

Eagle Eye Indoor Air Quality Sensor Data Sheet

View a wide range of conditions and get real-time detection for vaping and more in the Eagle Eye VMS.

Monitor air quality and environmental conditions to ensure the health, safety, and productivity of your students, employees, and customers. The sensor continuously measures key health and comfort parameters such as temperature, humidity, TVOC, CO, CO₂, and the presence of harmful particulate matter. It uses these measurements to create aggregate health and comfort scores, and even detects smoking or vaping.

Key features

- Monitor site conditions to improve employee health and productivity.
- Detect vaping or smoking where cameras are prohibited.
- Monitor noise levels to comply with OSHA standards.
- Send alerts when detecting motion in secure areas.
- Ensure compliance with common building standards.
- Get tamper alerts to respond immediately to potential vandalism.

Secure, scalable, cloud architecture

The sensor uses ultra low-energy Bluetooth (BLE5) to transmit data to the cloud via a highly secure gateway. The gateway can connect up to 150 wireless sensors, allowing facility managers to monitor all aspects of the facility with the Eagle Eye Cloud VMS. The system is scalable from a single-sensor, one-site application to multi-site enterprises with thousands of sensors.

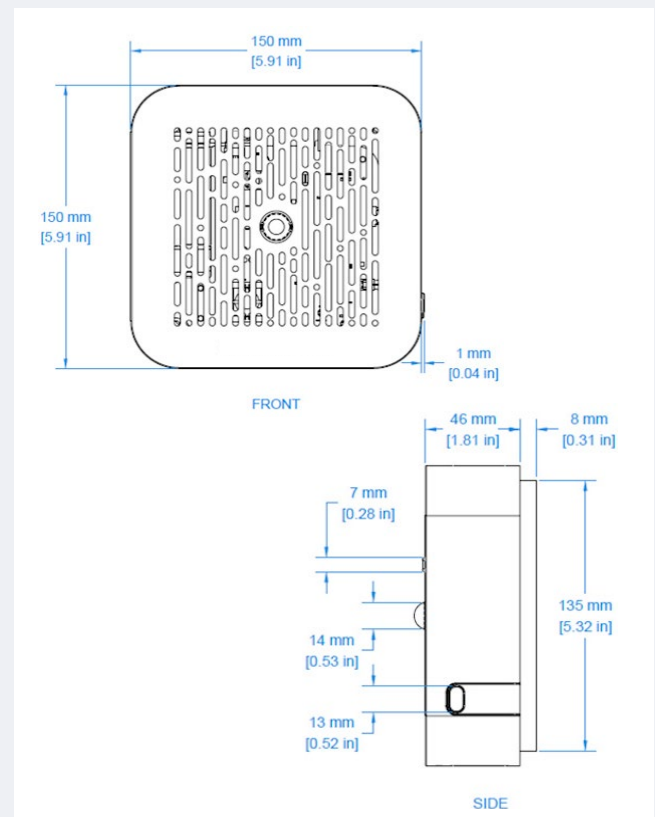
Real-time monitoring and analytics with actionable data

The Eagle Eye Cloud VMS sensor interface allows real-time asset monitoring and sophisticated analysis from anywhere via computer, tablet, or smartphone. Data analytics provide operational insights and deep visibility. Notifications can be set based on customizable thresholds and complex rules based on individual sensors or sensor groups.



Applications

- ✓ Schools
- ✓ Airports
- ✓ Medical facilities
- ✓ Corporate offices
- ✓ Commercial buildings
- ✓ Industrial facilities
- ✓ Public restrooms
- ✓ Greenhouses



Part Number	EN-SS3-901
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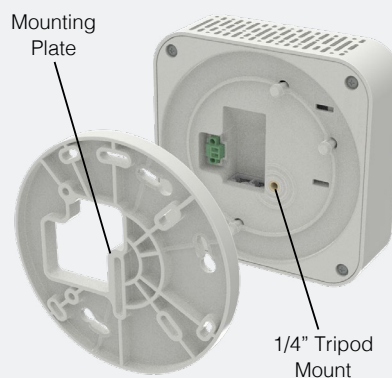


