What are Door Tablet's Health Sensors

Door Tablet's Health Sensors are designed to keep everyone safe and healthy in offices and other closed spaces like schools or conference rooms. Clean air encourages employees and individuals back into their place of work or education.

Since 2020 air quality and the air we breathe has become as important as water quality. Poor indoor air quality is linked to bad health, fatigue, viruses, sick building syndrome and impaired learning in schools. Media coverage and education on air quality has created an importance of this subject to individuals across the globe. According to a recent survey, 80% (JPES Partners Report) of respondents would feel more comfortable returning to work (after the pandemic) if the air quality was improved.

Our sensors focus on measuring CO_2 levels and Internal Air Quality (IAQ), two elements that can affect the health, comfort, and well-being of building occupants.
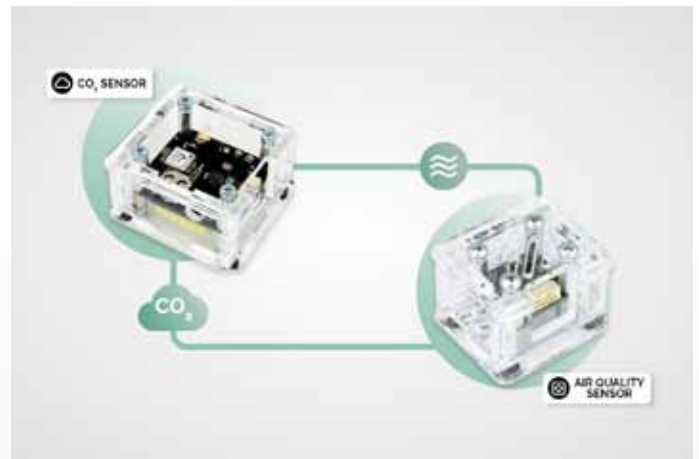
CO_2 Sensors

The Door Tablet CO_2 sensor alerts staff when a certain level of CO_2 is surpassed. The tablets connected to the sensors will turn red indicting the CO_2 level is too high. In the UK, it is advised not to exceed a threshold of 1200ppm. However, this product allows the purchaser to decide on what level to set the threshold at. Ideal measurements vary depending on the size of a space, but as a general rule, a consistent reading of less than 800ppm indicates a well-ventilated area.

As CO_2 levels rise, you get less oxygen in each breath. This can cause you to feel lethargic, tired, or less focused. At more extreme levels, carbon dioxide can give you a headache and make you feel dizzy.

Benefits of Monitoring CO_2 & IAQ

- Create awareness among your staff to know how to respond to high levels of CO_2 and IAQ
- Make informed organizational or architectural improvements accordingly
- Reducing energy costs by knowing when to turn on/off the HVAC system
- Ensure a pleasant and safe workspace for your staff
- Can help reducing the potential transmission of germs

In fact at 1400ppm, studies have found CO_2 concentrations may cut our basic decision-making ability by 25%, and complex strategic thinking by around 50%. The cognitive impacts of rising CO_2 levels represent what scientists call a "direct" effect of the gas concentration, much like ocean acidification.

"It's amazing how high CO_2 levels get in enclosed spaces. It affects everybody, from little kids packed into classrooms to scientists, business people and decision makers to regular folks in their houses and apartments."

Kris Karnauskas, CIRES Fellow, Associate Professor, CU Boulder

Door Tablets CO_2 sensors also help prevent the spreading of Covid and other airborne viruses. Higher levels of CO_2 indicate higher levels of unventilated air that has been breathed out. Less staff that are off sick make a more productive work environment.

This sensor ensures air circulation is properly monitored. It helps prevent rooms from being filled with stagnant air and allows room participants to make a decision of how to ventilate the space. E.g. Opening windows, doors, air vents.

As of 2021, the UK Government is urging employers to implement CO_2 sensors throughout offices and schools.

Air Quality Sensors

Numerous studies have identified the importance of measuring IAQ as deficiencies lead not only to decreased concentration and performance but also to serious health issues like asthma.

