

■ Make Sensing Matter ■



V1.0



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Product Brochure



LoRaWAN®
Product Catalogue



5G Router
Catalogue

MILESIGHT PEOPLE SENSING PRODUCT PORTFOLIO

Beyond Counting, Into Data-Driven Human Insight



PEOPLE SENSING

Top in Occupancy & People Counting, and Lead the People Sensing

The core of People Sensing lies in a steadfast commitment to accuracy and security. With years of expertise in the IoT field, Milesight has become a leader with its extensive product line and multi-dimensional industry solutions.

Milesight People Sensing Series epitomizes AI-driven algorithms, offering a range of products that utilize technologies such as binocular vision, time-of-flight (ToF), radar, thermopile, infrared sensing, and AI. Whether in varied lighting conditions, complex layouts, or high-traffic zones, Milesight's technology delivers great performance. Our devices integrate seamlessly with other systems, providing businesses with scalable, future-ready solutions for intelligent decision-making and resource allocation.

Deployed Sensors

50,000+

Help people from all walks of life improve management and gain tangible benefits.

Retail Stores

5,000+

Help retailers to increase their sales revenue by more than 16%.

Buildings

400+

Help to optimize management, resource allocation, and reduce cost by 14%.

Numerous successful cases worldwide attest to the reliability and excellence of Milesight People Sensing Series. From corporate offices and public facilities to healthcare and retail spaces, over 25,000 sensors help industries improve management and bring benefits; over 1,500 sensors help retailers increase sales revenue by more than 16%; and over 300 sensors help optimize management, resource allocation, and significantly reduce operational costs by 14%.

With a strong commitment to privacy protection, the Milesight People Sensing Series helps businesses capture high-precision occupancy and human behavior data, enabling organizations of all sizes to optimize space, enhance security, and improve operational efficiency.

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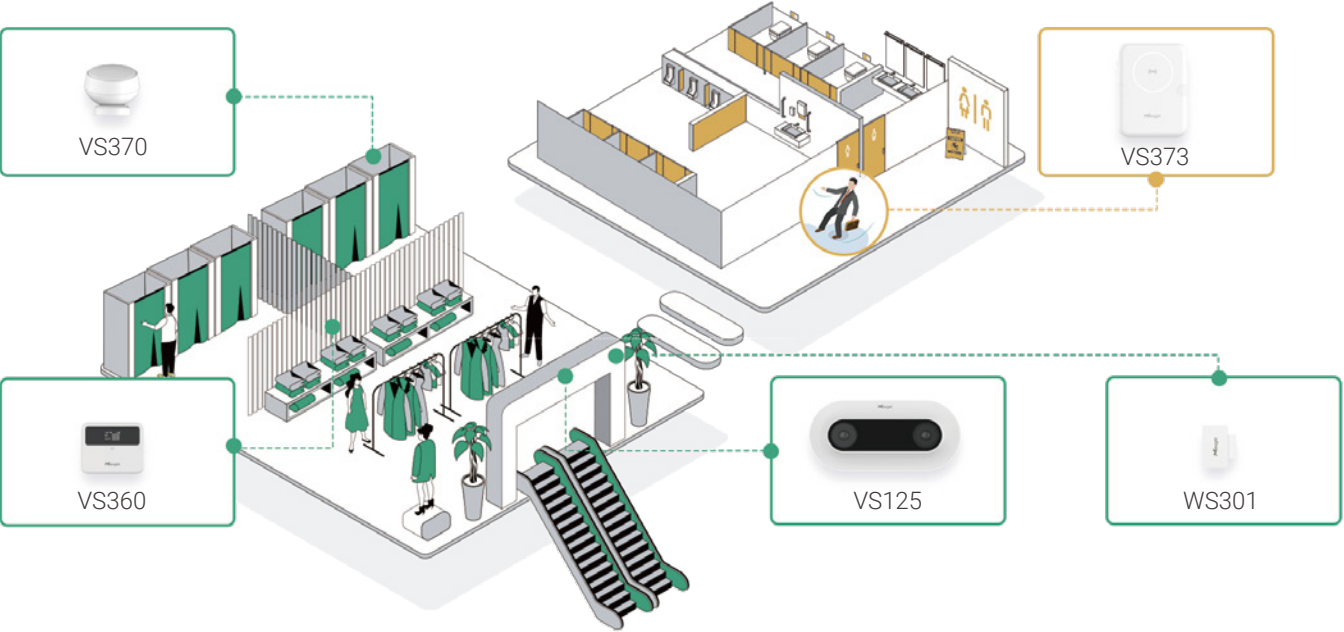
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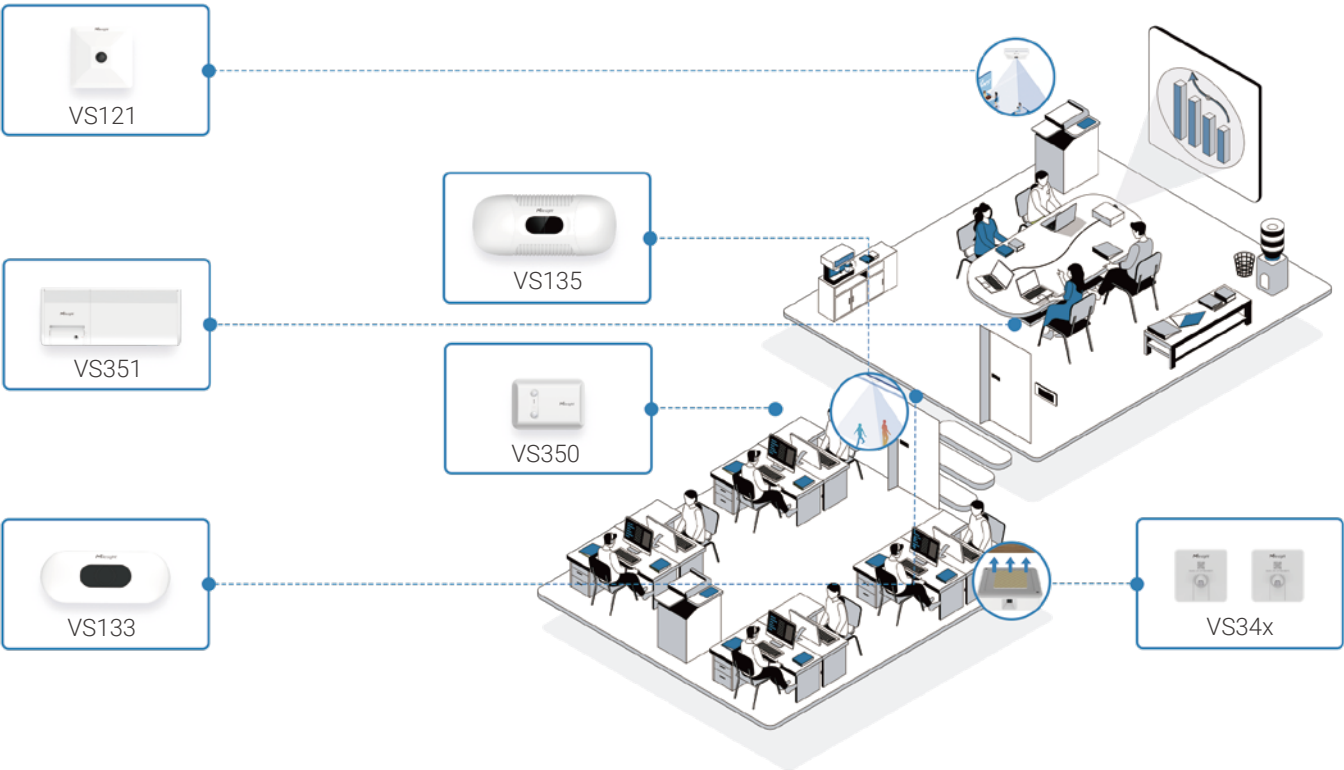
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People Sensing Products Portfolio

