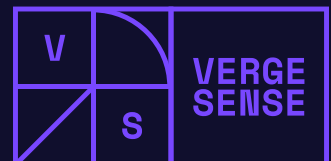


VergeSense E104

Data Sheet



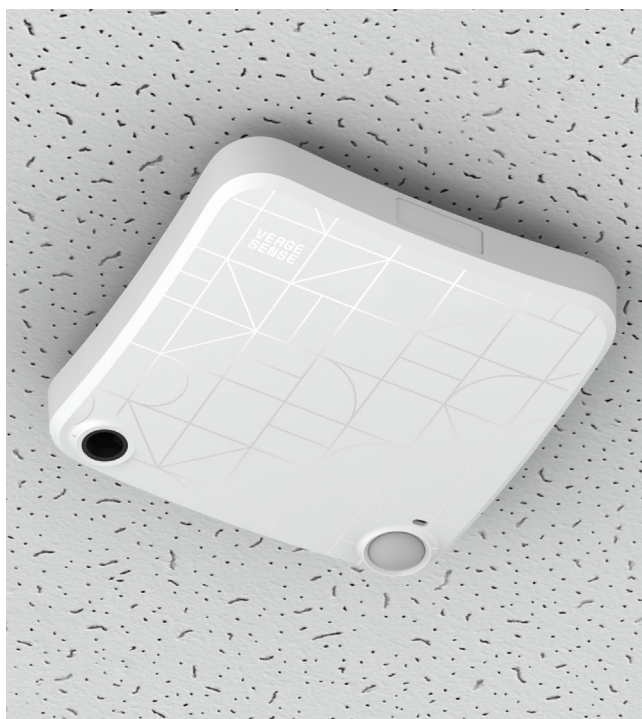


VergeSense E104

Data Sheet

VergeSense powers the future of space design by placing people at the center of the design process. Now the VergeSense Elite builds on the success of our market-leading IoT sensor by delivering real-time analytics as part of a permanent installation.

The platform contains multiple sensory inputs, as well as an onboard BLE radio to support beaconing and indoor navigation, and the sensor's image-to-data conversion (IDC) technology ensures the privacy of your employees.



VergeSense System Architecture - Wired

The VergeSense Difference

- Real-world insights — reveals how people actually use space.
- Powerful analytics — cutting-edge AI that learns and gets smarter.
- Flexible and open — open API for exporting data to existing workplace management solutions.
- Privacy protections — sensors transmit data only, no images.
- Versatile — multi-sensor capability includes BLE, optical, and motion.

VergeSense System Architecture — Wired

The VergeSense system is comprised of three components.

Sensors

Wired sensors operate off IEEE 802.3af Power over Ethernet (PoE) and can be mounted using a variety of different configurations (drop-ceiling, 4" square/octagonal junction boxes).

