# **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.



# 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

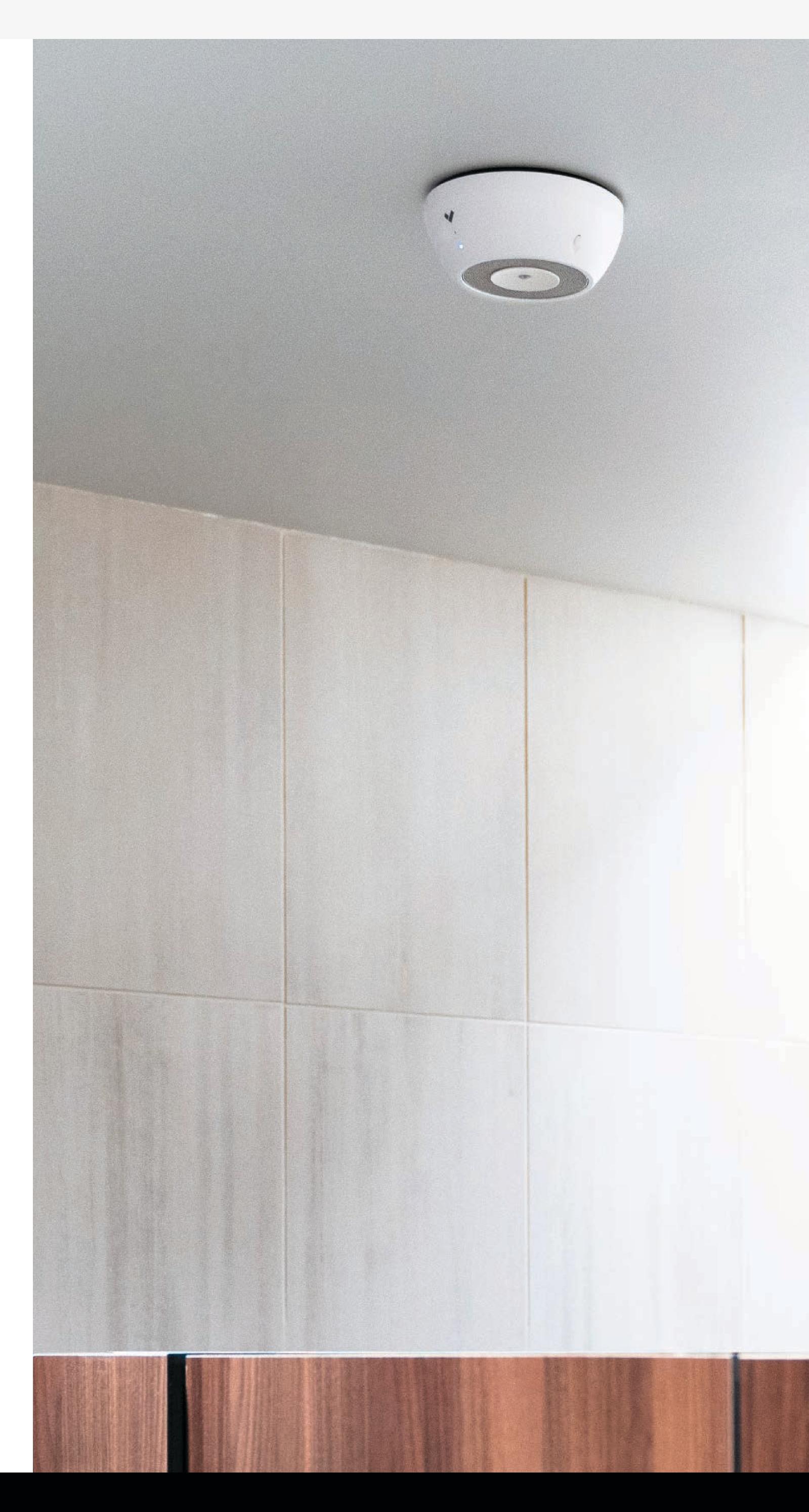
- Secure remote access and alert management on any device anywhere
- SAML-based integration with single sign-on (SSO) solutions
- Continuous updates with new features

