Environmental Sensor

An all-in-one sensor to unlock new insights

Overview

Verkada's SV11 is an all-in-one sensor for monitoring environmental changes in your physical space. With a collection of powerful embedded sensors, the SV11 simultaneously measures air quality, temperature, humidity, motion, and noise.

Each SV11 sensor can be managed from Verkada's web-based Command platform. Users can configure the device to display the sensor data they wish to monitor, as well as set custom alerts based on user defined thresholds. Users receive alert notifications in real-time, allowing for fast and proactive responses.

Sensor data from the SV11 is visualized in an interactive graph in Command. Users can associate a Verkada camera with their sensor to provide greater context into environmental changes and events. This video footage and sensor data are automatically synced, ensuring a seamless experience for historical investigations or live monitoring.

For scenarios where an SV11 is used in sensitive areas, such as a bathroom or locker room, users can opt to use their sensor without an associated camera or can place one in an adjacent, safe-to-record area.

The SV11 lends itself to a wide range of use cases. From monitoring air quality in manufacturing facilities to detecting temperature fluctuations in server closets, the SV11 offers a new kind of visibility and insight into your physical space.

In addition to monitoring a wide range of environmental changes, the SV11 can detect vaping and smoking events. Schools and other smoke-free facilities can monitor vaping and smoking behavior from Command using Verkada's Vape Index, making it easy to conduct investigations and implement deterrence measures.

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Verkada's Cloud-Based Sensor

Cloud-Based Sensor

Verkada's SV11 instantly connects to the cloud via Ethernet.

Easy to Scale

No servers, databases, or on-prem clients to manage — simply just plug-in and monitor

Centralized Management

Modern platform enables secure access on any device from anywhere in the world

Benefits of Verkada's Cloud-Based Sensor Platform

Simple to Install

- Sensors come online and configure in minutes
- No VPNs, added software or complexities
- Users can quickly configure and customize sensors and alerts

Easy to Use

- Color-coded sensor readings and data visualizations
- No training required, with one-click investigations
- Out-of-the-box integration with Verkada cameras

Advantages of Cloud-Managed Solution

- Secure remote access and alert management on any device anywhere
- SAML-based integration with single sign-on (SSO) solutions
- Continuous updates with new features

Ready For Scale

- Cloud-based platform has no limitations on the number of sensors or users
- Remotely monitor sensors across any number of locations
- Minimal bandwidth impact

No Hidden Costs

- Hardware includes a 10-year warranty
- Automatic firmware updates keep sensors secure
- No additional maintenance or support fees

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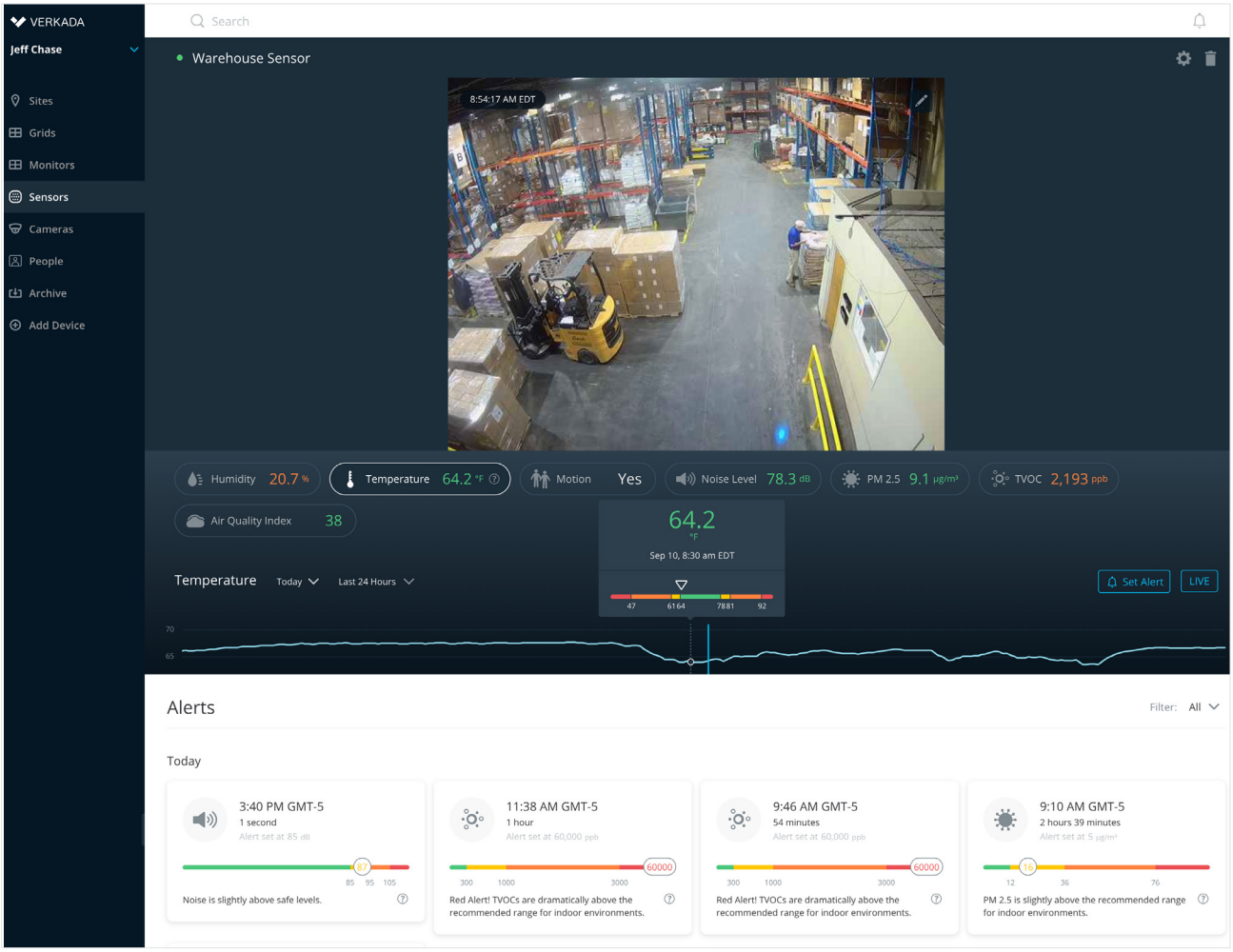
Sensor Software Overview