Milesight People Sensing series delivers high-precision solutions for people counting, space occupancy, and people care across buildings, retail, and public sectors. With strong compatibility and local deployment support, it enhances facility and energy management, optimizes space use, and reduces costs—unlocking data-driven insights and greater efficiency.

















































































- AI-Powered Insights
- Multi-Sensor Sync
- Privacy & Data Security
- Up to 99.8% Counting Accuracy
- Real-Time Full-Area Tracking
- LoRaWAN® & Flexible Connectivity
- Ultra-Wide Coverage
- Easy Plug & Play
- Low Power Consumption



























Product Comparison Guide

People Counting Sensors

Product	 VS133 AI ToF People Counting Sensor	 VS135 Ultra ToF People Counter	 VS125 AI Stereo Vision People Counter	 VS121 AI Workplace Occupancy Sensor	 VS351 Mini AI Thermopile People Counter	 VS360 IR Breakbeam People Counter	 VS350 Passage People Counter
Basic Functionality	 Bi-Directional People Counting  Regional People Counting  Dwell Time Detection	 Bi-Directional People Counting  Regional People Counting  Dwell Time Detection	 Bi-Directional People Counting  Regional People Counting  Dwell Time Detection	 Bi-Directional People Counting  Regional People Counting  Multi-Zone Occupancy Detection  Dwell Time Detection	 Bi-Directional People Counting	 Bi-Directional People Counting	 Bi-Directional People Counting
Accuracy	 Up to 99.8%	 Up to 99.8%	 Up to 99.8%	 Regional People Counting: Up to 95% Line-Crossing: Up to 95%	 Type-C Version: Up to 95%	 Up to 99% for Single Up to 85% for 2+ People	 Multiple People: ~80% <small>* The accuracy is influenced by environmental temperature * Can't identify targets side by side</small>
Advanced Features	 Multi-Device Stitching(4 Devices)  Heat Map  Adults/Children Differentiation  Staff Detection  Group Counting  U-Turn Filtering  Shopping Cart Detection  Tailgating Detection	 Multi-Device Stitching(8 Devices)  Heat Map  Adults/Children Differentiation  Staff Detection  Group Counting  U-Turn Filtering  Shopping Cart Detection  Tailgating Detection	 Multi-Device Stitching(16 Devices)  Heat Map  Adults/Children Differentiation  Staff Detection  Group Counting  U-Turn Filtering  Shopping Cart Detection  Gender Recognition	 Dwell Time Detection  U-Turn Filtering  DI for Unnecessary Filtering  People Flow Analysis  Privacy Mask  DO for Overcrowding Alarm	 Side By Side Differentiation		 Threshold Alarm
Technology	 AI  2nd Gen ToF	 AI  2nd Gen ToF	 AI  RGB  Binocular Technology	 AI  RGB	 Battery Version:  Radar  Thermopile  Type-C Version:  Thermopile	 Infrared Break Beam	 Dual PIR

