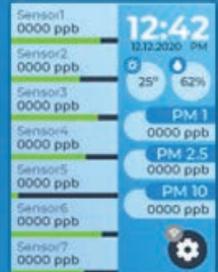


# SCENTROID



# AQSafe

Indoor Air Quality Continuous Monitor

# Product Brochure

## AQSafe

## Letter from Scentroid's CEO

Scentroid's mission is to empower our clients with vast in-depth knowledge, state-of-the-art instruments, and the most extensive customer support. To this end, we strive in every aspect of our operation to put our client first and to use our research expertise to develop the most innovative and effective products and services in the sensory industry. We envision a future where environmental impacts will be easily and accurately measured and mitigated.



**Dr. Ardevan Bakhtari**  
CEO, Scentroid

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# INTRODUCING THE AQSAFE



AQSafe indoor air quality monitor observes indoor air quality with up to 12 sensor varieties, including pressure, temperature, relative humidity, and GPS. Our sensor detection ranges from dust (PM1, 2.5, and 10), noise, radiation, and many other chemical compounds found indoors.

The AQSafe features a compact, low profile design. It is both easy to install and operate. Not only has it been proven for long term

stability, but all sensors have been calibrated and prepared for your space. The AQSafe is your new companion for indoor air quality monitoring, built with labor saving, cost-effective, and health and comfort measures in mind.

The AQSafe features built in software for graphical representation, statistical data, and alarm systems. The touch screen incorpo-

rates control over a variety of advanced gas sensor technologies, designed to monitor the target gases (which can be specified at the time of ordering). A full list of sensors is available on our website.

Please contact us for any questions or clarifications at [info@scentroid.com](mailto:info@scentroid.com) OR call us at +1.416.479.0078



### RELIABLE, STABLE, ENHANCED

Conducts automatic health check of all sensors daily and sends reminders when any sensor requires a replacement



### WIRELESS CONNECTIVITY

Easily connects to any WI-Fi network to transmit data to the cloud server. Also capable of bluetooth connectivity with any smart device for initial network setup



### CLOUD BASED MONITORING

The AQSafe monitors sensor readings and checks the health of each unit from the easy to use cloud based software, SIMS2.

## Compact, Safe, & Easy to Install!

The AQSafe can be installed just about anywhere. Simply mount it to the wall and connect the power to any 110-240v outlet. AQSafe can be equipped with a custom configuration of sensors.

## State of the Art Alarm & Communication Systems

Easily program alarm levels for each pollutant. A higher alarm level can be set for an audible local alarm. The built in LCD and color-coded LEDs provide feedback on system status and ambient AQ levels. Equipped with SMS and email, you will always know what's in your facility's air, from anywhere!





## Specifications

<b>Product name</b>	Scentroid AQSafe
<b>Maximum # of sensors</b>	12 (4xEC, 1xCO2, 1xPID, 1xCH4, 1xPM, T, RH, Barometer)
<b>Type of sensors</b>	PID, NDIR, EC, Laser Particulate Counter, Temperature and Relative Humidity, and barometric pressure
<b>Sampling rate</b>	Approximately 1/s
<b>Weight</b>	860g
<b>Size</b>	220 mm x 200 mm x 50 mm
<b>Screen</b>	Built-in LCD with color coded LEDs to provide system status feedback
<b>Communication</b>	WiFi and Bluetooth
<b>Power Requirement</b>	110 v - 240 v wall outlet
<b>Cloud server</b>	Included by Default
<b>Alarm Equipped</b>	Yes
<b>Temperature range</b>	5°C to 40 °C.
<b>Operating R. Humidity</b>	10 - 90%
<b>Device Health</b>	Daily sensor health checks and provides sensor replacement reminders
<b>Warranty</b>	24 months full warranty to all parts including sensors
<b>Sensor replacement</b>	Sensor dependent - first 2 years covered by warranty
<b>Mounting</b>	Recessed backing allows for device to be easily mounted on a protrusion