# **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

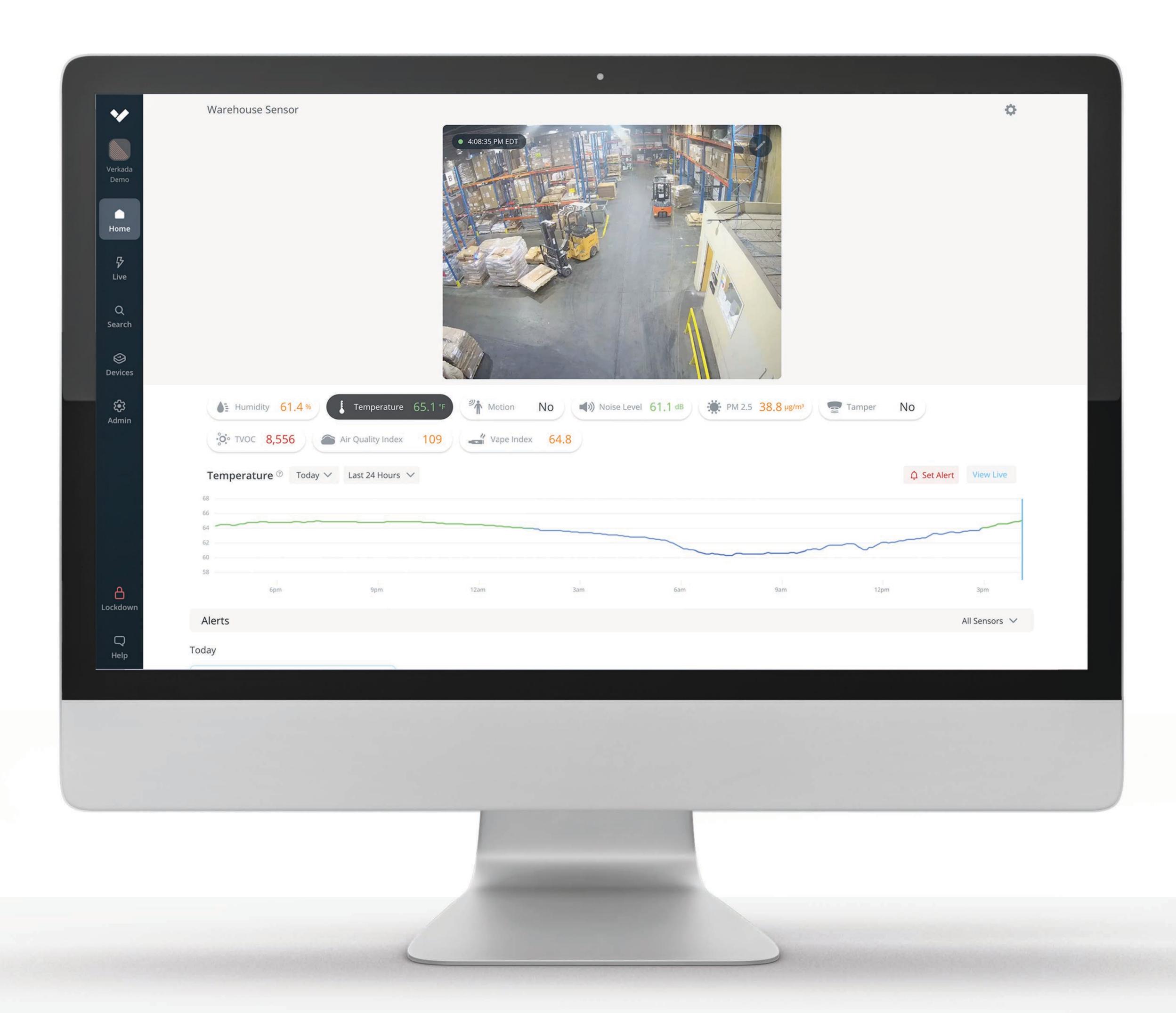
# No Hidden Costs

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



# 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



# Sensor Overview

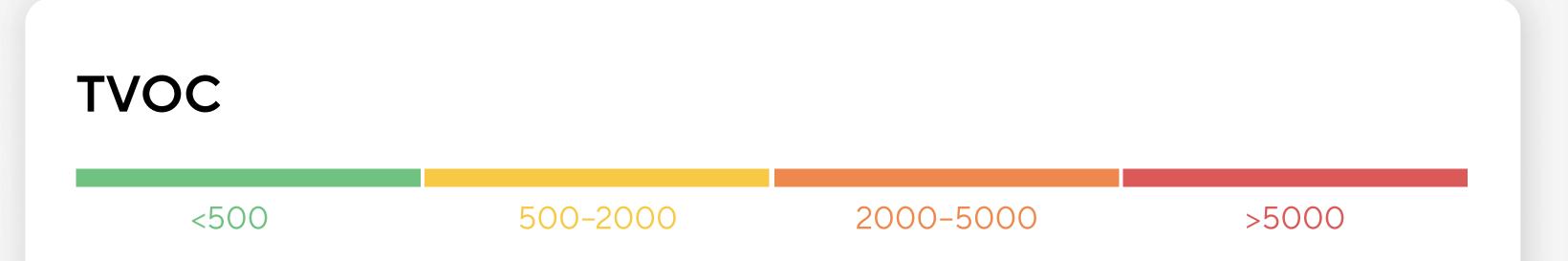
Verkada created recommended sensor value ranges based on data