Customizable dashboards for real-time environmental monitoring of your sites



Command, Verkada's cloud-based management software, provides all-in-one monitoring and management of sensors deployed across your organization.

Sensor Management

- Customize the data displayed for each SV11 sensor
- Set alerts based on user-defined thresholds for each data stream
- Configure notification recipients and scheduling
- Filter data by sensor, date and time

Video Integration

- Associate Verkada cameras with sensors for increased visibility
- View historical or live video synced with sensor data
- Click on sensor alert to see sensor data alongside video footage of the incident

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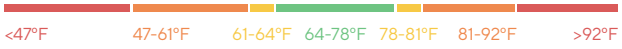
Sensor Overview

Verkada created recommended sensor value ranges based on data from the Environmental Protection Agency (EPA), the World Health Organization (WHO), the Occupational Safety and Health Administration (OSHA), and the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE).

Color-coded sensor ranges are aligned to these government and industry standards for healthy indoor environments.

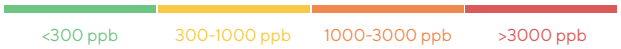
The SV11 can show the following data streams in Command

Temperature



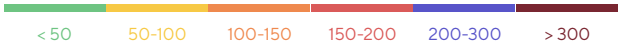
SV11 temperature measurements are accurate from 23 °F - 122 °F. As with other data streams, users can customize temperature alerts if a space is kept at a temperature outside of the recommended green zone.

TVOC



A total measure of Volatile Organic Compounds, which are chemicals that evaporate into the air and are emitted by cleaners, paints, varnishes, fragrances, and hundreds of other products. Examples include benzene, ethylene glycol, and formaldehyde. VOCs are measured as a group because of their cumulative effects, with high TVOC values associated with negative health impacts.

Air Quality Index

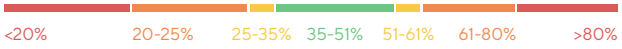


The U.S. AQI measures total air pollution and provides benchmarks for healthy values. When AQI exceeds 100, air quality is unhealthy - at first for certain sensitive groups of people, then for everyone as AQI values get higher.

Noise Level

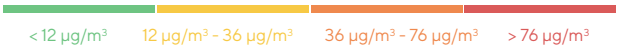
A measure of total noise level at the sensor. OSHA regulations state that noise levels cannot exceed 90 dB over an 8 hour period, or 95 dB over a 4 hour period.

Humidity



Relative humidity is the amount of moisture in the air compared to what the air can hold at that temperature.

PM 2.5



Particulate Matter 2.5 (PM 2.5) refers to tiny inhalable particles or droplets in the air that are less than 2.5 microns in width. These particles can have negative health effects, and are caused by dust, vehicle exhaust, burning fuels, cooking, smoking, and vaping.