# Scentroid Sensor List

#	Sensor ID	Type	Formula	Chemical	Max. Detection Limit	Lowest Detection Threshold	Resolution	Cross sensitivity		Industry	Expected Life (years)	Warmup Time (Sec)	Response Time (Sec)
								Required	Recommended				
1	CD1	NDIR	CO2	Carbon Dioxide - High Concentration	5%	100 ppm	20 ppm	-	-	Safety/Combustion/process control	1	120	120
2	CD2	NDIR	CO2	Carbon Dioxide - Low Concentration	2000 ppm	1 ppm	0.6 ppm	-	-	Urban, Industrial, IAQ	1	120	120
3	CM1	EC	CO	Carbon Monoxide (Low Concentration)	100 ppm	0.03 ppm	0.01 ppm	-	H2, C2H4	Urban, Industrial, IAQ	2	40	40
4	CM3	EC	CO	Carbon Monoxide (Medium Concentration)	1000 ppm	1 ppm	1 ppm	-	-	Urban, Industrial, IAQ	5	40	20
5	CM2	EC	CO	Carbon Monoxide (high concentration)	10000 ppm	30 ppm	3 ppm	-	-	Safety/Combustion/process control	2	45	40
6	CL2	EC	Cl2	Chlorine (High Concentration)	2000	1 ppm	1 ppm	NO2	BR2	Safety/Combustion/process control	2	45	40
7	CL1	EC	Cl2	Chlorine (Low Concentration)	10 ppm	0.05 ppm	0.01 ppm	NO2	NO2	Industrial, Safety	2	120	60
8	H1	EC	H2	Hydrogen	10000 ppm	100 ppm	10 ppm	-	CO	Industrial, Safety, IAQ	2	120	40
9	HCL1	EC	HCl	Hydrogen Chloride	20 ppm	0.5 ppm	0.2 ppm	H2S	HBr	Industrial, Safety	2	120	60
10	HCY1	EC	HCN	Hydrogen Cyanide	50 ppm	0.1 ppm	0.1 ppm	H2S, NO2, SO2	-	Industrial, Safety	2	120	30
11	PH1	EC	PH3	Phosphine (low Concentration)	5 ppm	50 ppb	30 ppb	NO2	SO2, H2S	Industrial, safety	2	60	20
12	PH2	EC	PH3	Phosphine (high Concentration)	2000 ppm	5 ppm	2 ppm	NO2	SO2, H2S	Industrial, safety	2	60	25
13	HS1	EC	H2S	Hydrogen Sulfide (low Concentration - ppb)	3 ppm	7 ppb	1 ppb	-	-	WWTP, Odour, IAQ, Urban, Industrial	1	180	35
14	HS2	EC	H2S	Hydrogen Sulfide (high Concentration - ppm)	2000 ppm	15 ppm	2 ppm	-	-	Safety, WWTP	2	180	25
15	HS3	EC	H2S	Hydrogen Sulfide (medium Concentration - ppm)	200 ppm	2 ppm	0.2 ppm	-	-	Safety, WWTP	2	180	60
16	E2	MOS	C2H6O, H2, C4H10	Organic solvents (Ethanol, Iso-Butane, H2)	500 ppm	25 ppm	1 ppm	-	Benzines <20%	Industrial, Odour, Compost	1	30	10
17	MT1	NDIR	CH4	Methane (LEL)	20,000 ppm	10 ppm	10 ppm	-	Propane	Safety/Combustion/Inprocess control, Industrial	>3 years	45	12
18	NC1	EC	NO	Nitric Oxide (Low Concentration)	1 ppm	0.01 ppm	0.001 ppm	-	-	Urban, IAQ, Industrial	2	120	60
19	NC2	EC	NO	Nitric Oxide (Medium Concentration)	25 ppm	0.2 ppm	0.1 ppm	-	-	Urban, IAQ, Industrial	2	120	60
20	NC3	EC	NO	Nitric Oxide (High Concentration)	5000 ppm	2 ppm	2 ppm	-	-	Industrial, safety, Process control	3	120	10
21	ND1	EC	NO2	Nitrogen Dioxide (Low Concentration)	1 ppm	0.01	0.001 ppm	-	-	Urban, IAQ, Industrial	>5 years	120	60
22	ND2	EC	NO2	Nitrogen Dioxide (Med Concentration)	20 ppm	0.1 ppm	0.1 ppm	-	-	Urban, IAQ, Industrial	>5 years	120	60
23	ND3	EC	NO2	Nitrogen Dioxide (high Concentration)	1000 ppm	2 ppm	1 ppm	-	-	Industrial, safety, Process control	2	120	60
24	NS1	NDIR	N2O	Nitrous Oxide	10,000 ppm	100 ppm	1 ppm	-	Negligible	Urban, Industrial, Process control	5	30	30
25	O2	EC	O2	Oxygen (high Concentration)	250,000 ppm	5000 ppm	200 ppm	-	-	Process control, Safety	1	60	15
26	PD3	PID	VOCs	Total VOCs 10.0 eV	100 ppm	5 ppb	5 ppb%	-	Aromatic Carbons	WWTP, Odour, IAQ, Urban, Industrial	5*	5	3
27	PD1	PID	VOCs	Total VOCs (Low Concentration) - PID 10.7 eV	50 ppm ( isobutylene )	1 ppb	1 ppb	-	All VOCs	WWTP, Odour, IAQ, Urban, Industrial	5*	5	3
28	PD2	PID	VOCs	Total VOCs (High Concentration) - PID 10.7 eV	300 ppm ( isobutylene )	1 ppm	50 ppb	-	All VOCs	Safety, Industrial	5*	5	3