Occupancy Sensors

Product	Basic Functionality	Accuracy	Advanced Features	Technology
 VS121 AI Workplace Occupancy Sensor	 Bi-Directional People Counting  Regional People Counting  Multi-Zone Occupancy Detection  Dwell Time Detection	 Regional People Counting: Up to 95% Line-Crossing: Up to 95%	 U-Turn Filtering  Privacy Mask  People Flow Analysis  DO for Overcrowding Alarm  DI for Unnecessary Filtering	 AI  RGB
 VS34X Desk & Seat Occupancy Sensor	 Desk & Seat Occupancy Detection	 VS340: Up to 95% VS341: Up to 98% <small>* Will be influenced by environmental temperature</small>	/	VS340:  PIR VS341:  PIR  Thermopile
 VS370 Radar Human Presence Sensor	 Presence Detection	 Up to 99%	/	 PIR  Millimeter Wave Radar

Smart Office

Optimize office efficiency with people counting and space occupancy sensors. By strategically deploying people counting sensors at entrances, common areas, meeting rooms, and workstations, businesses can gain a comprehensive understanding of occupancy rates. This data enables informed decision-making regarding resource allocation, facility layout, and workspace optimization.

People Counting in Office


- **Optimize Space Utilization**
Accurate people counting enables businesses to monitor space usage, optimize seating, meeting rooms, and common areas, ensuring resources align with actual demand.
- **Reduce Energy Consumption**
By integrating people counting data with HVAC, lighting, and air quality systems, office buildings can dynamically adjust operations based on real-time occupancy, driving energy savings and reducing carbon emissions.
- **Empower Smarter Decisions**
Comprehensive insights into occupancy trends and movement patterns support data-driven policies on safety, hygiene, and emergency response, ensuring a healthier, more comfortable, and efficient work environment.




Space Occupancy




Real-Time Workspace Utilization

- Occupancy sensors provide instant visibility into which workstations, meeting rooms, and common areas are actually in use, helping offices avoid under- or over-utilization.

Flexible Resource Allocation

- By monitoring space occupancy patterns, businesses can dynamically adjust cleaning schedules, maintenance, and support services, improving operational efficiency and employee comfort.

Enhanced Workspace Planning

- Detailed occupancy data supports agile workspace design and capacity management, enabling companies to create adaptive environments that meet evolving employee needs and promote productivity.



Save Approximately **\$45,000** Per Year in Milesight Building

Unveiling Milesight Smart Green Building For Enhanced Energy Efficiency and Cost Savings

Key Metrics:

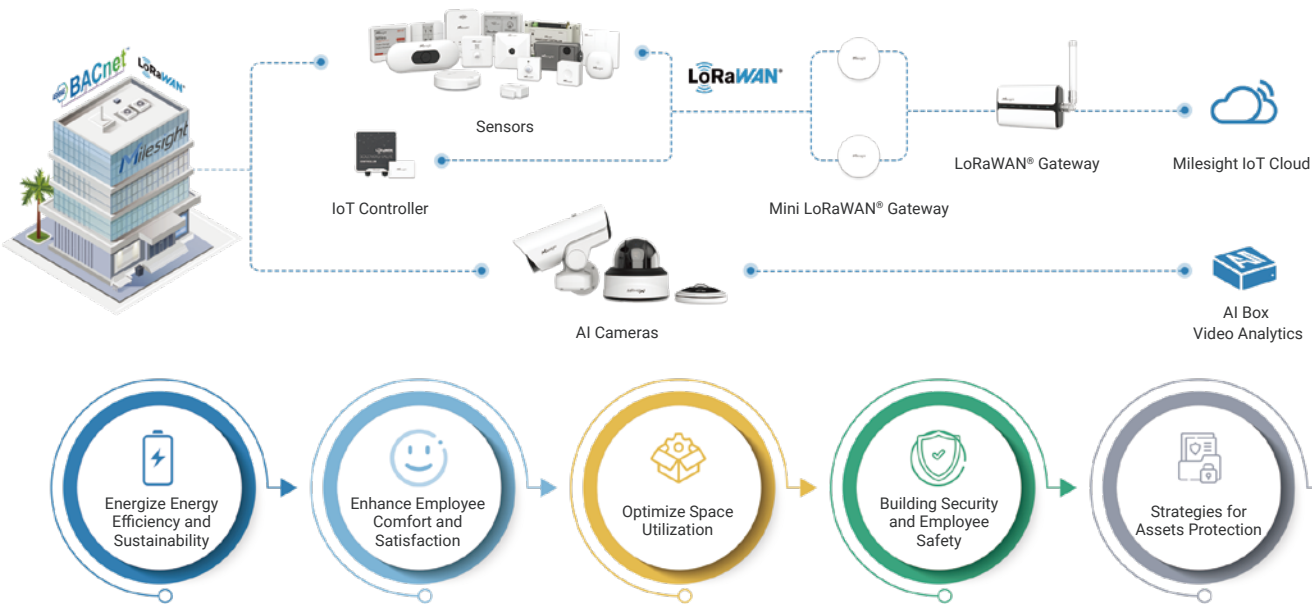
- 45% Energy Saving per Year
- 62% Increased Daily Meeting Room Occupancy Rates
- 13% Decreased Water Usage
- 83% Increased Employee Satisfaction

