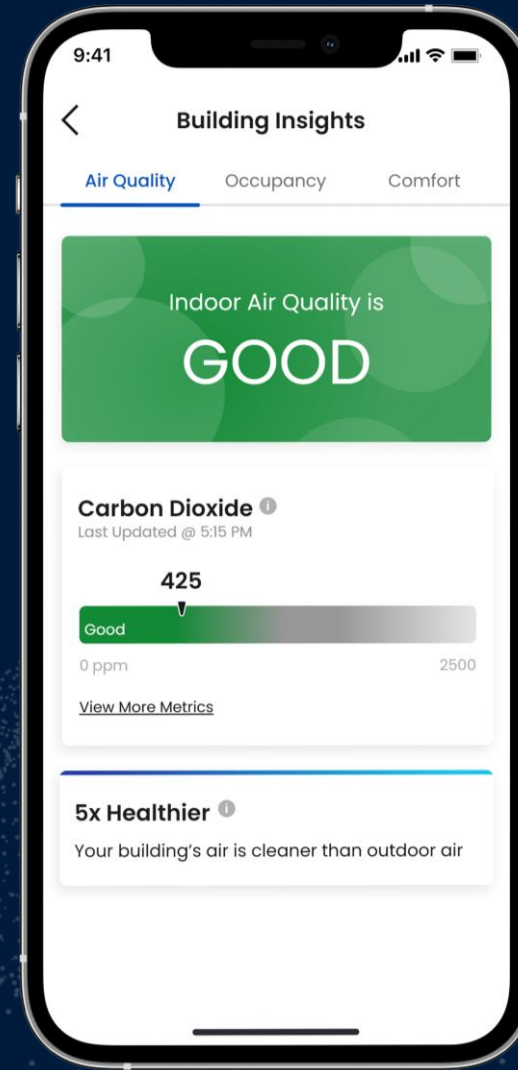


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Indoor Air Quality Platform

Implementation + Pricing



Indoor Air Quality (IAQ) Program

A complete solution for **measuring**, **viewing**, and **responding** to current air quality information in the spaces throughout a building + trends over time.



Sensor devices measure
air quality in a space

Sensors installed
strategically in spaces
throughout your building

Real-time air quality
information available at
your fingertips



IAQ Implementation process

IAQ Implementation Process

Cohesion's 5-step IAQ implementation process accomplishes something the 5 human senses cannot: **insight** + **control** over air quality in a space.

1 Assess Building Needs + Provide Recommendations



- Cohesion + Client discuss air quality needs and goals to determine sensor count
- Cohesion provides product information
- During a site visit Cohesion + Client determine sensor placement
- Cohesion identifies sensor types + mapping required based on placements throughout the building
- Cohesion provides a detailed quote

2 Order Hardware + Coordinate Delivery



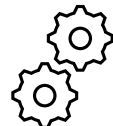
- Cohesion orders hardware [sensors + mounts]
- Cohesion coordinates delivery to the building

3 Install Sensors at Building



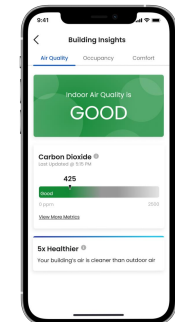
- Client installs sensors (and mounts if required) in building
- Client establishes data connection to sensors [2.4GHz WiFi or Ethernet]

4 Connect Sensors to Dashboard



- Cohesion integrates sensors with app + dashboard

5 Real-Time Monitoring Live





Air quality sensor information

Air Quality Sensor Information

Air quality sensors provide **powerful + actionable** insights that enable real-time adjustments to improve air quality.

What does a sensor do?

Measures these key IAQ metrics that affect indoor air quality and communicates current levels:

- Temperature
- Relative humidity
- Carbon dioxide [CO₂]
- Total VOCs [TVOC]
- Particulate matter levels [PM_{2.5} + PM₁₀]

Sensor Certifications

WELL and RESET approved.

Sensor Calibration

- Recalibrate sensors with the app and exposure to fresh air.