#	Sensor ID	Type	Formula	Chemical	Max. Detection Limit	Lowest Detection Threshold	Resolution	Cross sensitivity		Industry	Expected Life (years)	Warmup Time (Sec)	Response Time (Sec)
								Required	Recommended				
29	SD1	EC	SO2	Sulfur Dioxide (high Concentration)	2000 ppm	2 ppm	1 ppm	NO2	-	Safety, Industrial	2	120	25
30	SD2	EC	SO2	Sulfur Dioxide (low Concentration)	1 ppm	0.01 ppm	0.001 ppm	NO2	-	Urban, IAQ, Industrial	2	120	20
31	SD3	EC	SO2	Sulfur Dioxide (medium Concentration)	100 ppm	0.4 ppm	0.2 ppm	NO2	-	Urban, IAQ, Industrial	2	120	20
32	FM1	EC	CH2O	Formaldehyde	5 ppm	10 ppb	10 ppb	-	Ethanol	IAQ, Safety, Industrial,	2	180	60
33	PM 2.5-10	Laser Scattere	PM	Particulate PM 2.5, 10 (simultaneous)	1000 µg/m3	1 µg/m3	1 µg/m3	-	NA	Urban, IAQ, Industrial	>5 years	NA	NA
34	TS1	Laser Scattere	TSP	TSP - PM Required	20000 µg/m3	1 µg/m3	1 µg/m3	-	NA	Urban, IAQ, Industrial	>5 years	NA	NA
35	NMH	EC	NMHC	Non-methane Hydrocarbon	25 ppm	0.1 ppm	0.1 ppm	-	NA	Industrial, Process, Combustion	2	180	55
36	MS2	MOS	TRS	TRS and Amines	10 ppm	10 ppb	2 ppb	-	Trimethyl Amine, Methyl Mercaptans, H2S, other amines and sulfur compounds	Odours, WWTP	1	30	10
37	MS3	MOS	NH3-C2H6O-C7H8	Air Contaminants (Ammonia, Ethanol,	30 ppm	1 ppm	4 ppb	-	(ammonia, Ethanol, Toulene)	Odours, WWTP, Industrial	1	30	10
38	AM2	EC	NH3	Ammonia (High concentration)	100 ppm	3 ppm	1 ppm	CL2	H2S, NO2	Agricultural, Industrial	2	30	40
39	AM1	EC	NH3	Ammonia (Low Concentration)	10 ppm	0.005 ppm	0.001 ppm	CL2	H2S	Agricultural, Industrial	2	30	50
40	OZ1	EC	O3	Ozone (low Concentration)	0.5 ppm	1 ppb	1 ppb	CL2	H2S, NO2	Urban, Industrial	>5 years	60	30
41	OZ2	EC	O3	Ozone (High Concentration)	5 ppm	20 ppb	20 ppb	CL2	H2S, NO2	Urban, Industrial	>5 years	60	30
42	RD1	Geiger Counter	α-, β-, γ, X	Radiation Monitor ( α-, β-, γ- and x- radiation )	1000 µSv / h	0.01 µSv / h	0.01 µSv / h	-	-	Mining, Industrial, Nuclear Energy, Security	>3 years	0	0
43	CIO21	EC	CIO2	Chlorine Dioxide	50 ppm	0.01 ppm	0.05 ppm	-	CL2	Odour, Industrial	2	180	60
44	CH4L	TDLS	CH4	Methane - ppb	100 ppm	0.4 ppm	0.01 ppm	-	-	Greenhouse gases, industrial	10+	20	1
45	ET1	EC	C2H4	Ethylene - Low Concentration	10	0.05 ppm	0.01 ppm	CO	-	Greenhouse gases, industrial	2	120	30
46	ET2	EC	C2H4	Ethylene - Medium Concentration	200	1 ppm	0.5 ppm	CO	--	Greenhouse gases, industrial	2	120	30
47	ET3	EC	C2H4	Ethylene - High Concentration	1500	5 ppm	2 ppm	CO	-	Greenhouse gases, industrial	2	120	30
48	MM	EC	CH3SH	Methyl Mercaptan	10 ppm	0.05 ppm	0.01 ppm	H2S	-	Odours, WWTP, Leak Detection, Industrial	2	120	35
49	EMF	EMF	EMF	Electro Magnetic Field	200 mGauss	0.1 mGauss	0.1 mGauss	-	-	Urban, Industrial, power plants	3	<1	<1
50	CS	EC	CS2	Carbon Disulfide	100 ppm	1 ppm	0.1 ppm	-	-	Odour, WWTP, Industrial	2	120	30
51	TBM	EC	C4H10S	Tert Butylthiol	14 ppm	0 ppm	0.1 ppm	-	-	Odour, Leak detection, Industrial	2	120	30
52	THT	EC	C4H8S	Tetrahydrothiophene	14 ppm	0 ppm	0.1 ppm	-	-	Odour, Leak detection, Industrial	2	120	30
53	THT	EC	C4H8S	Tetrahydrothiophene	99.9 pCi/l (3,700Bq/m³)	0.2 pCi/l (700Bq/m³)	0.2 pCi/l (350Bq/m³)	-	-	IAQ, Safety, Industrial,	2	10	<1