from the Environmental Protection Agency (EPA), the World Health Organization (WHO), the Occupational Safety and Health Administration (OSHA), and the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE).

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

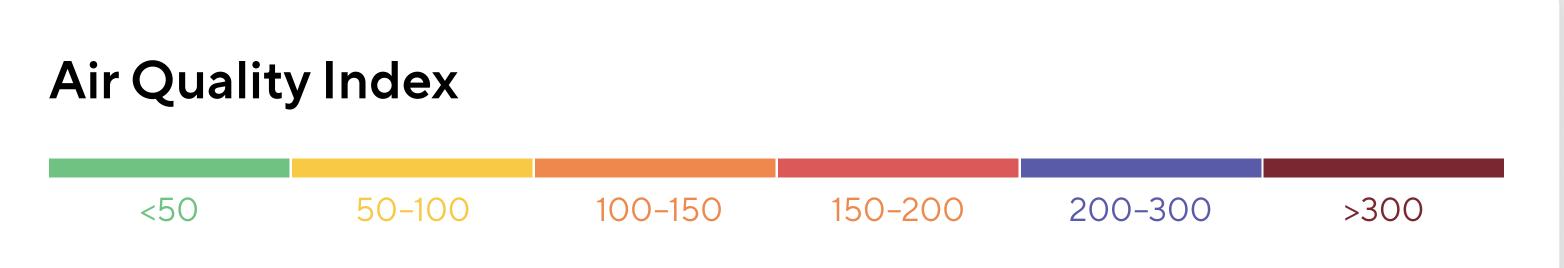
The SV11 can show the following data streams in Command