Vape Index

Verkada's Vape Index is a score derived from multiple sensors that is strongly correlated with vaping and/or smoking activity. Vape Index measurements outside of the green zone indicate suspected vaping/smoking activity, but could also reflect smoke or fumes from other sources. Smoke from cooking, burning fuel or wildfires may register highly on the Vape Index.

Motion

A measure of changes in infrared light absorption caused by the motion of warm bodies, as measured by a passive infrared sensor. Powered by the same technology as motion sensors for intrusion detection, a motion event indicates human/animal motion or other large changes in infrared activity.

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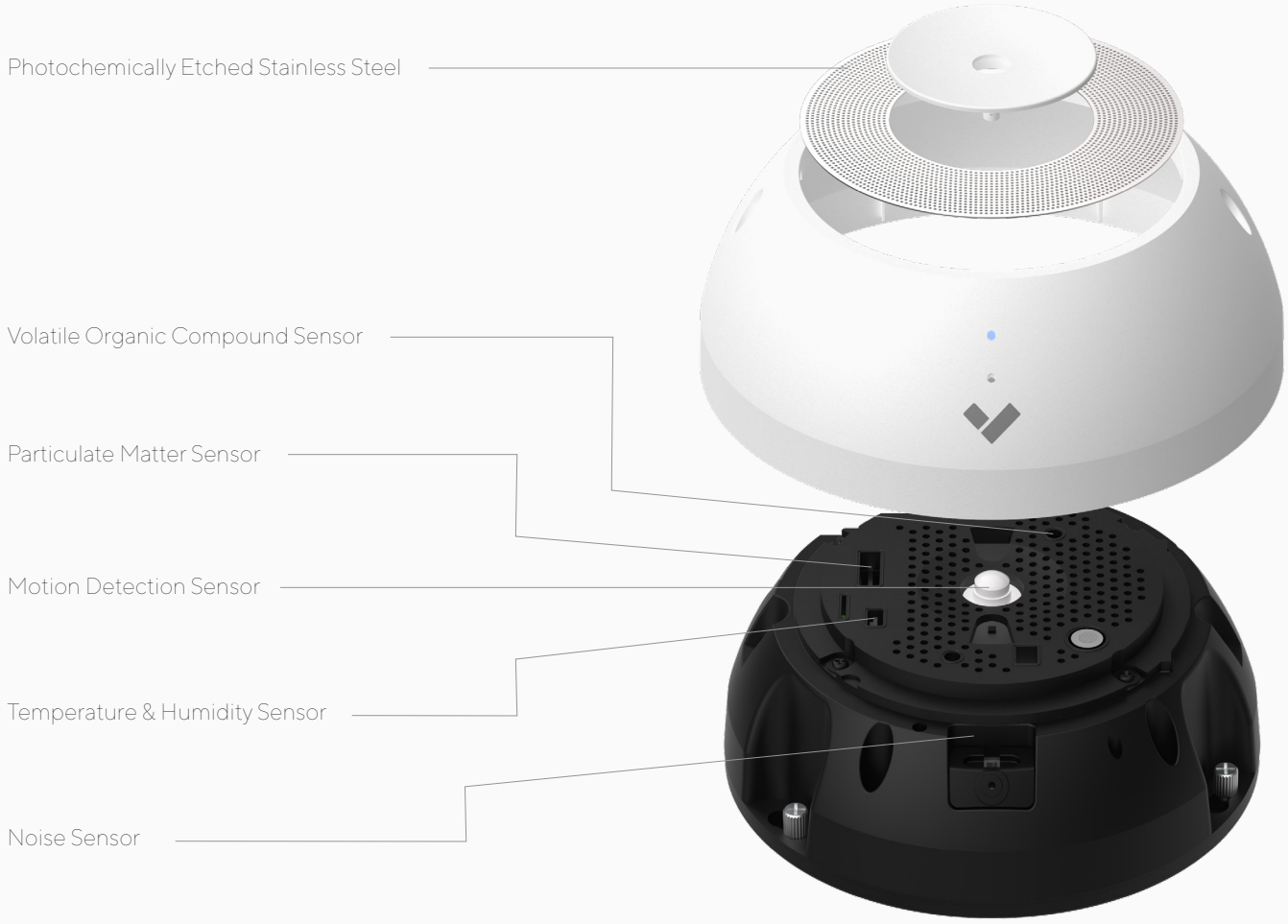
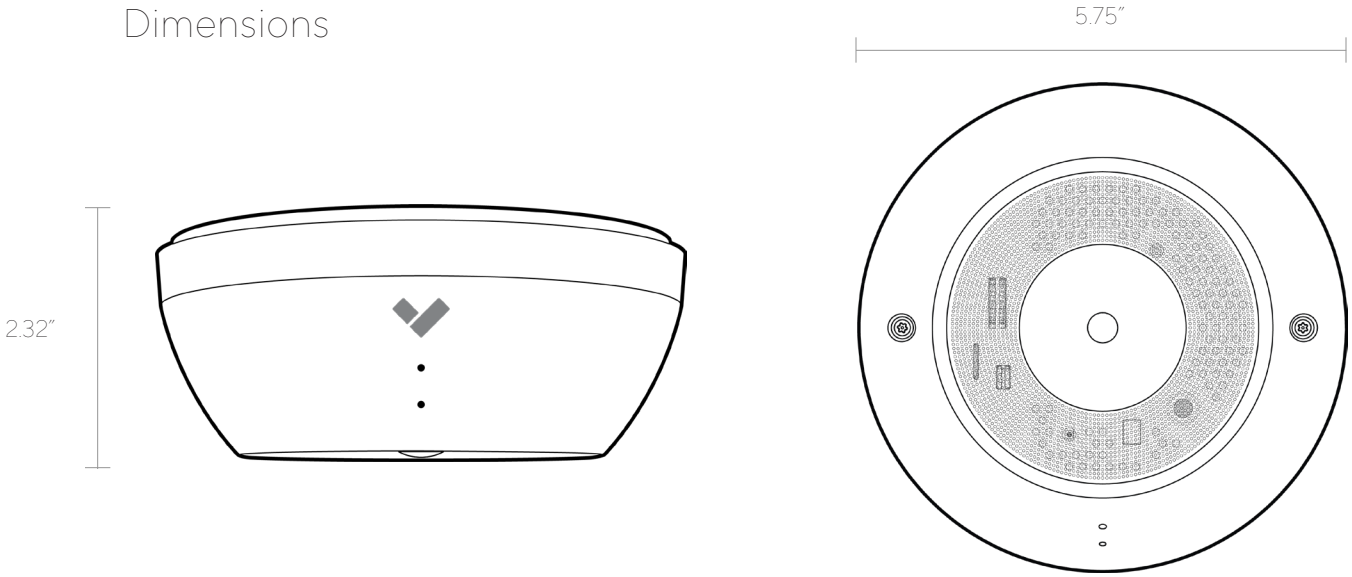
Sensor Overview