For our most updated sensor list, please email us at [info@scentroid.com](mailto:info@scentroid.com), or visit us online at [www.scentroid.com](http://www.scentroid.com)



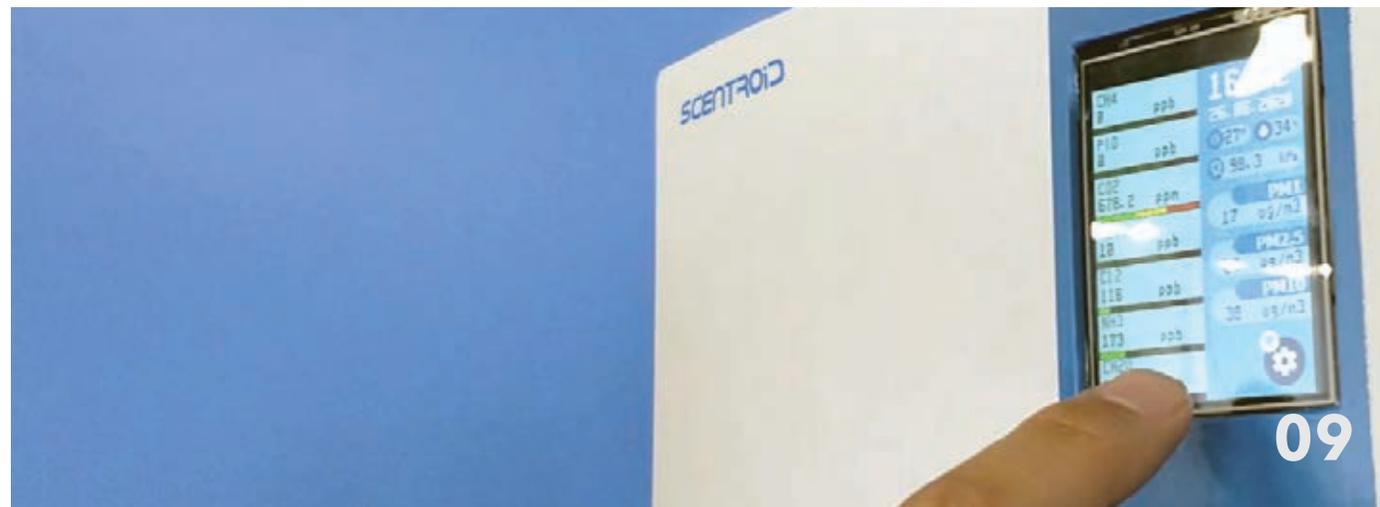
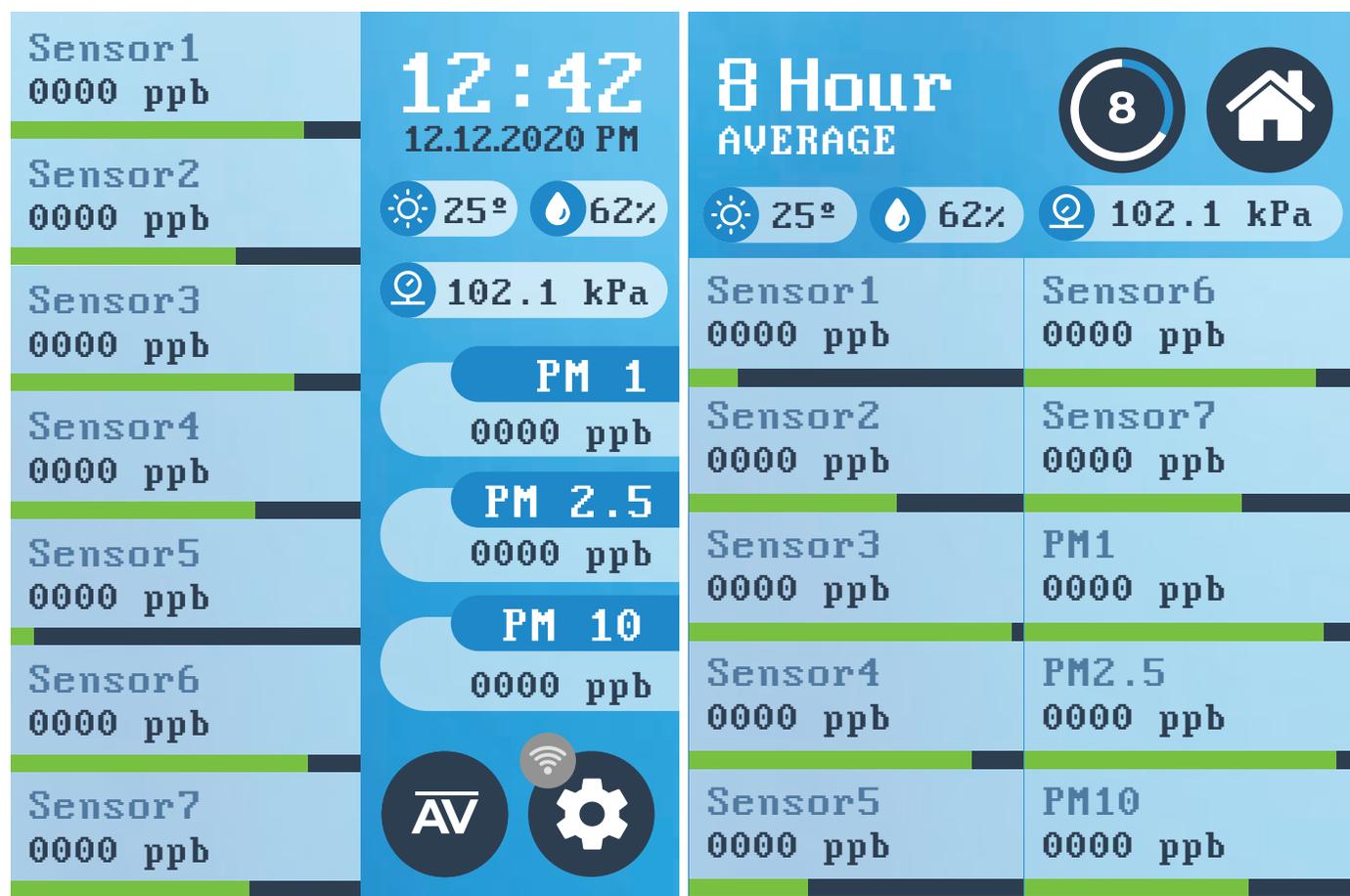
# INTERFACE & COMMUNICATION