Cloud Analytics & API

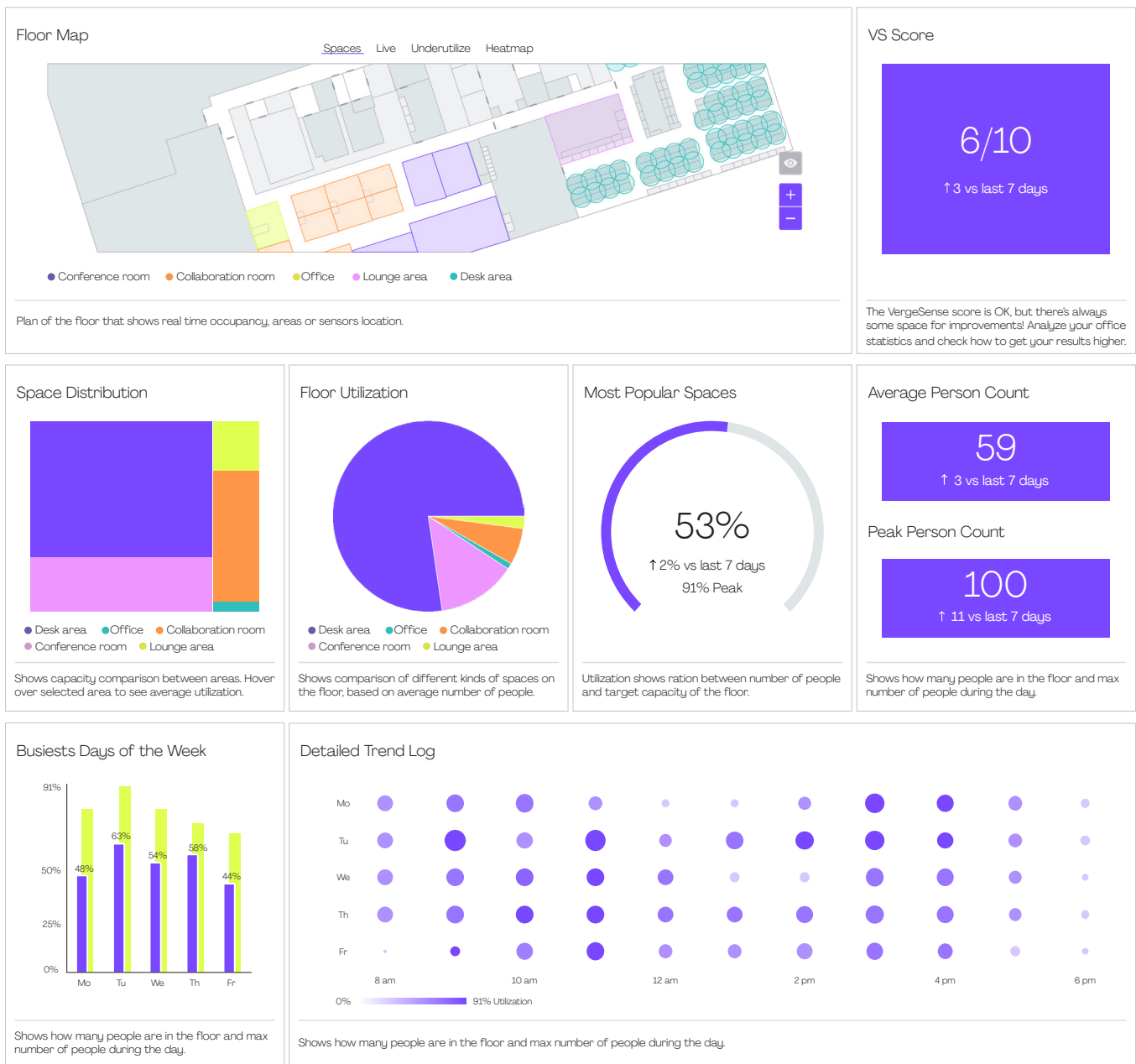
Anonymous data is analyzed in the cloud and can be reviewed via the VergeSense portal or exported via the VergeSense API. Data integrations with workspace software providers can use data to power hoteling, hot-desking, and room-booking systems, and help occupants find available rooms and desks.

