PEOPLE COUNTING SENSORS
CATALOGUE 2024

VS133
AI ToF People
Counting Sensor

VS135
Ultra ToF
People Counter

VS350
Passage
People Counter

VS121
AI Workplace
Occupancy Sensor

VS330
Cubicle
Occupancy Sensor

VS340
Desk & Seat
Occupancy Sensor

ondaradio   Milesight

Passage People Counter

With bi-directional detection using dual PIR sensor, VS350 brings applicable accuracy and redefines the way you track foot traffic in a cost-effective way.

LoRaWAN® | D2D | 🖥

VS350

Overall Features

- Flexible Bi-Directional People Counting
- Cost-Effective Accuracy Performance & Easy Installation
- 100% Anonymous Detection & Large Detection Area
- 4 Years Long Battery Life with High Report Frequency
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Milesight D2D with Communication Latency to <1 Se

Model		VS350
People Counting	Technology	Dual PIR
	Installation Height	Ceiling Mount: ≤ 3.0m, Wall Mount: 1.2m~1.3m
	Detection Range	Bi-directional People Counting Ceiling Mount: Passage Width = 2.8 m (At the height of 3m) Wall Mount: Passage Width < 3.8 m
Wireless Transmission	Technology	LoRaWAN®, Milesight D2D
	Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4
	Mode	OTAA/ABP Class A
	Power Supply	2 x 2700 mAh ER14505 Li-SOCl2 Replaceable Batteries
Physical Characteristics	Battery Life*	Around 4 Years (10-min Interval, 25°C, 1000 People per Day)
	Operating Temperature	-20°C ~ +60°C
	Dimension	100 x 70 x 21 mm (3.94 x 2.76 x 0.83 in)
	Installation	Ceiling Mount, Wall Mount

* Tested under laboratory conditions and for guideline purposes only.

AI Workplace Occupancy Sensor

VS121 delivers curated insights by real-time occupancy data to unleash potential, especially for workplace and buildings.

LoRaWAN | AI | PoE

VS121
VS121-P

Overall Features

- LoRaWAN® & PoE Versions for Broader Applications
- High Ceiling Mount Version up to 7 Meters High Is Available
- Embedded AI Algorithm Realizes Up to 98% Accuracy Counting
- Compliant with GDPR & 100% Anonymous Detection
- 78m² Large Detection Area with 16 Custom Detection Regions
- Bi-Directional People Counting via In/Out Counting
- Smart U-Turn Detection via the U-Shape Tracks of People Flow
- Milesight D2D with Communication Latency to <1 Sec

Model		VS121	VS121-P
Wireless Transmission	Technology	LoRaWAN® , Milesight D2D	-
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class C	
Ethernet Transmission	Ethernet Port	-	1× RJ45 10/100 Mbps (PoE PD)
	Network Protocol		MQTT(S), HTTP, RTSP, NTP, SSH, etc.
Measurement	Field of View	Standard Version: 190° Horizontal, 112° Vertical High Ceiling Mount Version: 129.4° Horizontal, 68.4° Vertical	
	Recognition Range	Standard Version: a Radius of 5 Meters, At the Height of 3m High Ceiling Mount Version:18m × 7m, At the Height of 7m	
	Recognition Rate	Region Counting: Up to 95% Line Crossing Counting: Up to 98% People Flow Analysis: Up to 98%	
	Installation Height	Standard Version: 2.5m to 4m High Ceiling Mount Version: 5m to 7m	
	Advanced Feature	Mapped Detection Region Customization, Filter U-Turns, Privacy Mask, Dwell Time Detection	
Physical Characteristics	Configuration	Wi-Fi	Ethernet
	Power Supply	5 VDC / 1.5A by Type-C Port	1.5VDC / 2A by Terminal Block 2. 802.3af PoE
	Installation	Ceiling Mounting	

* Tested under laboratory conditions and for guideline purposes only

AI ToF People Counting Sensor

VS133 is a people counting sensor with combination of AI and upgraded ToF technology to offer line crossing people counting data in real-time to get precise and valuable statistics for facility operators.

LoRaWAN® | ToF | AI | PoE

Overall Features

- Combination of On-board AI Algorithm and 2ND Generation ToF Technology
- Industry-Leading 99.8% Accuracy
- Support Staff Detection and Adults/Children Differentiation
- Compliant with GDPR & 100% Anonymous Detection
- Smart U-Turn Detection Suitable for Real World Scenarios
- Support Group Counting for Line Crossing Function
- Bi-Directional People Counting via In/Out Counting
- High-Capacity of Storing a Million Data Locally
- User-Friendly Management on DeviceHub
- Support Multi-Device Stitching
- Support Regional People Counting & Dwell Time Detection
- Advanced Heat Map Available (VS133-P)