Technologies: D2D, LoT, AI, 5G, ToF, LoRaWAN

Benefits: Improved Security (Building Security and Employee Safety), Safeguarding Assets (with Advanced Monitoring and Alerts)

Topology Overview


In the Milesight Green Building, there are a total of **352** Milesight sensors and **126** AI Network Cameras in deployment.



Smart Restroom Occupancy Management


People Sensing in Optimizing Environmental Resources and Workforce Allocation

High restroom traffic during peak hours often leads to cleaning delays, long queues, and poor customer satisfaction. Traditional manual management fails to reflect real-time usage, making scheduling inefficient. Milesight People Sensing sensors provide accurate, 100% anonymous detection of restroom occupancy and traffic. With low power consumption, long battery life, and options for LoRaWAN® and PoE, they enable flexible area configuration and seamless platform integration—helping optimize cleaning schedules, reduce queues, and ensure a cleaner, more pleasant restroom experience.




Occupancy Data

- Real-Time Occupancy Feedback
- Bi-Directional Regional Traffic Detection
- Capacity Compliance



Operational Efficiency

- Maintain Comfort
- Flexible Resource Allocation
- Optimize User Experience



Analytics

- IoT Sensor Integration
- Strong Compatibility
- Automatic Notifications

Milesight sensors provide high detection accuracy, low power consumption, long battery life, and 100% anonymous detection. They come in LoRaWAN® and PoE versions, support flexible area configuration, and integrate seamlessly with management platforms.

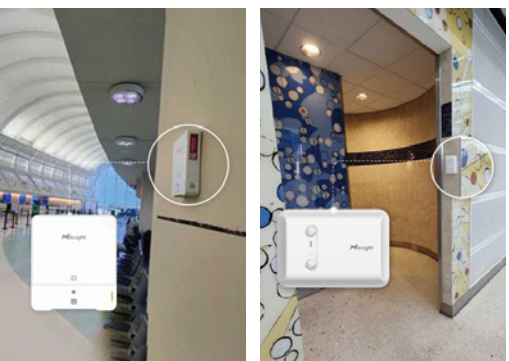


International Airport

Boost Comfort and Efficiency at Jacksonville International Airport



With Sensary SkySmart and Milesight sensors, we optimize HVAC systems using real-time data, cutting energy costs and enhancing passenger comfort. Our sensors monitor people flow, air quality, and more, ensuring a seamless airport experience.



- **Seamless Network Operations with Activity's TPE**
Ensures secure, reliable LoRaWAN® connectivity, enabling uninterrupted IoT data flow for real-time visibility and smooth airport operations across multiple applications.
- **Enhanced Passenger Experience with Smart Restroom Monitoring**
Real-time restroom usage data optimizes cleaning schedules, reduces labor hours, and improves passenger comfort by avoiding cleaning during peak traffic.
- **Data-Driven Facility Management and Air Quality Control**
Comprehensive sensor network monitors air quality, equipment, and passenger flow, supporting preventive maintenance and ensuring compliance with safety and environmental standards.

Smart Shopping Mall People Sensing Management

Turning Foot Traffic into Actionable Insights for Smarter Retail Decisions

Milesight provides AI-powered, industry-leading people sensing sensors that deliver highly accurate data in complex mall environments. With support for API, MQTT, and HTTP, our devices ensure seamless integration with third-party software platforms—enabling a complete data-driven solution.



Real-Time Footfall Analytics

Track entry and exit traffic to improve operational awareness and resource planning.