Our Internal Air Quality sensor covers two major areas in a building:

- Ventilation: The introduction of fresh air into the building, typically through HVAC systems.
- Heat Stress and Thermal Comfort, two related conditions - maintaining temperature and humidity levels inside the building at a level that suits the employees' overall temperature and wellbeing.

Our IAQ sensor calculates the Index Air Quality by measuring:

- Temperature
- Humidity
- Air Pressure

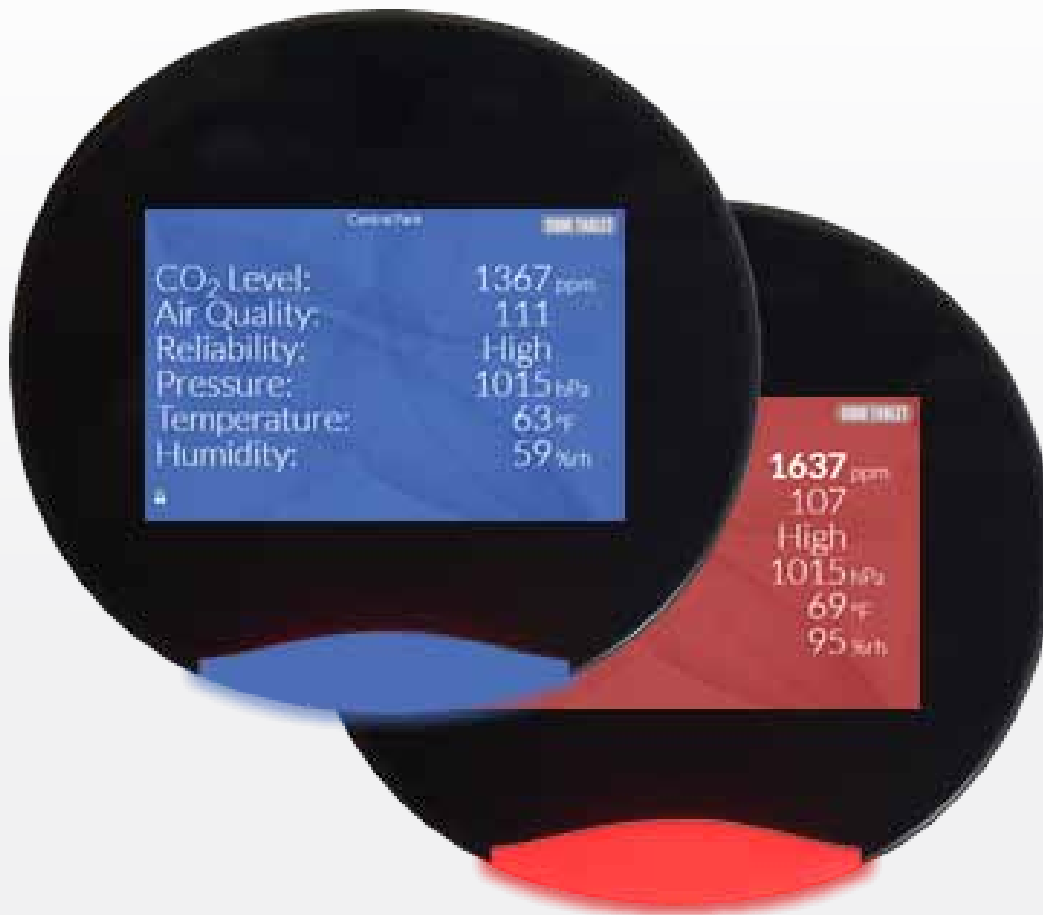Note: Both Sensors measure Humidity and Temperature

Easy to Use and Implement

Installation of the Door Tablet health sensors is simple. We recommend these are placed in closed areas like meeting rooms or classrooms. Due to their clear casing and small size, you can place them anywhere in a room and they will go largely unnoticed.

Avoid placing the sensors next to windows, as the outside environment can influence the measurements. You will have access to a Product Manual, and of course our team remains on hand for assistance with installation and learning how to read the sensors.