VS133
VS133-P

Model		VS133	VS133-P
Wireless Transmission	Technology	LoRaWAN®	-
	Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class C	
Ethernet Transmission	Ethernet Port	-	1× RJ45 10/100 Mbps (PoE PD)
	Network Protocol		HTTP, MQTT, NTP, etc.
Measurement	ToF	FoV: 98° Horizontal, 80° Vertical Light Beam: 940nm (Invisible)	
	Accuracy	<3.5 cm	
	Range	0.5~3.5 m	
	Recognition Rate	Up to 99.8%	
Physical Characteristics	Configuration	Wi-Fi	Ethernet
	Power Supply	12VDC / 2A	802.3 at PoE+
	Operation Temperature	-20°C ~ +50°C	
	Ingress Protection	IP40	
	Installation	Ceiling Mounting, Extended Ceiling Mounting & Lintel Mounting (with Optional Multifunctional Bracket)	

* Tested under laboratory conditions and for guideline purposes only

Desk & Seat Occupancy Sensor

VS34x adapts PIR thermopile, bringing higher accuracy and quick occupancy status detecting. It frees up human resources enabling efficient management in hot desking, dining area, traffic hub, library and etc.

LoRaWAN® D2D

Overall Features

- High Precision & Speed Dual-Technology
- Adjustable PIR Angles for Flexible Performance
- Up to 98% Ultra-High Accuracy
- 100% Anonymous Detection
- Ultra Low Latency Gains Quick Response
- LoRaWAN® Wireless Deployment with Low Power Consumption
- Milesight D2D with Communication Latency to <1 Sec

VS340
VS341

Model		VS340	VS341
Occupancy Detection	Technology	PIR	TPIR & Thermopile
	Recognition Rate	Up to 95%	Up to 98%*
	PIR Detection Area	107° Horizontal, 107° Vertical	
	PIR Detection Distance	Within 1m	
Wireless Transmission	Technology	LoRaWAN®, Milesight D2D	
	Frequency	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4	
	Mode	OTAA/ABP Class A	
Physica Characteristics	Power Supply	1 x 4000 mAh ER18505 Li-SOCL2 Battery	
	Battery Life**	Around 5 Years (100 Triggers per Day, 25°C)	
	Configuration	NFC Configuration via Mobile App	
	Operating Temperature*	-20°C ~ +60°C	
	Dimension	73 x 73 x 26 mm (2.87 x 2.87 x 1.02 in) (Without PIR Cover)	
	Installation	3M Tape Mounting, Wall Screw Mounting	

* The temperature range of thermopile to reach best recognition rate is +10°C to +30°C.
** Tested under laboratory conditions and for guideline purposes only.

Bathroom Occupancy Sensor

VS330 combines ToF and PIR technology for accurate detection, solving the ultimate difficulty in public toilets and bathrrom.

LoRaWAN® N ☁ ToF 🏃

Overall Features

- Combine PIR & ToF Technology with Low Power Consumption
- Detection & Report with Smart Logic Achieving 99.5% Accuracy
- Compliant with GDPR & 100% Anonymous Detection
- Real-Time Data Collection at a 10-Second Intervals for Prompt and Accurate Updates
- Conformal Coating on PCBA and Rotatable Probe for Reliable Usage

VS330

Model			VS330
Wireless Transmission	Technology		LoRaWAN®
	Frequency		CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
	Mode		OTAA/ABP Class A
Measurement	ToF	ToF FoV	27°
		Detetion Accuracy and Range	±2cm, 0.040 ~ 3.500m
	PIR	Detection Area	80°
		Detection Distance	Maximum 2.5m
	Others	Sensor Adjustable Angle	0°, 15°, 30°, 45°, 60°, 75°
Physical Characteristics	Configuration		Mobile App via NFC
	Power Supply*		Easily Replaceable Batteries with up to 4-Year Battery Life
	Button		1 × Power/Reset Button
	Ingress Protection		IP30
	Dimension		Φ100 x 24 mm (Φ3.94 x 0.95 in)
	Installation		Ceiling Mount or Wall Mount via Screws or 3M tapes

Ultra ToF People Counting Sensor

VS135 is a people counting sensor with combination of AI and upgraded ToF technology to offer line crossing people counting data in public scenarios such as airport, park and etc.
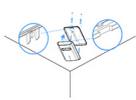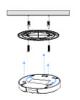
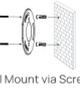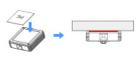**LoRaWAN® 4G ToF**
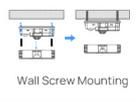
Overall Features

- Combination of On-board AI Algorithm and 2ND Generation ToF Technology
- Industry-Leading 99.8% Accuracy
- High Ceiling Mount Version up to 6.5 Meters High Is Available
- Support Staff Detection and Adults/Children Differentiation
- Compliant with GDPR & 100% Anonymous Detection
- Smart U-Turn Detection Suitable for Real World Scenarios
- Bi-Directional People Counting via In/Out Counting
- High-Capacity of Storing a Million Data Locally
- User-Friendly Management on DeviceHub
- Support Multi-Device Stitching
- Advanced Heat Map Available (VS135-P)