Sensor Life Cycle

- With proper care, sensors can last 5 years or more. Some sensor elements are rated for 10+ years.

Installation Requirements

- 2.4 GHz WiFi or ethernet connectivity
- USB-C, 12-30V DC direct wire, or PoE

Dimensions

- L: 6.1 in [155mm]
- W: 5.1 in [129mm]
- H: 1.3 in [34mm]

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IAQ in Real-Time

Sensor Indicators

Indicators display current levels in real-time + an overall air quality score

Dashboard

Data from all installed devices is aggregated in a dashboard to show air quality metrics at-a-glance

Sensor Placement

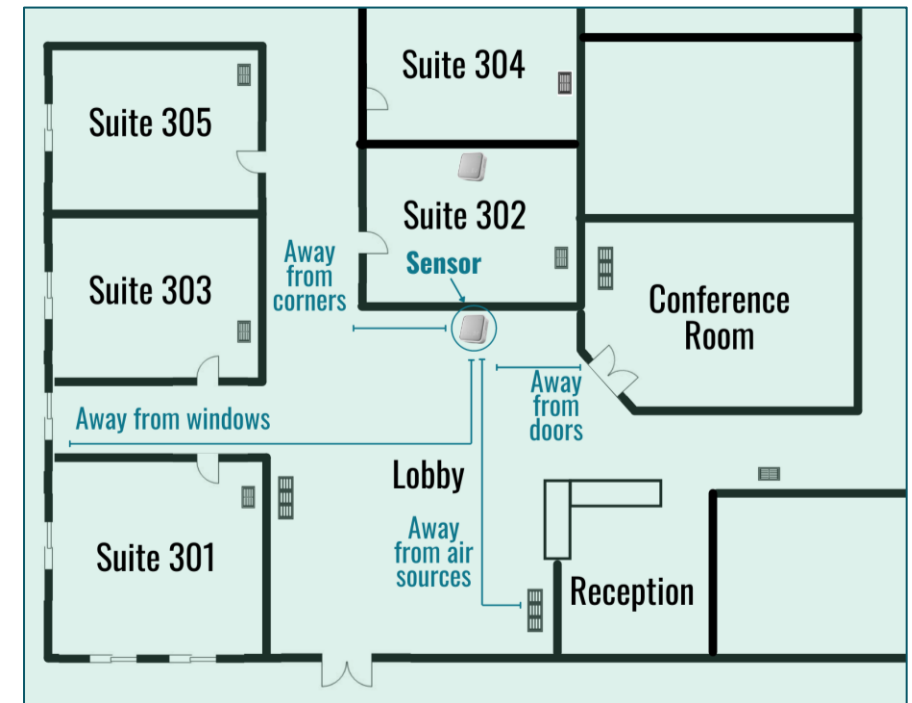
Below are some key considerations in determining sensor placement in a space. The goal is to ensure sensors can gather the most accurate air quality readings.

- At least one sensor per 3500/sq.ft. [WELL requirement]
- Centrally placed in each space within the “breathing zone”:
 - 4' - 6' from the floor
 - 3' from corners
 - 2' from open doorways
- Away from air sources [windows, halls, air vents]

Individual sensors for closed spaces like gyms and conference rooms

May be free-standing or wall-mounted [depending on space]

Key considerations for sensor count: Building size + Certification requirements + Placement requirements + Other nearby air sources





Roles + responsibilities

IAQ Implementation Responsibilities

The Indoor Air Quality implementation process is collaborative and involves responsibilities of both the Client + Cohesion.

Cohesion

- Deliver hardware [sensors + mounts]
- Provide guidance on installation location + best practices for certifications
- Integrate sensors with app + dashboard
- Ongoing support + troubleshooting for software and hardware

Client + Cohesion

- Determine number of sensors needed based on building size, layout, + certification requirements

Client

- Install/mount sensors in space
- Sensor connectivity [2.4GHz WiFi, Ethernet]

Manufacturer installation instructions are supplied



IAQ program pricing

Pricing

This example pricing is based on the WELL standard minimum requirements. More robust air quality monitoring options are available.

