



# i-Vu® Building Automation System IAQ Desktop Display Sensor

Part # IAQ1-D-4 (Indoor Air Quality Monitoring)



Multiple public studies<sup>1</sup> suggest that indoor environments can profoundly impact the health and decision-making performance of building occupants. Research undertaken as part of these studies has concluded that the levels of carbon dioxide, volatile organic compounds, particulate matter and other contaminants commonly encountered in our indoor spaces should be held within healthy thresholds. Having actionable, real time data can contribute to increased occupant awareness and drive control strategies that can be deployed to deliver optimum, healthy indoor conditions.



Carrier's indoor air quality desktop display sensor provides building occupants simple visual indicators and alerts of critical indoor air quality measures.

## Features

- Measures and displays six critical elements of healthy indoor air quality: temperature, humidity, particulate matter (PM2.5), carbon dioxide (CO<sub>2</sub>), total volatile organic compounds (TVOC), and the carcinogen formaldehyde (HCHO)
- Features a bright 4.3 inch TFT capacitive touch screen with a resolution of 800\*480, that dims when not in use
- Easily integrates with the Carrier's i-Vu system via BACnet/WiFi to share sensed values
- Has a passive infrared (PIR) human proximity sensor to wake the display when occupants are nearby
- Powered by USB Type-c and has a lithium ion battery as a backup power supply
- Supports firmware upgrades via USB if required
- Compact, low-profile, attractive design
- Can operate as a stand-alone device



<sup>1</sup> Harvard T.H. Chan School of Public Health; The COGfx Study: <https://cogfx.forhealth.org>

US EPA Indoor Air Quality (IAQ) <https://www.epa.gov/indoor-air-quality-iaq>

# i-Vu Building Automation System

## IAQ1-D-4

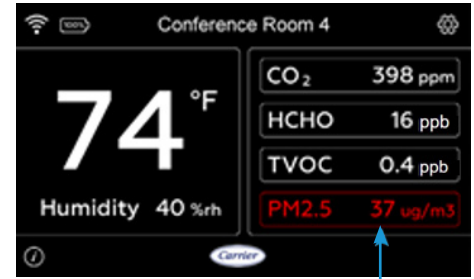
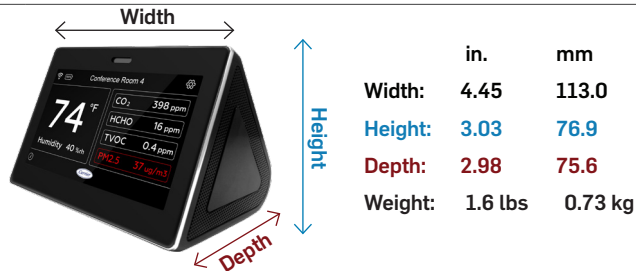
### IAQ Desktop Display Sensor



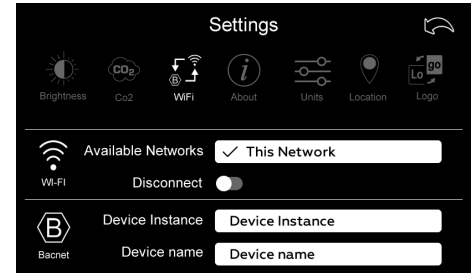
#### Specifications

<b>Power</b>	5VDC with USB Type-C; 3.6v 2500mAh Lithium Ion Battery (not user accessible or replaceable)
<b>Communication</b>	BACnet over IEEE 802.1b/g/n Wi-Fi
<b>Sensors</b>	
Temperature	-0 to 50°C, Resolution: 0.1°C, Accuracy: $\pm 2^\circ\text{C}$ . Sensing element model Sensurion SHT30, sensing element lifetime: > 3 years
Humidity	10% RH–90% RH, Resolution: 1% RH, Accuracy: $\pm 10\%$ RH. Sensing element model Sensurion SHT30, sensing element lifetime: > 3 years
Particulate Matter (PM2.5)	0–500 $\mu\text{g}/\text{m}^3$ (effective range) 0–1000 $\mu\text{g}/\text{m}^3$ (maximum range). Resolution 1 $\mu\text{g}/\text{m}^3$ , Accuracy 1–100 $\mu\text{g}/\text{m}^3 \pm (15\mu\text{g}/\text{m}^3)$ , $\pm (101\text{--}500\mu\text{g}/\text{m}^3 + 15\%)$ , sensing element model Plantower PMSA003-C, & element lifetime: > 5 years
Total Volatile Organic Compounds (TVOC)	125–600ppb, Resolution 1ppb, Accuracy: $\pm (20\text{ppb} + 30\%)$ , sensing element model AMS IAQ Core, & element lifetime: > 3 years
Carbon Dioxide (CO <sub>2</sub> )	0–5000ppm, Resolution: 1ppm, Accuracy: $\pm (50\text{ppm} + 10\%)$ . Sensing element model CM1106, & element lifetime: > 5 years
Formaldehyde (HCHO)	0–2000ppb, Resolution: 1ppb, Accuracy: $\pm (20\text{ppb} + 30\%)$ . Sensing element model DART(WZ-S-K), & element lifetime: > 3 years
<b>Environmental Range</b>	0° to 50°C, 5–95% relative humidity, non-condensing
<b>Housing</b>	Steel mesh, Polycarbonate, & ABS
<b>Display</b>	4.3" diagonal TFT capacitive touch screen with a resolution of 800*480
<b>Compliance</b>	FCC CE (Power Supply ETL Listed - Conforms to UL STD 62368-1 Certified to CSA STD C22.2 NO. 6236801 US cETL Listed - Intertek 4007202)

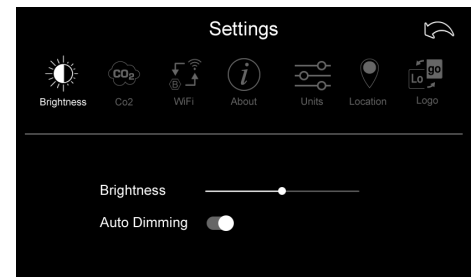
#### Physical Dimensions



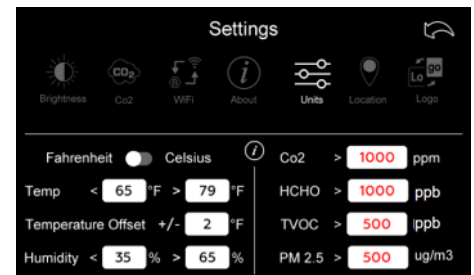
Clear visual indication of alarm conditions. Alarm thresholds are configurable to local compliance standards



Configurable Wi-Fi® and BACnet Settings



Configurable Brightness and Auto Dimming Settings



Configure display units and threshold limits