# Temperature <47°F 47°F-61°F 61°F-64°F 64°F-78°F 78°F-81°F 81°F-92°F >92°F

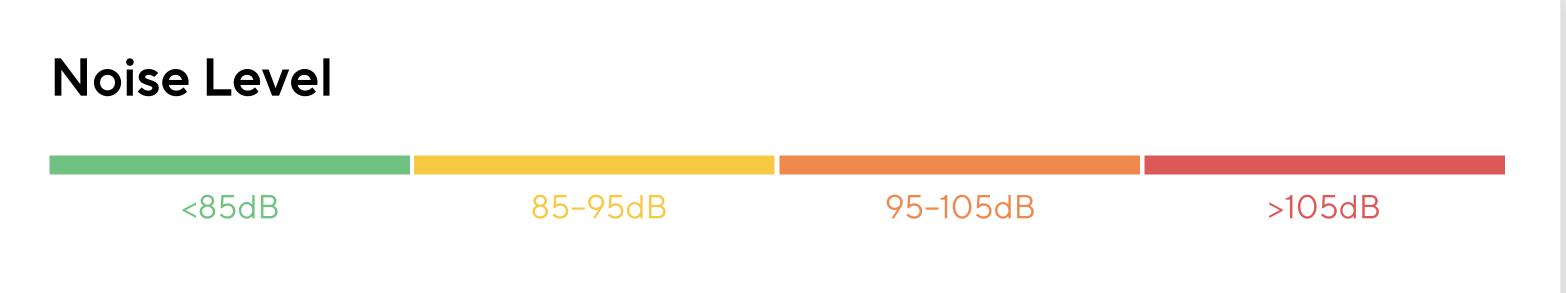
SV11 temperature measurements are accurate from 23 °F – 122 °F. As with other data streams, users can customize temperature alerts if a space is kept at a temperature outside of the recommended green zone.



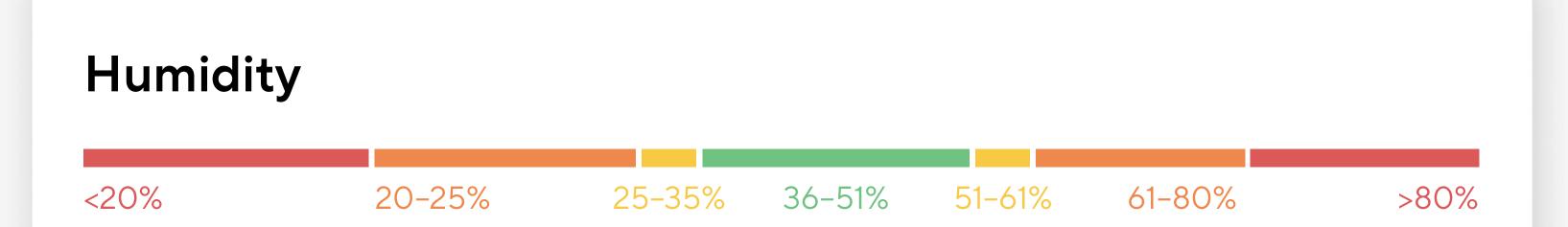
A total measure of Volatile Organic Compounds, which are chemicals that evaporate into the air and are emitted by cleaners, paints, varnishes, fragrances, and hundreds of other products. Examples include benzene, ethylene glycol, and formaldehyde. VOCs are measured as a group because of their cumulative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



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.



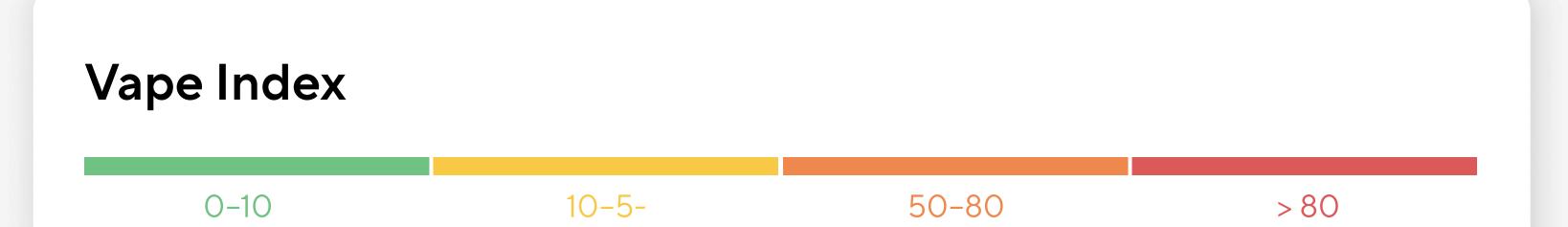
A measure of total noise level at the sensor. OSHA regulations state that noise levels cannot exceed 90 dB over an 8 hour period, or 95 dB over a 4 hour period.



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

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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.