Unit Cost

- Sensor: \$500
- Mounting hardware: \$0-\$199*
- SaaS fee: \$36 per month

*Mounting hardware cost depends on the power option per sensor. When connected via Ethernet, mounting hardware is required.

Pricing as of July 2021

Example Pricing

Building Square Footage	Total Sensors*	Total Price per 2 Years	Total Price per 4 Years
250,000	10	\$13,640	\$22,280
500,000	20	\$27,280	\$44,560
1,000,000	40	\$54,560	\$89,120

*Sensor count and mounting will depend on your building needs. Pricing does not include tax and mounting hardware.



IAQ FAQ

Frequently Asked Questions

Which air quality metrics are measured?

- **temperature** – the optimal range spans 18 to 25°C [64.4 to 77°F]
- **relative humidity** – amount of water vapor in the air. Optimally between 40-50%.
- **carbon dioxide [CO2]** – the acidic colorless gas in the air. Ideally below 800 ppm.
- **total VOCs [TVOC]** – organic chemicals in the air.
- **particulate matter levels [PM2.5 + PM10]** – tiny parts of solids or liquid materials in the air. A hair follicle is 7x larger than PM10 + 30x larger than PM2.5.

For more detail, see [IAQ Factors, Values, Roles, and Permissions](#).

How long is an implementation?

Between 4-12 weeks for a 100,000 sq.ft. Building. Factors that affect the timeline can include number of sensors required, delivery and installation times.

What are the sensor specifications?

Metric	Sensor type	Range	Accuracy
Temperature	Complementary metal-oxide-semiconductor [CMOS]	-40 to 125°C [-40 to 257°F]	±0.2°C
Humidity	CMOS	0-100%	±2%
CO2	NDIR [Non Dispersive Infrared Sensor]	400-5,000 ppm	±75 ppm or 10% of reading
TVOC	Multi-pixel metal oxide gas sensor	0-60 ppm	±10%
PM2.5	Laser-based light scattering sensor	0-1,000 µg/m³	±15% or ±15 µg/m³

Wireless connectivity

- Wi-Fi connection: 802.11 b/g/n @ 2.4GHz [single stream]
- Supported Wireless Security: WPA, WPA2
- Bluetooth 4.1 @ 2.4GHz

Battery life

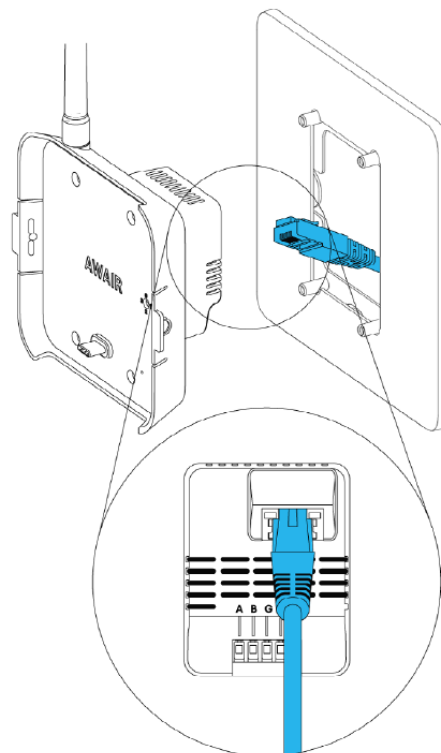
- Rechargeable Lithium-Ion Battery
- Capacity and voltage: 2250mAh @ 3.7V
- 5.5 - 9 hours [depending on settings]

Sensor In-Wall Power Sources

Power over Ethernet (PoE)

An Ethernet cord can be used to deliver power to your device [PoE]. To use this power method, you must install your Omni device into the wall using components found in the Surface Mount Kit and In-Wall Mount Kit.