Operational Specifications

Power Options	
1. DC Voltage	12-24VDC
2. POE	802.3af/at/PoE+ (passive PoE also supported at 40-56VDC)
3. USB-C Power Adapter	802.3af/at/PoE+ (passive PoE also supported at 40-56VDC)
Backup Battery	2 Hours of uninterrupted operation
Operating Voltage	5VDC, 3.3VDC from various input sources
Avg. Power Consumption	0.5W (steady state), 0.9W (first two hours of operation)
Operating Temperature	-10°C to +50°C (14°F to 122°F)
Storage Temperature	-10°C to +50°C (14°F to 122°F)
Operating Environment	Indoor use, 10-90% RH
Communication Protocol	BLE/BT5 2.4Ghz
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Wireless Sensor Range	30m (100ft)
Encryption	128-Bit AES Encryption
LED Indicators	1. Ethernet Port Solid Yellow, Solid Green (Power) 2. At Startup, Internal Green Flash Succession will initiate, 3s long
Find My Sensor	Command from Console to blink sensor LED
Weight	180g (7oz)
Sensor Dimensions	150mmL x 150mmH x 54mmD (Including Mounting Pegs + Plate) 5.9L x 5.9H x 2.1D
Mounting Plate Dimensions	135mm Radius, 10mm Thickness, 5.3 Radius, 0.25 Thickness
Enclosure Material	ABS PA-765+
Certifications	FCC ID: X8WBT840X IC ID: 4100A-BT840X
EMC Compliance	FCC Part 15 Class B
Warranty	2-years

Mounting options

The Indoor Air Quality sensor includes a mounting plate that allows the sensor to be mounted on a wall or ceiling, plenum (dropped-ceiling), or electrical junction box. The sensor can also be mounted using a standard 1/4" tripod arm.



Configurable thresholds and alerts

Sensor outputs are shown on a console featuring a simple yet powerful threshold and alerting system for all sensor measurements. The sensor comes with standard default threshold settings applied for quick setup. You can also configure thresholds and alerts via the Eagle Eye Cloud VMS, based upon specific reporting requirements or unique environmental conditions within your facility.

Eagle Eye Sensors Gateway

The Eagle Eye Sensors Gateway collects encrypted data from sensors located within the specified communication range (30-60m/ 100-200ft) and then transmits the data to the cloud through either Ethernet or Wi-Fi. The gateway auto-detects all sensors within range and will immediately establish secure communication without any user configuration or setup. Each gateway can support up to 150 sensors.

Eagle Eye Sensors Console

All sensor data is automatically logged and stored in the cloud. The Eagle Eye Sensors Console in the VMS is configured to monitor and track all sensor data in the cloud. Multiple thresholds and alerts can be set separately for each sensor. An API allows integration with other data sources and third-party data analytics tools.

Health score (PM1, PM2.5, PM10, TVOC, CO2, CO)

The health score indicates general indication of room air quality, the specific pollutant measurements that are impacting your score, and to guide appropriate corrective action.

Comfort score (temperature, humidity, persistent noise level)

The comfort score is derived from recommended conditions for optimal comfort and productivity in the workplace as defined by the UL Verified Healthy Buildings standard and your own preferred conditions.

Vape index

The vape index combines multiple measurements to derive the probability of vaping at the location. Smoke from cooking, burning fuel, or wildfires may also impact the vape index.

Measurement Specifications					
	Measurement Range	Accuracy	Precision	Inspection Rate	Resolution/ Configuration
Particulate Matter 1.0 (PM1)	0->6000ug/m^3	(+/-) 10% Mass Concentration	0.1ug/m^3	5 minutes	16-bit
Particulate Matter 2.5 (PM2.5)	0->6000ug/m^3	(+/-) 10% Mass Concentration	0.1ug/m^3	5 minutes	16-bit
Particulate Matter 10 (PM10)	0->6000ug/m^3	(+/-) 10% Mass Concentration	0.1ug/m^3	5 minutes	16-bit
Total Volatile Organic Compounds (TVOC)	0-100000ppb (0-100ppm)	(+/-20ppb + 15%)	ppb	5 minutes	16-bit
Carbon Dioxide (CO2)	400-6000ppm	(+/- 40ppm + 5%)	ppm	5 minutes	16-bit
Carbon Monoxide (CO)	0-1000ppm	0.5ppm (<100ppm), +/-2% of Reading >100ppm	ppm	5 minutes	14-bit
Temperature	14F to +140F (-10C to +60C)	(+/-)0.45C (typical), (+/-) 0.7C (Maximal)	0.01C	5 minutes	-
Relative Humidity	0% to 90% RH, non-condensing	(+/-)4.5% (typical), (+/-)6% (Maximal)	0.1% RH	5 minutes	16-bit, +/-1% Repeatability
Ambient Noise Level	25-120dB SPL	64.5 dB SNR, +/-0.25% Sensitivity, 0.1% THD @ 94dBA	1dB	5 minutes	16-bit
Ambinet Light	0-30000 LUX	10% of LUX Reading in direct light	1 LUX	5 minutes	16-bit

	Detection Distance	Detection Angle	Count Range	Count Meaning	Detection Interval
Motion	Up to 6m (19.5ft)	130 Degrees	0-255	Running Average # of motion events in past 5 minutes	<100ms

Only available in the United States and Canada.