VS135

Model		VS135-P	VS135-L08EU	VS135-HL*	VS135-868M/915M/470M
People Counting	ToF FoV	Standard Version: 98° Horizontal, 80° Vertical / High Ceiling Mount Version: 60° Horizontal, 45° Vertical			
	ToF Light Beam	940nm (Invisible)			
	ToF Lighting Mode	Auto/Always On			
	Measuring Accuracy	Standard Version: < 3.5cm / High Ceiling Mount Version: < 6.5cm			
	Installation Height	Standard Version: Up to 3.5m / High Ceiling Mount Version: Up to 6.5m			
	Recognition Rate	Up to 99.8%			
	Advanced Feature	Multi-Devices Stitching, Group Counting, Heat Map, Dwell Time Detection, Regional People Counting, Staff Detection, Children/Adults Differentiation, Filter U-turns		Group Counting, Dwell Time Detection, Regional People Counting, Staff Detection, Children/Adults Differentiation, Filter U-turns	
Wireless Transmission	Wi-Fi	IEEE 802.11 b/g/n, 2.4GHz (AP Mode for configuration)			
	Technology		LTE Cat 4	Wi-Fi Halow	LoRaWAN®
	Frequency/Band		LTE-FDD: B1/B3/B7/B8/B20/ B28 WCDMA: B1/B8 GSM/EDGE: B3/B8	900/800MHz	N470/IN865/EU868/ RU864/US915/AU915/ KR920/AS923-1&2&3&4
	Power Supply	802.3at PoE+ / DC12V	DC12V		
	Ingress Protection	IP65			
Physica Characteristics	Color	White/Black			
	Installation	Ceiling Mounting, Extended Ceiling Mounting & Lintel Mounting (with Optional VB01 Multifunctional Bracket)			

* VS135-HL Coming Soon

Product	VS133 AI ToF People Counting Sensor	VS135 Ultra ToF People Counter Sensor	VS121 AI Workplace Occupancy Sensor	VS350 Passage People Counter	VS330 Cubicle Occupancy Sensor	VS34x Desk & Seat Occupancy Sensor
Basic Functionality	Bi-Directional People Counting; Regional People Counting; Dwell Time Detection	Bi-Directional People Counting; Regional People Counting; Dwell Time Detection	Occupancy Detection; Bi-Directional People Counting; Regional People Counting	Bi-Directional People Counting	Cubicle Occupancy Detection	Desk & Seat Occupancy Detection
Typical Applications	Retails Stores; Airports; Buildings; Supermarkets	Retails Stores; Airports; Buildings; Supermarkets	Workplaces; Retail Stores; Airports	Retails Stores; Offices; Restrooms	Workplace Cubicles; Restrooms	Workstations
Technology	AI; ToF	AI; ToF	AI	PIR	PIR; ToF	VS340: PIR; VS341: PIR, Thermopile
Accuracy	Up to 99.8%	Up to 99.8%	Up to 98%	Up to 95%	Up to 99.5%	98%
Advanced Features	Regional Counting; Dwell Time Detection; Multi-Device Stitching; Heat Map; Adults/Children Differentiation; Staff Detection; Group Counting; U-Turn Filtering; Bi-Directional Counting	Regional Counting; Dwell Time Detection; Multi-Device Stitching; Heat Map; Adults/Children Differentiation; Staff Detection; Group Counting; U-Turn Filtering; Bi-Directional Counting	Dwell Time Detection; U-Turn Filtering; Bi-Directional Counting; Milesight D2D; Privacy Mask; People Flow Analysis; DO for Overcrowding Alarm; DI for Unnecessary Filtering	D2D Milesight D2D; Threshold Alarm; Bi-Directional Counting	/	D2D Milesight D2D
Installation Heigh	Up to 3.5m	Up to 6.5m	Standard versión 2.5 – 4m / High Celiling Mount versión 5-7m)	Ceiling Mount: 3m. Wall Mount: Passage width 3.8m	Detection range: 3.5m	Detection distance: 1m
Installation	Ceiling Screw Mounting; Extended Ceiling Mounting	Ceiling Screw Mounting; Extended Ceiling Mounting	Ceiling Screw Mounting	Ceiling Screw Mounting; Wall Screw Mounting	Ceiling Mount; Wall Mount via Screws	3M Tape Mounting; Wall Screw Mounting

The VS series incorporates various occupancy and people counting sensor models to meet different space utilization and people counting requirements. This series achieves accuracy rates of up to 99.8%, ensuring complete anonymous detection. Equipped with different technologies and algorithms, it enables advanced functionalities for managing and applying people counting and space utilization at an advanced level.

Airports | Building | Office | Retail Store | Shopping-mall