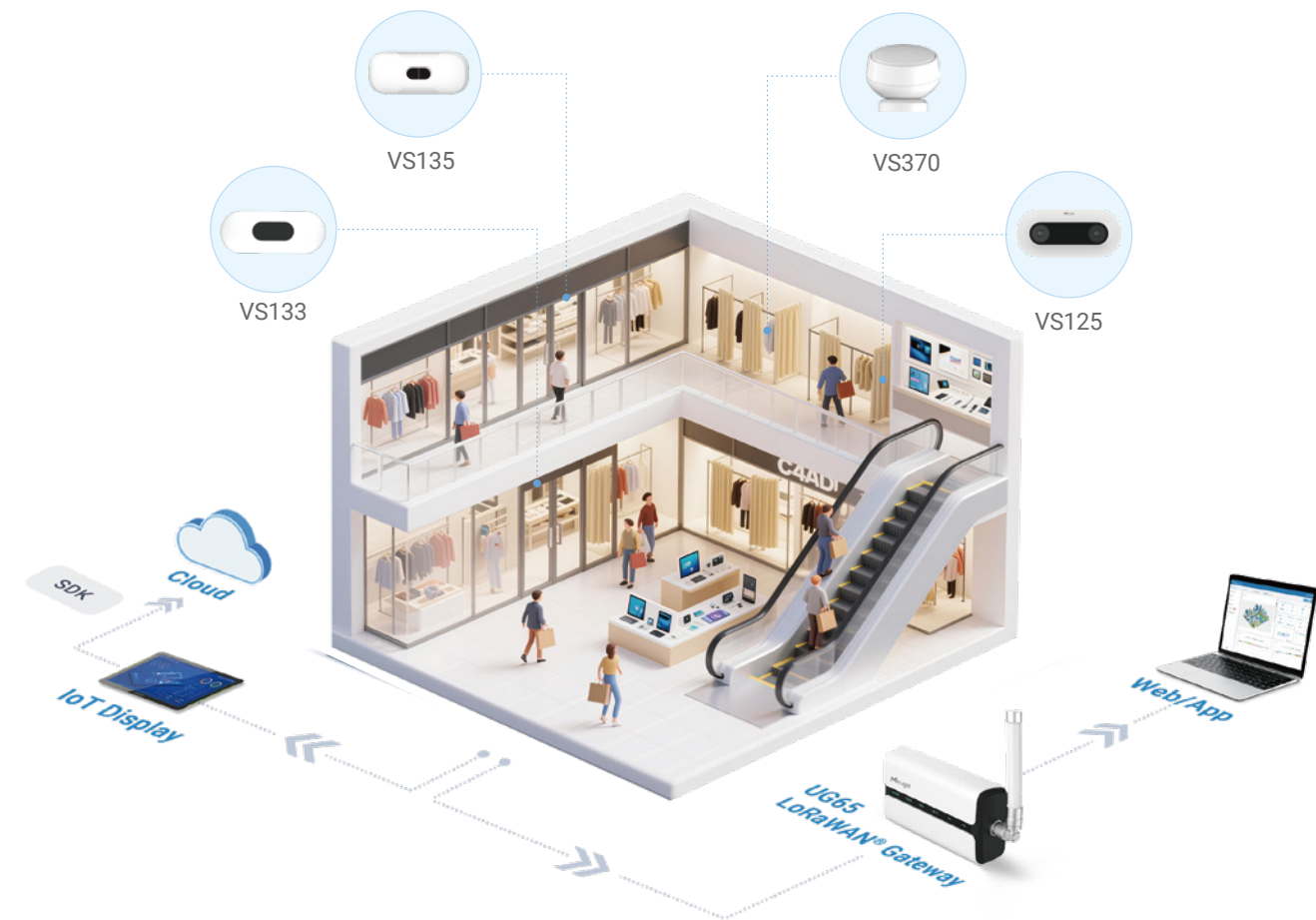
In-store Behavior Insights

Visualize visitor flow, dwell time, and hot zones to guide layout optimization and tenant placement.



Data-Driven Leasing Strategies

Support rental pricing and brand mix decisions with reliable traffic data.



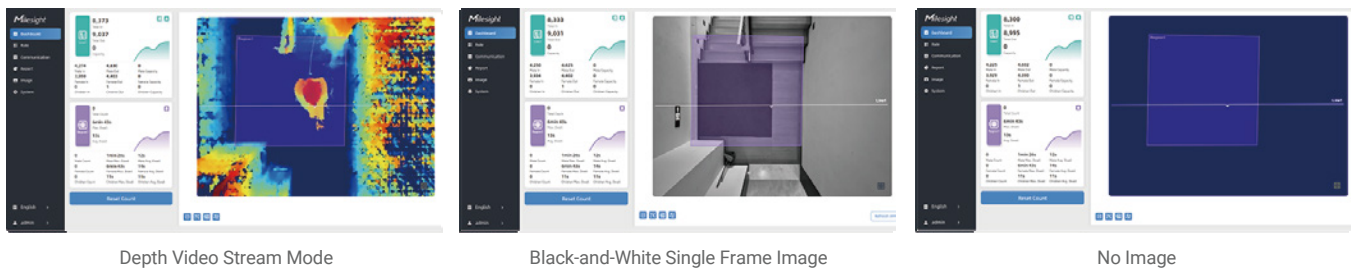
Transform Retail with People Sensing

5000+ Sensors Deployed Across
3000+ European Retail Stores

Go beyond footfall counting! Unlock privacy-friendly insights on visitor groups, gender, and child differentiation to better measure conversion.

Feature Highlights

- **Demographic Analysis:**
In-store customer insights
- **Queue Management:**
Shorten wait times
- **Staff Exclusion:**
Improve Operation
- **Conversion Benchmarking:**
Link visits to sales for ROI



Let People Sensing Boost Your Retail Business

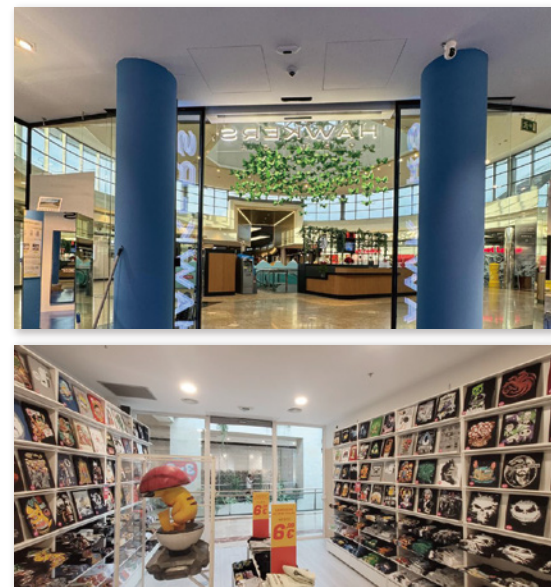
People Sensing in Optimizing Environmental Resources and Workforce Allocation

Retail

(Shopping Center/ Supermarket)

People counters are helpful for customer behaviour analysis. By collecting people counting data, the operators can better understand the customer flow and dwell time. And on the basis, generate more valuable information to help optimize management and make data-driven decisions.

