μg/m³
		Resolution	1 μg/m³
		Efficiency	98%>=0.5μm
		Maximum Consistency Error	±10% @100~500 μg/m³
		Standard Volume	0.1L
Gas Sensors	CH_2O	**Effective Range**	0~1 μg/m³
		Resolution	0.001 μg/m³
		Maximum Error	<5% FS
	CO_2	**Effective Range**	0~3000 ppm
		Resolution	1 ppm
		Maximum Consistency Error	±50ppm+5%FS
		Single Response Time	< 3 sec.
		Total Response Time	≤ 25 sec.
	tVOCs	**Effective Range**	1 ~ 30 ppm of EtOH
		Sensitivity	0.15 ~ 0.5 Rs (10ppm of EtOH)/ Rs (air)
Environmental Sensors	Temperature	**Range**	0 - 99 °C
		Resolution	0.1 °C
		Maximum Error	±0.5 °C
	Humidity	**Range**	0-99 %RH
		Resolution	0.1 %RH
		Maximum Error	±2 %RH
	Barometer	**Range**	300-1100 hPa
		Resolution	±0.12 Pa
		Maximum Error	±1.3 Pa

Communications	**Cellular**	GSM/GPRS/EDGE 850, 900, 1800, 1900 MHz, UMTS/HSPA 800/850, 900, AWS 1700, 1900, 2100 MHz
	WiFi	802.11 b/g
	Bluetooth	Bluetooth 4.0
	Mesh	Zigbee, LoRa
	GPS	Sensitivity > -165dBm, 3m Accuracy, A-GPS
	Antenna	Built-in (GPRS, 3G, GPS, Zigbee, Bluetooth, LoRa)
	SIM Card	Built-in
General	**Input Voltage**	5 VDC (micro-USB)
	Power	0.6 Watt
	Operating Temperature	-30 °C to 75 °C (-22 F to 167 F)
	Accelerometer	16g (13-bit resolution)
	Dimensions (LxWxD)	4.3in (110mm) x 2.6in (66mm) x 1.2in (30mm)
	Weight	0.4 Lbs (0.18 kg)
	Certifications	CE, FCC, PTCRB

Indoor air quality starts here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HOW CAN WE HELP YOU?

If you would like to find out more about how we can help you, please give us a call or drop us an email.

GENERAL QUESTIONS

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TECHNICAL SUPPORT

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Life is measured by the air you breathe and the moments that take your breath away

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