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

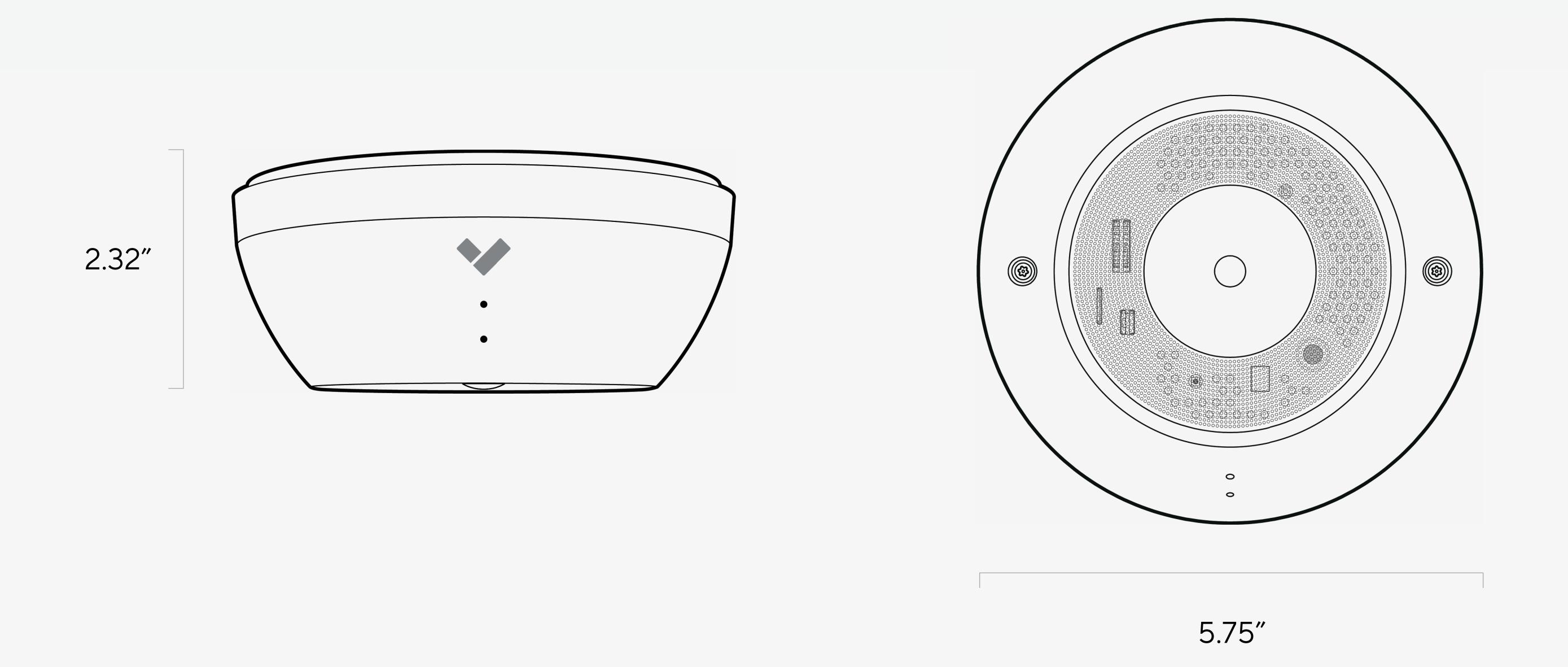
A measure of changes in infrared light absorption caused by the motion of warm bodies, as measured by a passive infrared sensor. Powered by the same technology as motion sensors for intrusion detection, a motion event indicates human/animal motion or other large changes in infrared activity.