- ✓ Monitor Customer Flow & Footfall
- ✓ Improve Queue Experience
- ✓ Identify the Best Performing Area
- ✓ Identify the Peak Hours
- ✓ Optimize Staff Management



Smarter Staff-smart Filtering, Smarter Luxury Stores

In premium retail environments, gaining accurate insights into real visitor traffic, excluding internal staff, is essential for data-driven operations and elevated customer experiences.



Helps focus service efforts more effectively on actual customers, enabling more responsive support for VIPs or high-value visitors.



Allows for more accurate conversion analysis by removing internal staff movements from visitor data



Supports smarter staff scheduling by revealing actual peak times driven by real customer traffic



Reduces reliance on manual counting or costly external systems, simplifying daily operations

Milesight smart sensors utilize AI-based pattern recognition to distinguish staff from customers in real time. By equipping employees with visual markers (strip, lanyard), our onboard algorithms identify and exclude staff from people counting—no extra devices or backend processing needed. All data is processed at the edge, ensuring efficient deployment, secure privacy, and accurate analytics for business decision-making.



Supermarket Intelligence with People Sensing

In modern supermarket operations, success depends on more than just good products—it's about understanding your customers in real-time. From managing staff during rush hours to evaluating the performance of product zones, precise foot traffic data is essential. Milesight's people Sensing solution empowers supermarkets to monitor visitor flow with 99.5% accuracy, uncover shopper behavior, and make informed decisions to increase efficiency, boost revenue, and enhance the customer experience.



Peak Hour Detection

Identify customer traffic patterns across days and weeks to adjust staffing and promotions accordingly.



Zone Performance Insight

Monitor footfall in specific zones like fresh food, checkout, and promotional areas to optimize store layout.



Store Benchmarking

Compare traffic between stores to identify high- and low-performing locations for strategic improvement.



Staff Optimization

Allocate staff based on real-time visitor density to improve service during peak hours.



Campaign Impact Evaluation

Evaluate the ROI of marketing campaigns and promotions through heatmaps and entry counts.



Energy & Resource Efficiency

Adjust lighting, air-conditioning, and cleaning schedules based on occupancy data to save costs.



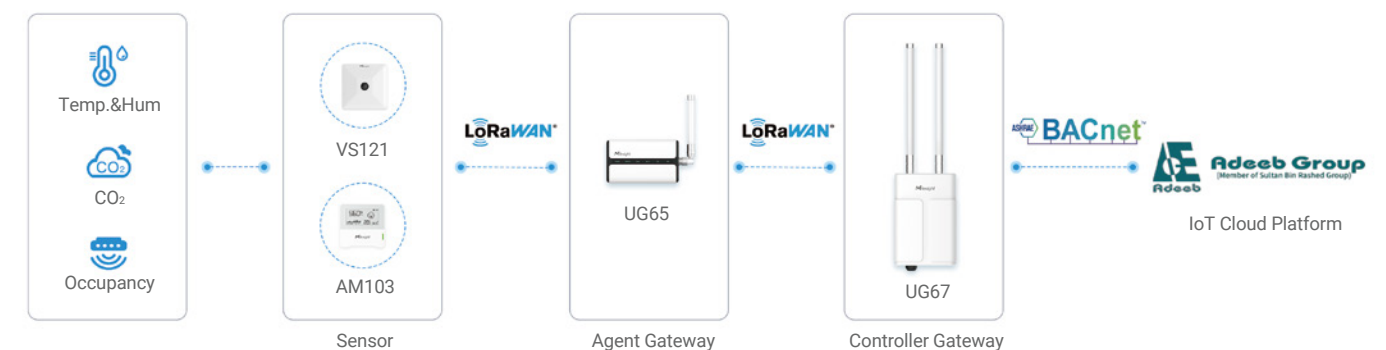
Public Building and Transportation

Smart Campus with People Sensing

Occupancy and people flow data are at the core of any smart campus. By deploying Milesight's AI-powered people sensing products, universities gain real-time visibility into space utilization, classroom usage, and foot traffic trends—laying the foundation for data-driven building operations, comfort improvements, and smart BMS integration.



Milesight VS121 AI Workplace Occupancy Sensor detects real-time presence with up to 95% accuracy. Combined with IAQ sensors, the data is transmitted via LoRaWAN® to BMS platforms through BACnet/IP. This enables automated ventilation adjustment, smart room release, and full environmental visibility—creating a responsive and efficient smart campus environment without requiring major system overhauls.



• Maximize Space Utilization

Identify underused rooms in real time to reduce resource waste and free up schedulable classrooms and meeting spaces.