Run a Cat 5e [or greater] Ethernet cable from your PoE Switch, through the drywall incision, and into the Ethernet port [RJ-45 connector] on the Awair Omni Backpack.

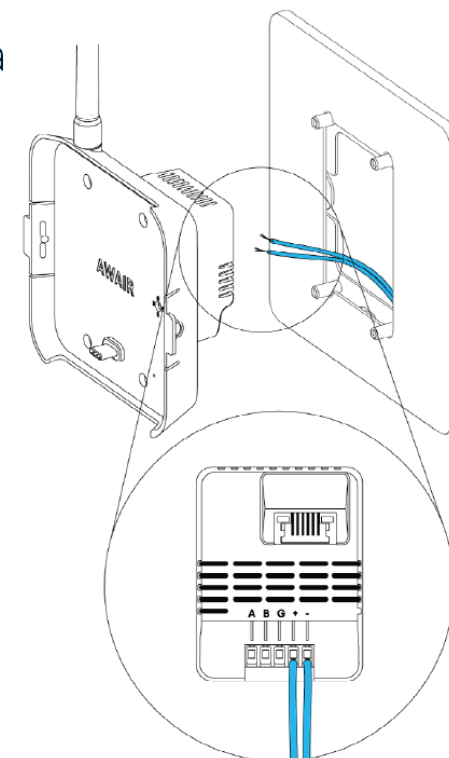


Power Specifications

- Input: Power over Ethernet (PoE – 802.3af & 802.3at)
- Output: DC 5V/2A

Low-Voltage Wiring


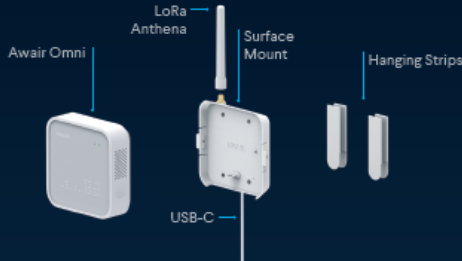
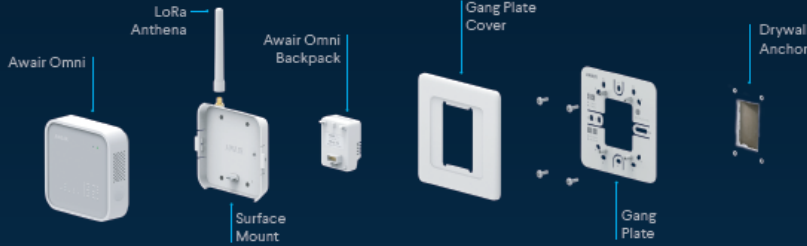
To power your device via low-voltage wiring, run electrical wires [16-gauge or smaller] from your low voltage transformer, through the drywall incision, and into the corresponding terminals on the Awair Omni Backpack.



Power Specifications

- Input: Low-Voltage Wiring [5-26VAC @ 50/60Hz or 7-37VDC]
- Output: DC 5V/2A

Sensor Installation, Power, and Connectivity Options

INSTALLATION OPTIONS	POWER OPTIONS	CONNECTIVITY OPTIONS	AWAIR OMNI SOLUTIONS
Basic Installation Non-invasive, adhesive wall mounting solution, comes included with Awair Omni.	Power Cord (USB-C)	WiFi	
Surface Mount Installation Non-invasive, adhesive wall mounting solution that offers power cord management and cellular data compatibility.	Power Cord (USB-C)	WiFi Cellular (LoRa Gateway)	
Retrofit Installation In-wall, drywall mounting solution for existing buildings.	Power over Ethernet (PoE) Low-Voltage Wiring Power Cord (USB-C)	WiFi Cellular (LoRa Gateway) Ethernet* <small>*Available Q1 2020</small>	
Electrical Box Installation In-wall, stud-mounted solution for new construction projects.	Power over Ethernet (PoE) Low-Voltage Wiring Power Cord (USB-C)	WiFi Cellular (LoRa Gateway) Ethernet* <small>*Available Q1 2020</small>	