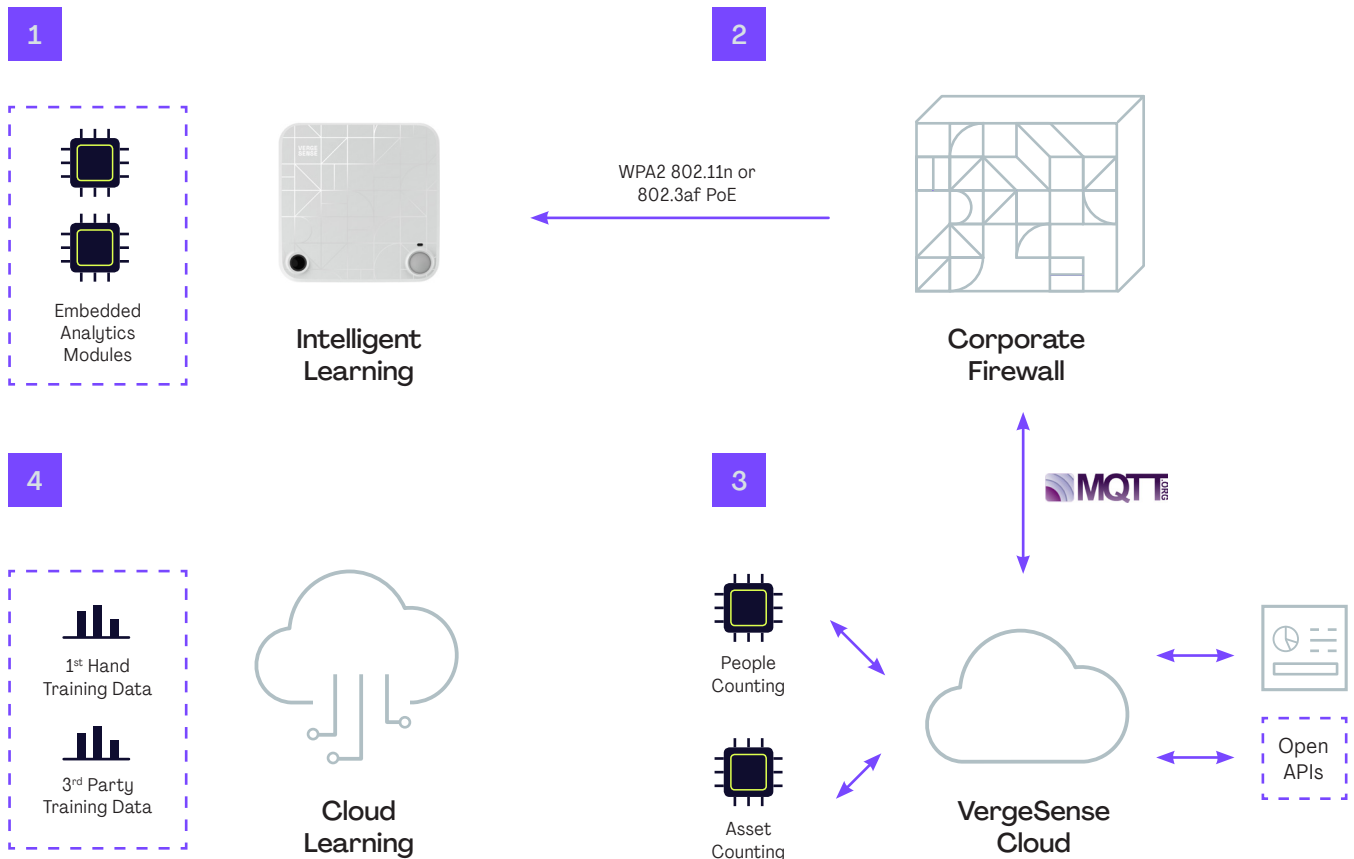
Cloud Learning

As more powerful deep-learning modules develop, new models are pushed to the devices. Sensors continually improve and acquire new skills with time.

Powerful Analytics

The VergeSense Analytics platform turns space data into insights and recommendations. When combined with other information on your workspace and workforce, VergeSense can help you improve the use of shared spaces, reduce desk vacancy, decrease energy consumption, and lower real estate overhead by allocating workspace efficiently. Seamless API integration with Workspace Software means that you can also do Asset Search and Room Finding right from your smartphone.





How It Works

Step 1

When in active mode, the sensor continuously captures raw data using its wide-angle (170 degrees) fisheye lens. The raw data is a 352x288 array of pixels, which is processed locally on the device through a neural network pipeline.

Step 2

Processed data is transmitted to VergeSense’s cloud analytics portal through an on-premise network. Devices can be configured to operate within the corporate firewall. All cloud communication uses TLS 1.2 encryption.

Step 3

Data on the VergeSense Cloud is available via the VergeSense portal or exported via the VergeSense API. Utilization and occupancy information for your facility is ready at any time. The data captured via the VergeSense system is your data and can be easily integrated into existing BI tools and workspace management solutions.

Step 4

As VergeSense continuously develops new machine-learning models, they can be pushed to sensors remotely (without requiring any hardware changes).



Technical Specifications

Product Models

- VergeSense VS-E104 Wired Sensor

Network

- WiFi 802.11 a/b/g/n (2.4 GHz)
- Bluetooth 4.0 (2.4 GHz)
- 802.3af Power over Ethernet (PoE)
- ~1MB data average analytics data generated per day

Power

- 802.3af Power over Ethernet (PoE)
- Power Consumption: ~3.2 W (active)

Deployment

- ~1 sensor / 8 desks (desk occupancy)
- ~1 sensor / room (room occupancy)
- Max deployment height: 15 ft
- Sensor detection resolution of 2 ft x 2 ft

Optical Sensor Specs

- 170 degree (Horizontal) FOV
- 352 x 288 pixel array
- 15 pixels / foot at floor (when sensor is mounted at 9 ft)

Additional Sensor Specs

- Digital passive PIR motion sensor detects minor motion in a coverage pattern of 300 sqft and major motion up to 1100 sqft

Mounting

- For drop-ceiling, mount sensor to T-bar using mounting clip. Notch a "1" hole to run Cat 5e cable to sensor RJ-45 port.
- Anchor screws available to attach to ceiling tiles / sheetrock surfaces
- Screw-holes for mounting to 4" Octagon and Square Junction Boxes)

Mechanical

- Size: 108 mm (L) x 108 mm (W) x 35 mm (H)
- Weight: 142 g

Environment

- Operating:
 - Temperature: 0 degrees C to 50 degrees C (+32 to +122 degrees F)
 - Humidity: 5% to 95% non-condensing
- Storage and transportation:
 - Temperature: -20 degrees C to +60 degrees C (-40 degree F to 158 degrees F)

Regulatory

- Contains FCC ID 2AHMR-ESP12S
- RoHS Compliant

Security

- WPA2 AES encryption
- TLS 1.2 encrypted cloud-communications

Software Compatability

- VergeSense applications are delivered through a cloud-hosted SaaS platform
- Supported browsers include Internet Explorer (Version 10+), Chrome, and Firefox

People Counting Accuracy

- 95%+ people counting accuracy
- 97% precision (defined as % of occupancy detection events that included occupant) with 97% recall (defined as % of actual occupants who are detected)