• Enhance HVAC Precision

Adjust ventilation dynamically based on real-time occupancy feedback to reduce energy consumption.

• Boost Student Comfort

Maintain indoor environments at optimal comfort levels during class hours, improving focus and wellbeing.

• Enable Smart Scheduling

Use historical occupancy data to optimize classroom allocation and energy usage across the day/week.



Smart Fall Detection for Elderly Care

The global aging trend has led to frequent unnoticed falls in nursing homes and hospital wards. Wearable devices are often uncomfortable or forgotten, leaving a critical gap in timely intervention. The care industry needs a non-intrusive, 24/7, smart fall detection solution.



Milesight VS373 Radar Fall Detection Sensor uses 60GHz mmWave radar for accurate, contactless fall detection — no wearables needed. With LoRaWAN® for long-range alerts and D2D protocol for smart automation, it enables real-time response and seamless integration with lighting and climate systems.



- Instant alerts for rapid emergency response
- Privacy-friendly, contactless monitoring suitable for the elderly
- Reduces caregiver workload and improves efficiency



- Easy deployment in nursing homes, wards, accessible public areas
- Smart automation via D2D

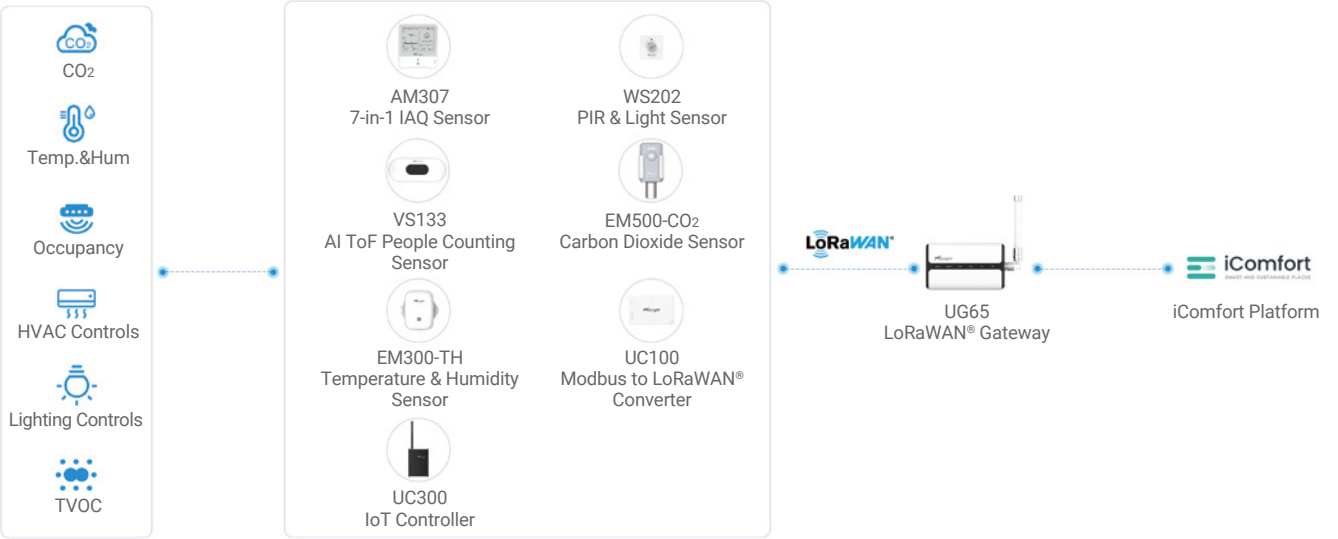
Milesight D2D is a local device-to-device communication protocol that works without the need for a gateway connection. When a fall is detected, it triggers actions like the alarm, ensuring rapid emergency response.

Smart People Counting for Cultural & Tourism Spaces

Cultural and tourism venues like museums and theaters increasingly rely on visitor data for smart operations. With complex layouts and high ceilings—especially in Europe—traditional camera systems are often impractical. Smart people counting offers accurate, non-intrusive tracking, helping improve layout efficiency, safety, energy use, and staffing.



A century-old theater in Italy struggled with managing visitor flow and optimizing energy use, especially around entrances and bar areas. With Milesight VS133 deployed and integrated into the iComfort platform, the venue gained accurate, real-time insights into foot traffic. The result: more efficient visitor flow during peak hours, improved guest satisfaction, and enhanced energy efficiency through smart lighting and environmental control.