# Sensor Overview



# Dimensions





# Sensor

# Tech Specs

Temperature	Sensor: CMOS, Operating Range: -5 to 50°C (23 to 122°F), Typical Accuracy: ± 2°C, Units: °F		
Relative Humidity	Sensor: CMOS, Operating Range: 0-80% non-condensing, Typical Accuracy: ± 5%, Units: %		
PM 2.5	Sensor: Laser Scattering Optical Sensor, Range: 0 – 1000 μg/m3, Typical Accuracy (0 – 100 μg/m3): ± 10 μg/m3 Typical Accuracy (100 – 1000 μg/m3): ± 10%, Units: μg/m3 (micrograms / cubic meter)		
TVOC	Sensor: CMOS, Range: 0 - 60,000 Index, Typical Accuracy: ± 15%		
Noise	Sensor: Microphone (not recording), Range: 20 – 120 dB SPL (A-Weighted), Typical Accurracy: ± 5 dB, Units: dB (decibels)		
Air Quality Index	Sensor: U.S. Air Quality Index, derived from multiple sensors, Range: 0 - 500		
Motion	Sensor: Passive Infrared Sensor		
Vape Index	Sensor: Proprietary formula derived from multiple sensors, Range: 0 – 100 index		
Dimensions	Ø: 146mm H: 59mm <b>Weight</b> 720g / 25.4oz		
Power	Power Consumption: 4W, Power Input: IEEE 802.3af PoE		
Connectivity	RJ-45 cable connector for Network/PoE connection		
LED Indicator	System power and status indicator		
Operating Temperature	-5° C to 50° C (23° F to 122° F)		
Compliance	FCC, CE, IC		
Included Accessories	Setup guide, T10 security Torx screwdriver, screw pack, paper mounting template		



# Professional Monitoring Overview<sup>1</sup>

Incidents are unpredictable. Ensure your sites are protected 24/7 with our professional monitoring service. Monitoring is provided by three fully redundant, U.S.-based, UL listed central stations with Five Diamond Certification from The Monitoring Association.

#### **Assess the Situation**

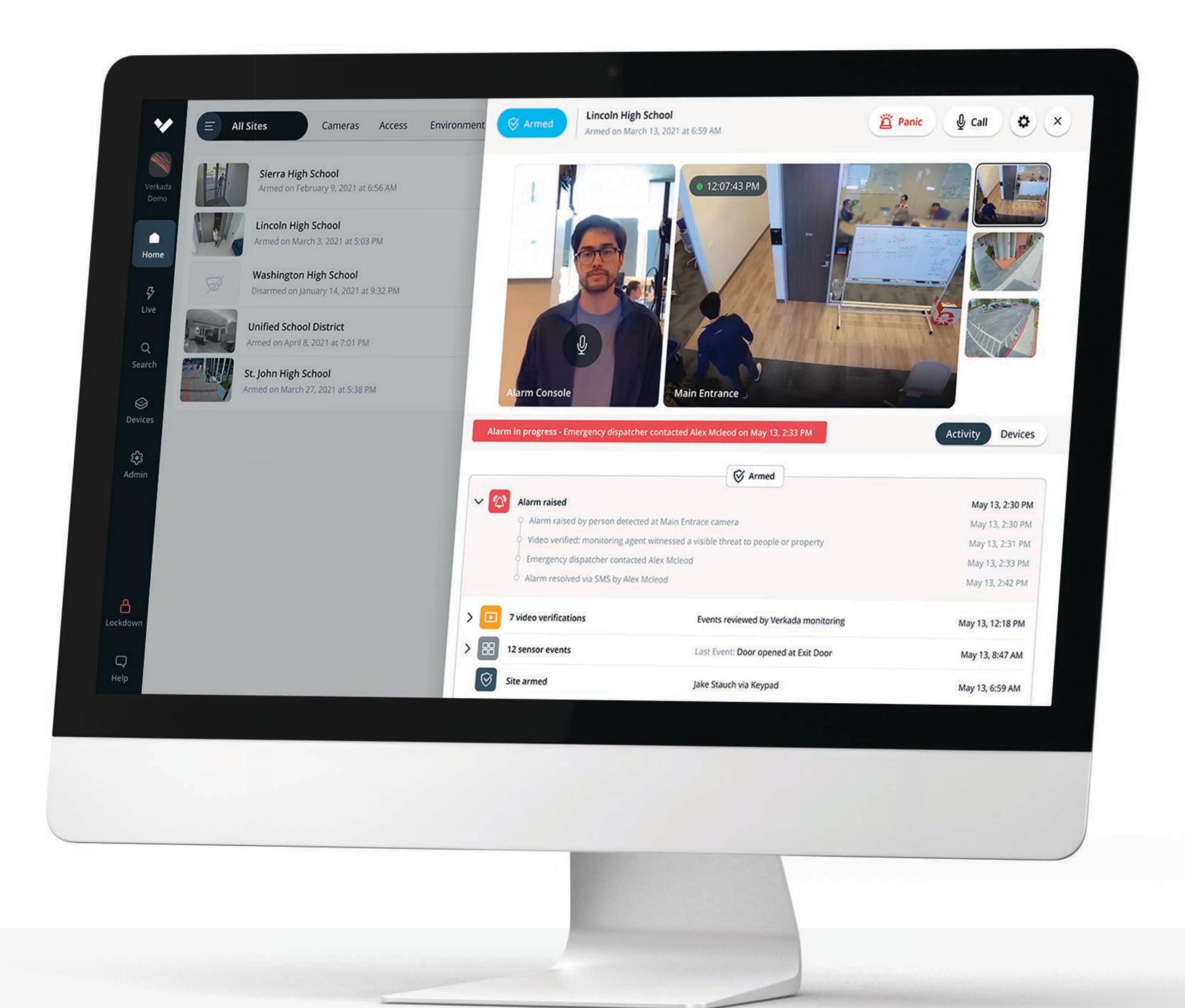
- With built-in video verification, agents can assess possible threats and screen out false alarms.
- If video verification is enabled, users will not be contacted unless incidents are confirmed as real alarms by an agent.