Dimensions



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Tech Specs

Temperature	Relative Humidity
Sensor: CMOS **Operating Range**: -5° C to 50° C (23° F to 122° F) **Typical Accuracy:** ± 2° C **Units:** ° F	**Sensor:** CMOS **Operating Range**: 0-80% non-condensing **Typical Accuracy:** ± 5% **Units:** %
PM 2.5	**TVOC**
Sensor: Laser Scattering Optical Sensor **Range**: 0 - 1000 µg/m^3 **Typical Accuracy (0 - 100 µg/m^3)**: ± 10 µg/m^3 **Typical Accuracy (100 - 1000 µg/m^3)**: ± 10% **Units:** µg/m^3 (micrograms / cubic meter)	**Sensor:** CMOS **Range**: 0 - 60,000 ppb **Typical Accuracy:** ± 15% **Units:** ppb (parts per billion)
Noise	**Air Quality Index**
Sensor: Microphone (not recording) **Range**: 20 - 120 dB SPL (A-Weighted) **Typical Accurracy**: ± 5 dB **Units:** dB (decibels)	**Sensor:** U.S. Air Quality Index, derived from multiple sensors **Range**: 0 - 500
Motion	**Vape Index**
Sensor: Passive Infrared Sensor	**Sensor:** Proprietary formula derived from multiple sensors **Range**: 0 - 100 index

Dimensions & Weight	Power
Dimensions: Ø: 146mm H: 59mm **Weight**: 720g / 25.4oz	**Power Consumption**: 4W **Power Input**: IEEE 802.3af PoE
Connectivity	**LED Indicator**
RJ-45 cable connector for Network/PoE connection	System power and status indicator
Operating Temperature	**Compliance**
-5° C to 50° C (23° F to 122° F)	FCC, CE, IC
Included Accessories	
Setup guide, T10 security Torx screwdriver, screw pack, paper mounting template	

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Pricing

Product Name	Description	Price (MSRP)
 **SV11-HW**	SV11 Environmental Sensor Hardware	$999
LIC-SV-1Y	1 Year Sensor License	$249
LIC-SV-3Y	3 Year Sensor License	$599
LIC-SV-5Y	5 Year Sensor License	$999
LIC-SV-10Y	10 Year Sensor License	$1,999