- Enhanced Visitor Experience

Real-time crowd monitoring helps optimize visitor flows and exhibit layout, reducing congestion.
- Improved Operational Efficiency

Zone-based analytics guide staffing, cleaning, and security deployment with data support.
- Better Safety & Emergency Response

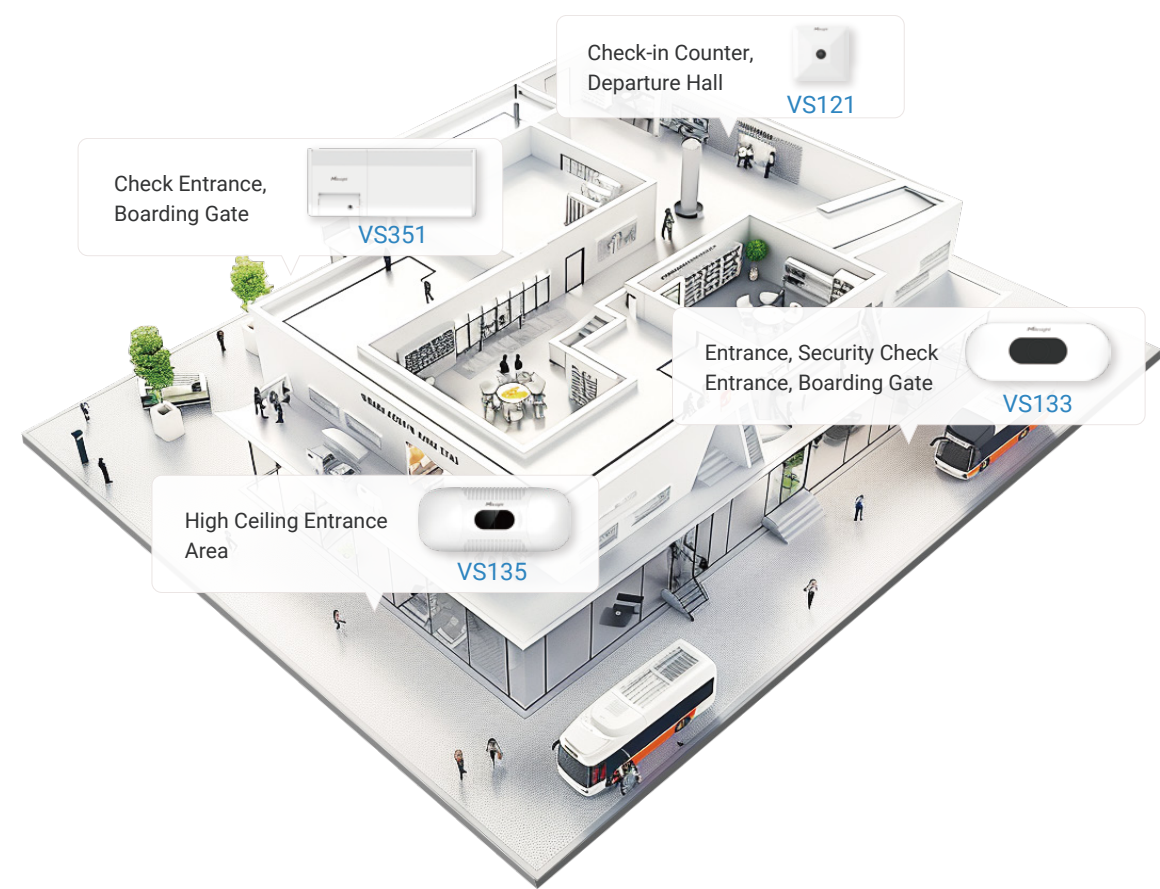
Alerts on crowd surges or anomalies enable swift evacuation and on-site coordination.
- Cultural Heritage Protection

Non-intrusive technology preserves the integrity of historic sites and artifacts.
- Energy Optimization

Integration with smart lighting and HVAC systems enables occupancy-based energy savings.

Smart People Counting Solutions for Transportation Hubs

Transportation hubs such as airports and train stations face complex and dense passenger flows, with frequent movement at key points like entrances, security checkpoints, and boarding gates, making real-time monitoring and accurate counting challenging. Additionally, high ceilings and complex structures restrict traditional device installation. The lack of precise data results in inefficient resource allocation and security management, making it difficult to ensure passenger safety and smooth operations.



• Enhance Operational Efficiency

Accurate passenger flow data enables optimal allocation of staff and security, minimizing resource waste.

• Optimize Passenger Experience

Reduce congestion and waiting times, improving overall flow and customer satisfaction.

• Adapt to Complex Environments

Wireless design and flexible installation overcome deployment challenges posed by high ceilings and complex structures.

• Ensure Safety and Order

Real-time monitoring of crowd density detects anomalies early, supporting emergency evacuation and security alerts.

• Enable Smart Management

Data-driven analytics and forecasting provide scientific support for operational decisions and management.

Mulesight Softwares and Ecosystem

Remote Management Platform

Mulesight Development Platform

Mulesight development platform is an integration platform to accelerate application development and project deployment.

- Plug-and-play: Automatic device provisioning with templates.
- Over-the-Air Updates: Remote firmware upgrades.
- Batch Operations: Manage multiple devices at once.
- APIs & Webhooks: Enable seamless integration.



Mulesight & Vemco Group

Mulesight and Vemco Group Expand Collaboration into Strategic Global Partnership

Mulesight and Vemco Group strengthen their partnership, combining high-performance sensors with advanced people counting and behavioral analytics. Together, they empower businesses with actionable insights—optimizing visitor insights, space utilization, and energy efficiency.

Beyond this collaboration, Mulesight is committed to fostering an ecosystem of innovation, working with industry leaders to drive smarter, data-driven environments worldwide.



Mulesight Technology Partners

Mulesight connects a network of technology partners to make a greater impact. Our technology partners are enabled to leverage Mulesight's range of high-compatible and high-performance people counting sensors and provide seamless interoperability to customers through our validated integrations.