## **Make Contact**

- When an alarm is raised, agents immediately call and send SMS messages to the predetermined contact list.
- If an agent is unable to reach any contacts, they can contact local emergency services to respond.

#### **Take Action**

- Once a threat is confirmed, agents will dispatch local first responders to the site address.
- All events can be reviewed, archived and accessed from Command for incident investigation.



#### **Alarm License**

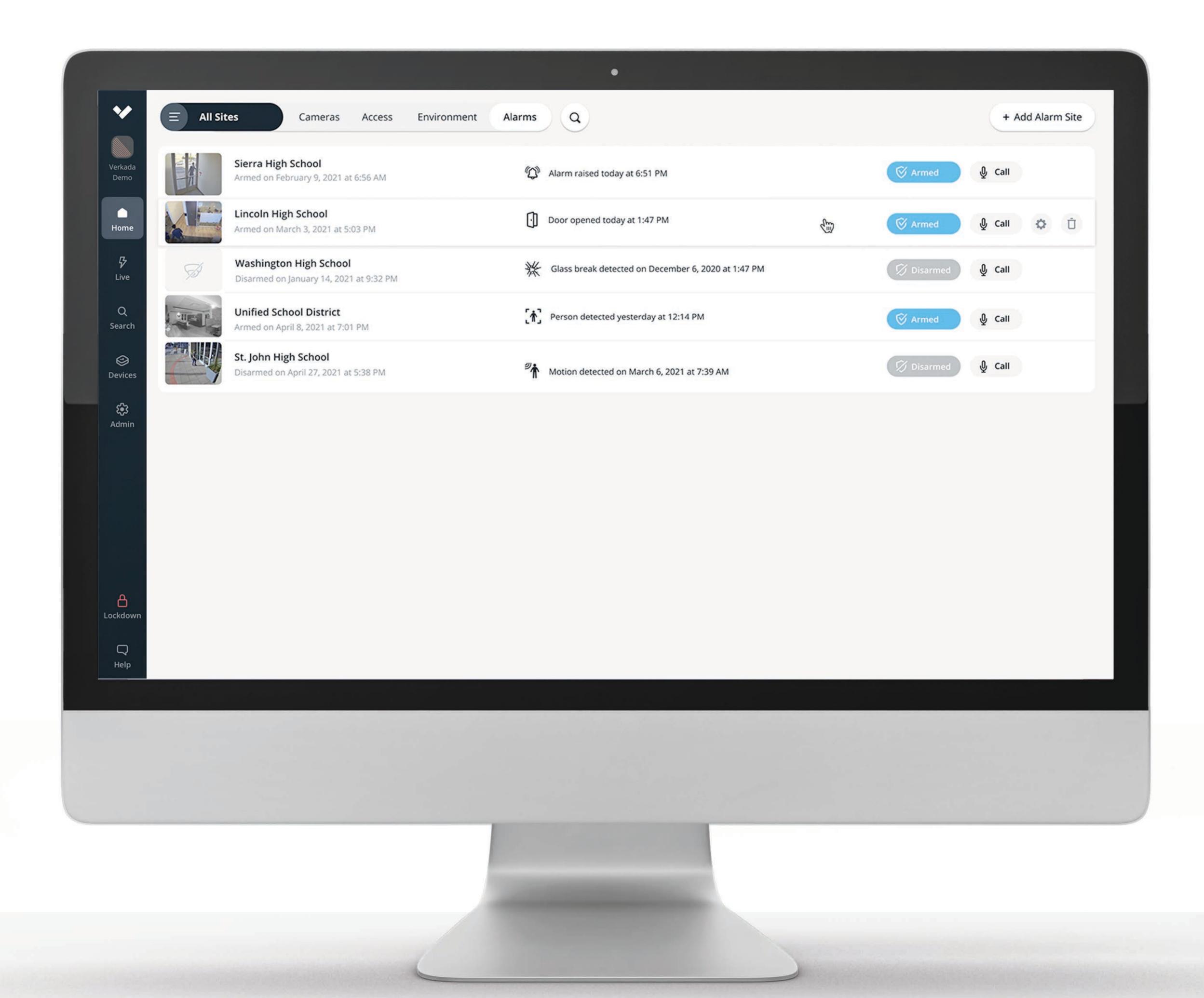
The Alarm License includes access to the cloud-managed Verkada Alarms platform and integrated professional monitoring. One Alarm License is required for each unique site address, with up to 32 monitored devices covered per license. Any Verkada cameras, doors, environmental sensors, and panel inputs that have been configured as alarm triggers will count as devices towards the 32 device limit.

An Alarm License is required for the BP41 Alarm Panel and BC51 Alarm Console.

<sup>&</sup>lt;sup>1</sup> Monitoring is provided by Verkada's independent monitoring center partners.

# Alarms Platform Overview

Seamlessly manage sites, configure alarm triggers, and customize alarm responses.



Alarms is powered by Verkada's Command Platform. This cloud-based management solution delivers secure remote access with an intuitive interface for ease-of-use.