# Interface

The AQSafe features an “always ready” easy to read sensor interface, indicating each individual chemical reading as they are sampled live. In addition to your desired sensor selection (see pages 6-7), you will also be informed of the relative humidity, temperature, and barometric pressure of the sampled area.

While receiving a live reading, the user can analyze averages over time with the click of a button. Instantaneous readings, 1 hour average, 8 hour average, 12 hour average, and 24 hour average. Should a longer average be required, we recommend you use our SIMS2 (Sensor Information Management Software) platform as indicated on the next page.

The Intuitive AQSafe user interface allows for anyone, environmental expert or not, to fully comprehend what’s in the air around them.



# SIMS2

The Scentroid Sensor Information Management System, SIMS2, is our all-inclusive software used to view historical data, run diagnostics, and configure various settings for the AQSafe. Provided as part of the AQSafe indoor air quality package, the software can be accessed with any stable internet connection.

SIMS2 provides easy analysis tools for an operator to determine pollutant threats, air quality alarms, historical data, sampled areas, and much more. The easy to use graphical interface allows anyone to run complicated data analytics without being a GIS expert.

SIMS2 is capable of displaying data from multiple AQSafe units in the same network. Users can analyze data and monitor progress remotely from a single platform.

Plus, as a valued Scentroid customer, you will receive a free one-year subscription to our SIMS2 cloud software.





