



VergeSense L208

Data Sheet





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VergeSense offers new perspectives on the ways people use space and get work done. Our fully wireless VS-L208 sensor delivers a wealth of information to the cloud via cellular network, while our intuitive dashboard allows you to derive powerful insights for optimizing space and maximizing productivity.

VS-L208 sensors can be installed quickly and securely wherever people work. Cellular connectivity means they operate independently of any corporate IT network, and their image-to-data conversion (IDC) technology ensures the privacy of your employees.



VergeSense System Architecture - Wireless

The VergeSense Difference

- Easy installation — 100% wireless and battery operated.
- Real-world insights — reveals how people actually use space.
- Powerful analytics — cutting-edge AI that learns and gets smarter.
- Privacy protections — sensors transmit data only, no images.
- Flexible and open — open API for exporting data to existing workplace management solutions.

VergeSense System Architecture — Wireless

The VergeSense system consists of four components.

Sensors

Wireless, battery-operated sensors transmit data only, not images, to a local gateway device. Sensors come in a variety of mounting configurations.

Gateway

Gateway device uses edge analytics to process sensor data and then transmits it to the cloud. Gateways utilize a cellular back link for cloud connectivity, allowing them to operate independent of corporate IT.

Cloud Analytics & API

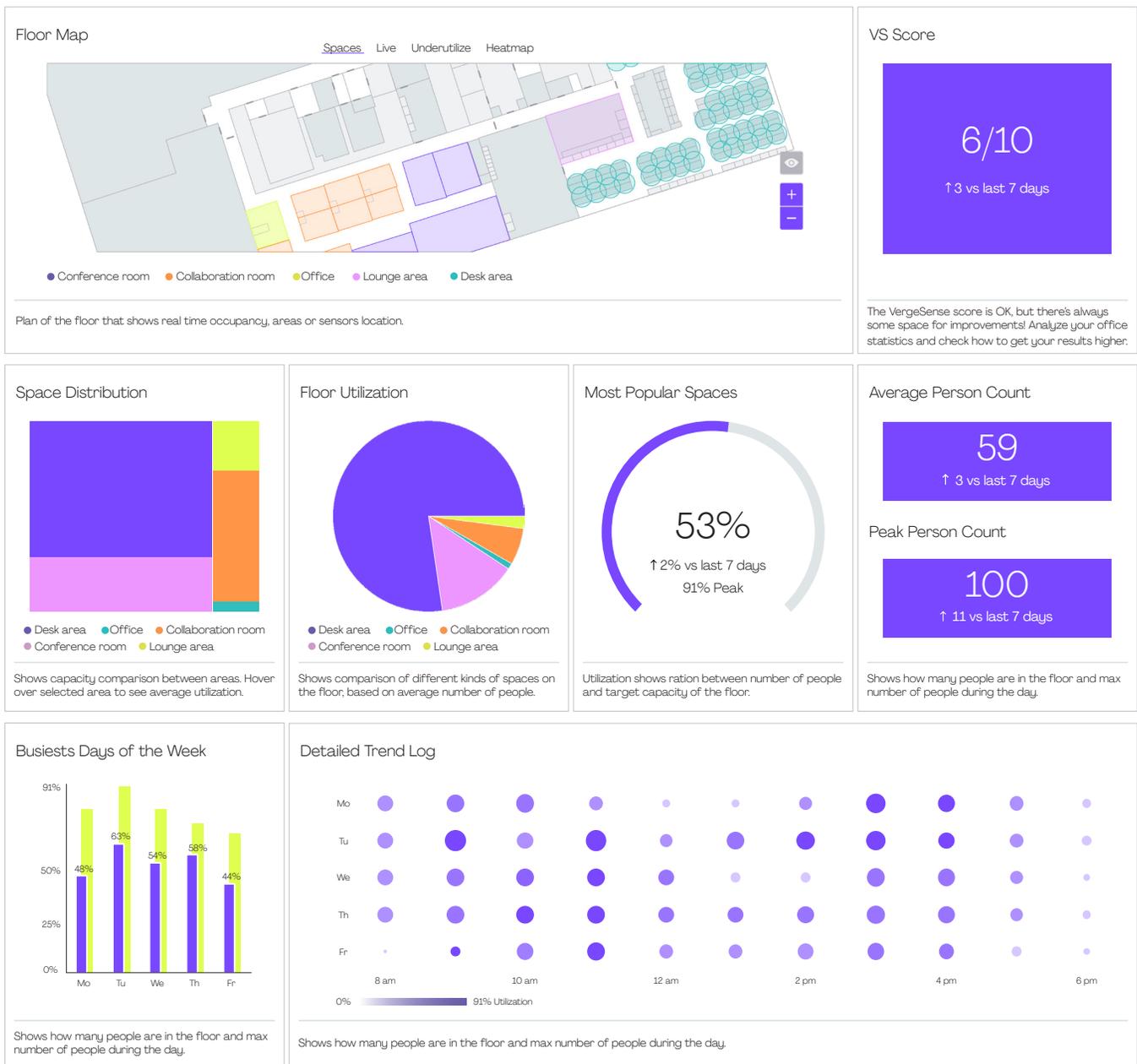
Anonymous data is analyzed in the cloud and can be consumed via the VergeSense portal or exported via the VergeSense API.