#### Site Management

- See overview of current status and recent events from all sites.
- Schedule arming/disarming and configure keycodes for onsite management.
- Instantly view incidents and play back event footage with integrated Verkada video surveillance.
- Control access to your Alarm sites with role-based permissions.

# Device Management

- Configure wired sensors and outputs on your Alarm Panel from Command with just a few clicks.
- Create alarm triggers based on events from any Verkada device.
- Manage fleet of devices from single dashboard.

# **Professional Monitoring Configuration**

- Enable video verification of alarms by trained security professionals.
- Enable dispatch of emergency services.
- Configure "an ordered list" of contacts for monitoring agents to call and text when an alarm is raised.

## **Alarm Console Talk-Down**

- From Command, initiate two-way video calls down to Alarm Consoles at any of your sites, from anywhere in the world.
- Make calls to Alarm Console to address staff, guests, or potential intruders.



# Ordering Information

# Sensor Pricing

Product Name	Description	Cost (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	5Year Sensor License	\$999
LIC-SV-10Y	10 Year Sensor License	\$1,999

# Alarm License Pricing

LIC-BA-1Y	1 Year Alarm License	\$1,499
LIC-BA-3Y	3 Year Alarm License	\$3,999
LIC-BA-5Y	5 Year Alarm License	\$5,999
LIC-BA-10Y	10 Year Alarm License	\$11,999