# AQSAFE APPLICATIONS

(INDUSTRIES AND RECOMMENDED SENSORS)

# Schools and Recreational Facilities

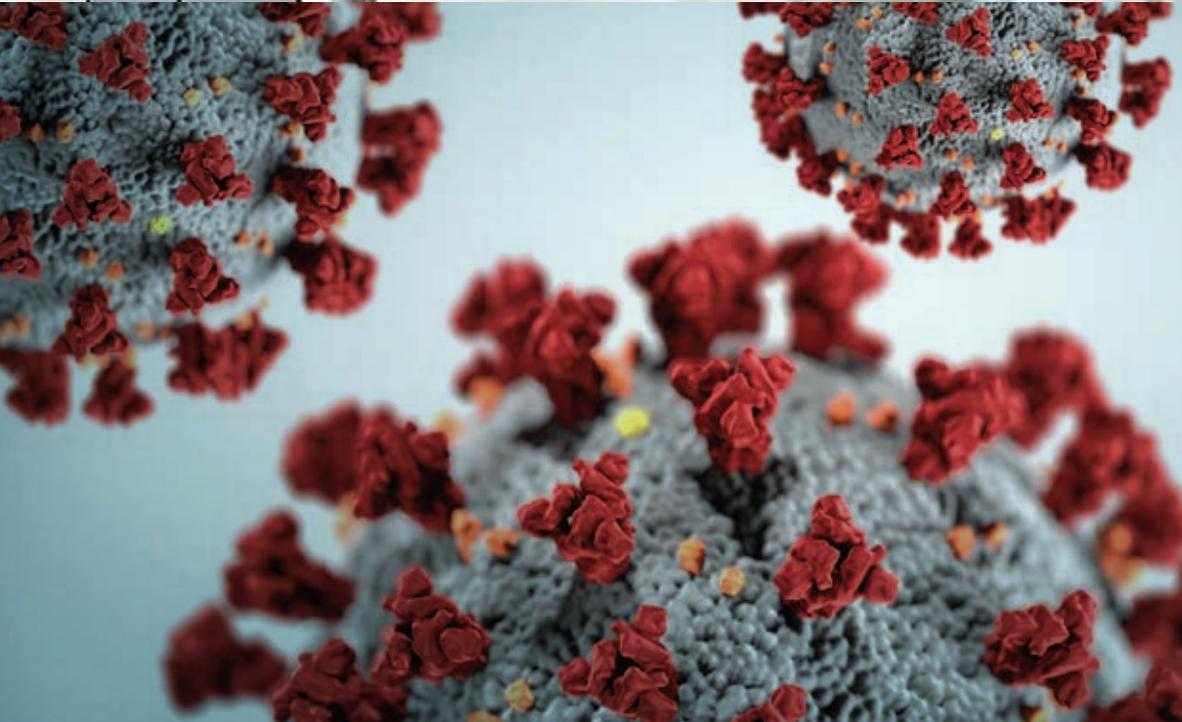
Indoor air pollution can have significant and harmful effects on individuals present. The US Environmental protection agency (EPA) studies of human exposure to air pollutants indicate that indoor levels of pollutants may be 2, 5, or even occasionally 100 times higher than outdoor levels.

You need an air quality monitor that can protect the ones who need it most.

For schools and recreational facilities, we would recommend the following sensors:



<b>PM2.5</b> <b>PM10</b> DUST	<b>CO<sub>2</sub></b> CARBON DIOXIDE	<b>VOCs</b> VOLATILE ORGANIC COMPOUNDS
<b>TEMPERATURE</b>		<b>RELATIVE HUMIDITY</b>



# Hospitals and Critical Spaces

AQSafe has played a key role in ensuring critical spaces such as isolation rooms, operating rooms, pharmacies, and clean rooms are safe from contamination. The intelligent system continuously monitors all environmental parameters including pressure, temperature, humidity, particulates, CO<sub>2</sub>, O<sub>2</sub>, VOCs, and O<sub>3</sub>.

**Pressure:** Safeguard against air leaks and ensure HVAC system is providing the adequate positive pressure for proper air isolation.

**Particulate Monitor:** AQSafe provides continuous monitor of all air born particles including water droplets and pathogens down to 0.3 μm.

**Oxygen:** Excessive air circulation and isolation can cause reduction of O<sub>2</sub> and increase in CO<sub>2</sub> levels. AQSafe will monitor all these critical parameters to ensure occupants are breathing safe and healthy air.

**O<sub>3</sub>:** UV disinfectants used widely in hospitals, isolation rooms, and industry can cause free ozone to be released in the indoor air causing sever health issues.

**Volatile Organic Compounds:** the use of disinfectants and sanitizers will release harmful VOCs in the air causing short term and long term health effects on patients and occupants.