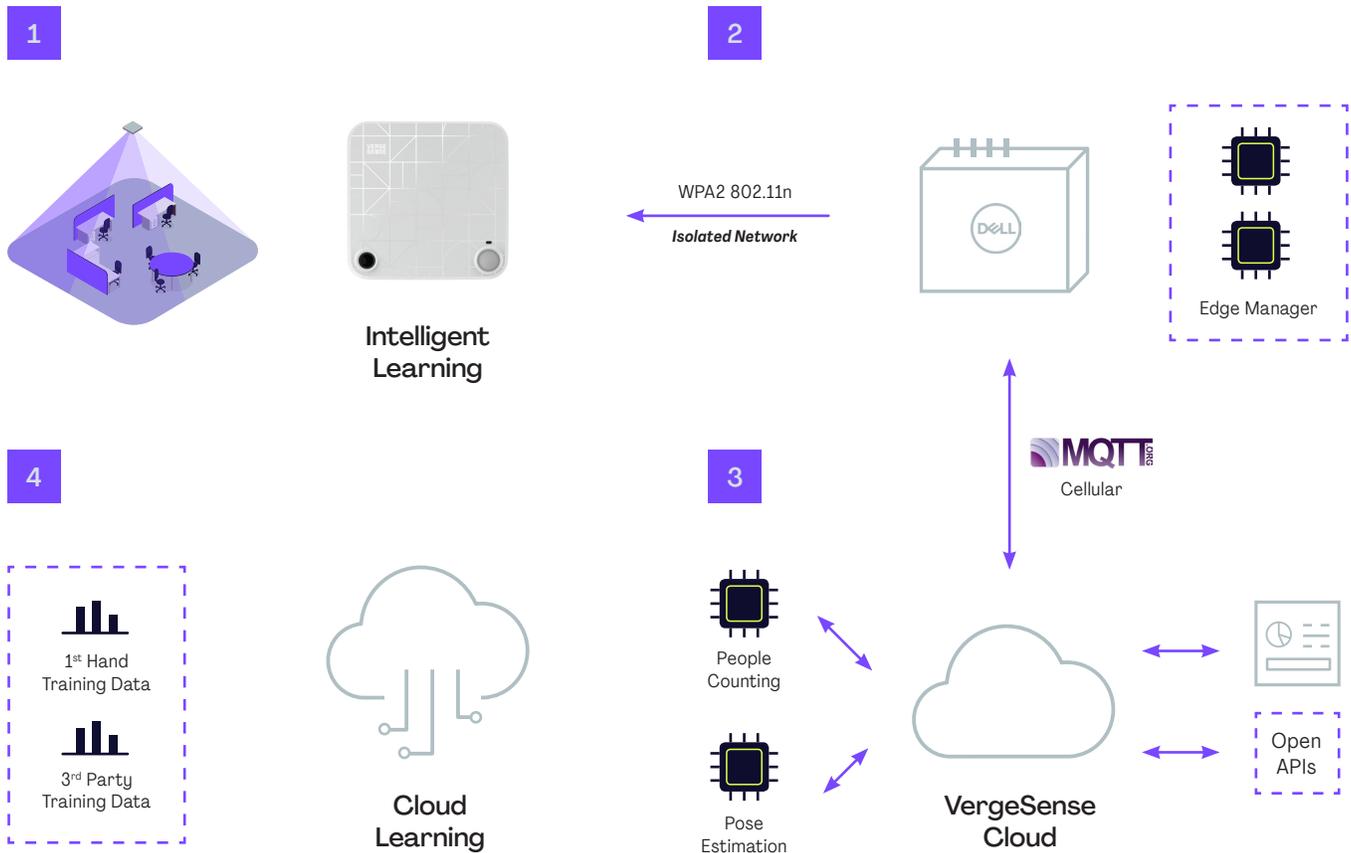
Cloud Learning

As we develop more powerful deep-learning modules, new models are pushed to the devices. Sensors continually improve and gain 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

The sensor wakes and captures a raw data point using its wide-angle (170 degrees) fisheye lens. The raw data point is a 352x288 array of pixels, which is transmitted to the gateway using an isolated WPA2 80211n Network. The VergeSense sensors and gateway do not use your facility's existing IT infrastructure.

Step 2

The gateway uses a neural network to process the data and then transmits it to the VergeSense Cloud via cellular network using the MQTT protocol.

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 yours and can be easily integrated into existing BI tools and workspace management solutions.

Step 4

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



Technical Specifications

Product Models

- VergeSense VS-L208 Wireless Sensor

Radio

- 2.4 GHz ISM
- WiFi 802.11n running on WPA-2
- Bluetooth 5.0 (optional – to support beaconing)
- Adaptive transmit power scheme – sensors calibrate TX power against Gateway

Operating modes

- Acts as a client to the VergeSense wireless network.
- Supports certificated-based authentication against enterprise WiFi network

Power

- Battery Operated (6 AA batteries)

Deployment

- ~1 sensor / 6-8 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)

Motion Sensor Specs

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

Mechanical

- Size: 117mm (L) x 84 mm (W) x 34 mm (H)
- Weight: 275

Mounting

- T-Bar clips (sized for 9/16" or 11/16" width) allow for rapid-mounting in drop ceiling configurations
- Adhesive option for open ceiling types
- Screw-holes available for wooden / concrete

Environment

- Operating:
 - Temperature: 0 degrees C to 50 degrees C (+32 degrees F 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

Software Compatability

- VergeSense applications are delivered through a cloud-hosted SaaS platform
- Supported browsers include Internet Explorer (Version 11+), Chrome, and Firefox

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)