After the implementation process, the data from the sensors can be displayed on any device that supports the latest version of our Door Tablet Software. Another way to display the notifications from the sensors is with our CIRs, which can be put in *"Healthcare Dedication Mode"*.
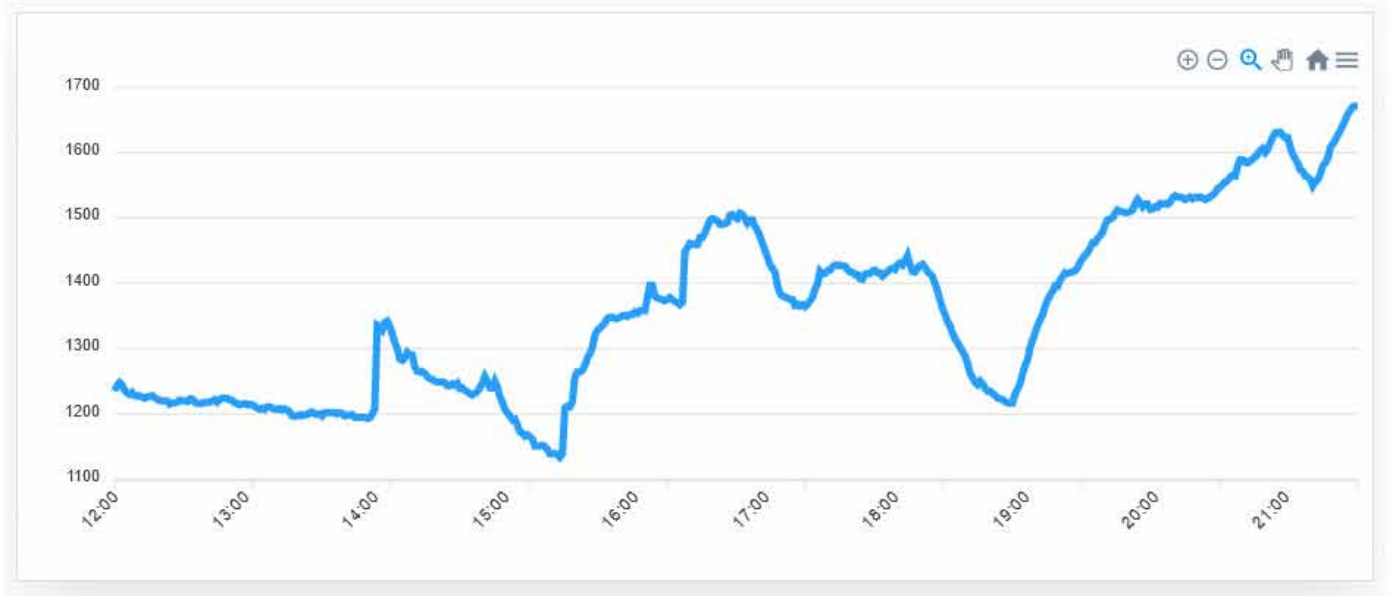
Dedicated Health Displays

Our Sensors send a message to your devices and change the entire screen to red when the established threshold is passed, in order to immediately alert staff.

Air Quality Charts

Chart: CO2 Level   **Area:** Office 365/Central Park   **Period:** Yesterday   GO

Via the admin view, the admin can see where the levels were at throughout the day, and see at what times the levels were elevated, allowing you to plan and organise appropriate methods of prevention.

CO_2 Sensor

Sensitivity	-148dBm -165dBm
Position Accuracy	3.0m (50% CEP)*
Update Rate	10Hz
Dimensions (W x D x H)	40 x 35 x 12mm
Current Consumption	approx. 73mA

IAQ Sensor

Air Pressure Resolution	0.0018hPa
Humidity Resolution	0.008%RH
Temperature Resolution	0.01°C
IAQ Index Accuracy	±15 and ±15% of reading
Measurement Frequency	0.3 measurements per second
Dimensions (W x D x H)	25 x 20 x 5mm