Let Scentroid's AQSafe help you protect your facility.

<b>PM2.5 PM10</b> DUST	<b>O<sub>2</sub>, O<sub>3</sub></b> OXYGEN & CARBON DIOXIDE	<b>VOCs</b> VOLATILE ORGANIC COMPOUNDS
<b>PRESSURE</b>		<b>CARBON DIOXIDE</b>

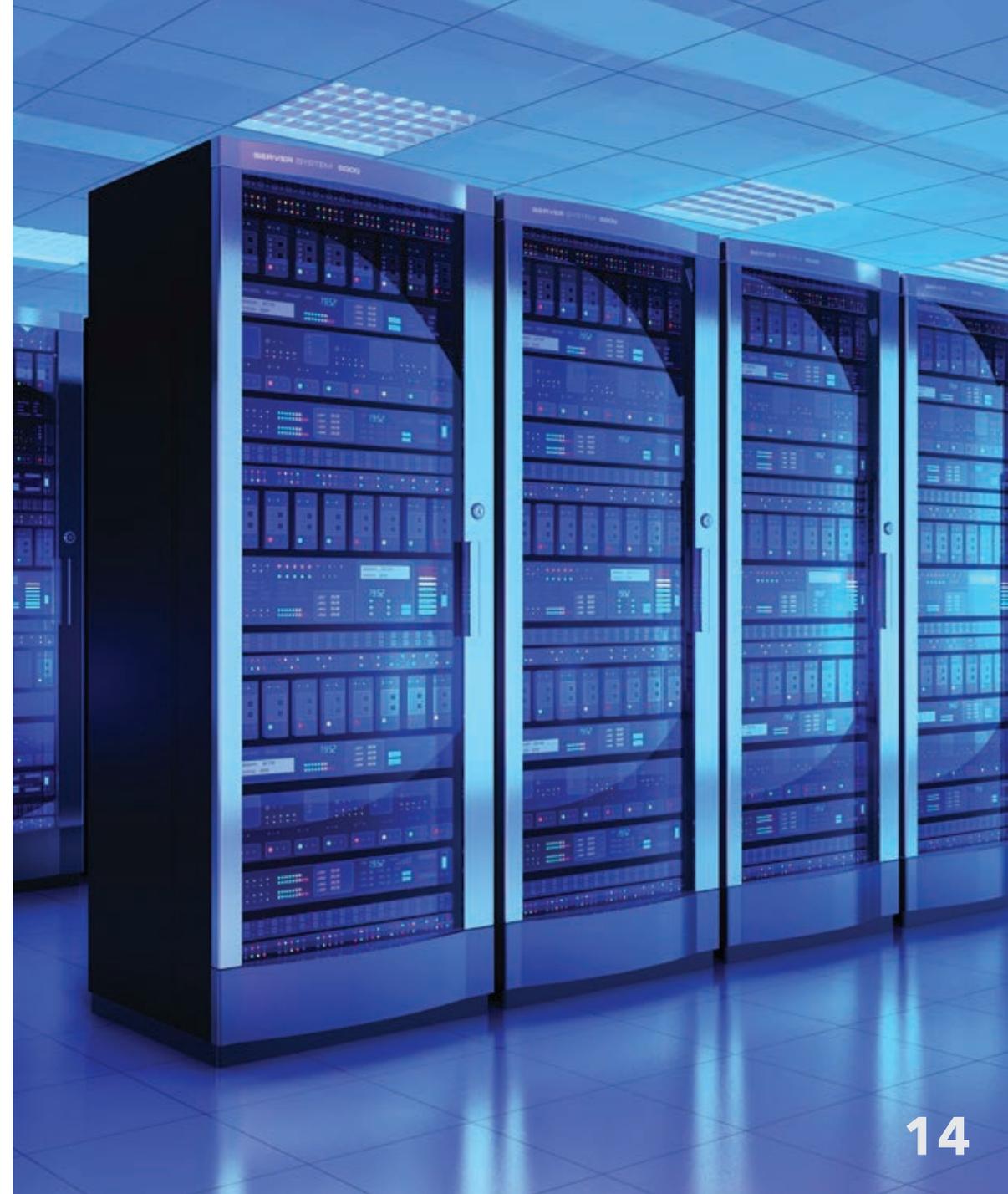
# Data Centers

Your data center never sleeps! It must be successfully protected from corrosion, moisture, temperature fluctuations and most importantly - dust. Data centers must also adhere to certain limits for specific chemical active substances such as SO<sub>2</sub>, H<sub>2</sub>S, CL<sub>2</sub>, HCL, HF, NH<sub>3</sub>, O<sub>3</sub>, and NO<sub>2</sub> in accordance to IEC 60721-3 Class 3 C1. Therefore, the right tools must be utilized to regulate your air quality.

You need an air quality monitor that works as hard as your data center.

For data centers, we would recommend the following sensors:

PM2.5 PM10 DUST	Cl <sub>2</sub> CHLORINE GAS	SO <sub>2</sub> SULPHUR DIOXIDE	O <sub>3</sub> OZONE	NO <sub>2</sub> NITROGEN DIOXIDE
TEMPERATURE			RELATIVE HUMIDITY	





## Cannabis Facilities

From growing to harvesting and extracting oils, drying, and curing, the process of cultivating cannabis can require multiple steps with complex ambient air requirements. When growing indoors, maintaining an ideal atmosphere inside the grow-room is essential. Air temperatures should be maintained, and adequate levels of CO<sub>2</sub> and Ozone (O<sub>3</sub>) must be present for the plants to grow efficiently. Assuming adequate light and nutrients are available to plants, the limiting factor in plant growth is the level of carbon dioxide present.

Certain cannabis strains emit distinctive odours during their reproductive phase. This presents difficulties to those who are cultivating, as continued exposure to powerful terpenes can be somewhat noxious. The cultivator must also ensure that air is thoroughly monitored prior to being expelled outside, lest some odour escape resulting in potential complaints against your facility.

Let Scentroid's AQSafe help you protect your Cannabis facility and its workers.

For cannabis facilities, we recommend the following sensors:

<b>TRS</b> TOTAL REDUCED SULFUR COMPOUNDS	<b>VOCs</b> VOLATILE ORGANIC COMPOUNDS	<b>SO<sub>2</sub></b> SULFUR DIOXIDE	<b>O<sub>3</sub></b> OZONE	<b>CO<sub>2</sub></b> CARBON DIOXIDE
<b>TEMPERATURE</b>			<b>RELATIVE HUMIDITY</b>	

# Food, Fruit, and Other Perishables

In order to successfully protect your food and produce in storage against loss of moisture, decay, and aging, the proper tools must be used to regulate your air quality. Oxygen and nitrogen levels, carbon dioxide as well as relative humidity and temperature must be both monitored and controlled.

Let Scentroid's AQSafe help you protect your storage facility.

For fruit, and other perishable storage, we recommend the following sensors:

$C_2H_4$ ETHYLENE	$CO_2$ CARBON DIOXIDE	E2 ORGANIC SOLVENTS
		TRS AND AMINES
TEMPERATURE	RELATIVE HUMIDITY	TOTAL VOC'S



# AFTER-SALES SUPPORT



## Training

Training is the key of using any instrument, and Scentroid provides worldwide training programs for our clients and distributors. Training can be conducted by Scentroid or your local distributor. Scentroid training tools include: online training, videos, brochure, operation manual and on-site workshops. We also offer a hands-on training program using our high-tech simulation room. Scentroid's state of the art simulation room is located at our headquarters in Toronto, Canada. You are more than welcome to visit us and meet with the people behind these products

## Warranty

We are so confident of the reliability of our products, that we are glad to offer our clients a comprehensive 24 month warranty for every AQSafe. Additionally, warranties can be extended for the 3rd, 4th and 5th year. For more information about our extended warranties, speak to us today.

## Technical Support

We are responsible for any products that exit from our manufacturing warehouse! Our support team offers different ways to help you. Choose the one most convenient for you below!



### Local Support

We have developed a vast growing network of distributors and repair facilities. To find your local support please check our distributors map.



### Phone Support

Our highly professional customer services are here to serve you, for any technical issue reach them easily via phone: 416.479.0078 - Ext 210



### SME Support

Connecting you to the Subject Matter Experts! Our customer support is unique in that you can talk directly to the designer or programmer of each product.



### Live Chat

If you feel it more convenient to solve your technical issue via chat, No problem! Reach our highly professional customer services through our website-hosted Live Chat.



### Email Support

For any technical issue you may encounter, our engineers are happy to assist via email. For fast and efficient support, simply email our team at [support@scentroid.com](mailto:support@scentroid.com)

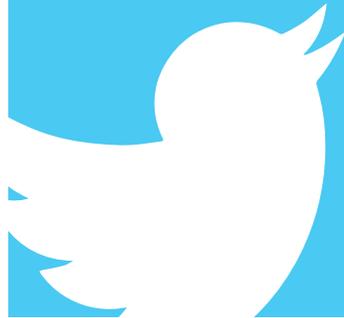
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NETWORK

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Future of Sensory Technology

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