AI ToF People Counting Sensor

VS133-P

Milesight

VS133-P is a sensor that uses second-generation ToF technology to accurately count people and transmit data via PoE (Power over Ethernet). Benefit from 2nd generation ToF technology, this product can provide more precise depth maps and longer detection distances while maintaining an excellent privacy protection. The advanced ToF technology combined with an AI algorithm enables the sensor to handle complex scenes and distinguish non-human objects with up to 99.8% accuracy.

VS133-P offers enhanced detection capabilities by allowing the stitching of multiple devices to cover a larger detecting area. Additionally, it provides rich interfaces for versatile connection options, expanding the possibilities for integration and customization. With easy installation and automatic detection of installation height, the VS133-P is ideal for entrances or corridors in retail stores, malls, offices, subways, and other locations.

◆ Features

Highly-efficient Sensing Ability

➢ Up to 99.8% accuracy combining the 2nd generation ToF technology and AI algorithm

➢ Support Multi-Device Stitching which enables the linking of multiple devices, allowing for up to four-device stitching to expand coverage

➢ Allow to collect people counting data by differentiating children and adults and detecting staffs via identification like staff lanyards for clearer people analysis

➢ Smart U-turn detection to filter redundant counting of people wandering in the area

➢ Support queuing management via dwell time detection and regional people counting

➢ Support both motion and dwell time heat map for anonymous customer tracking

➢ Wider field angle to obtain longer-distance depth maps and cover a larger area

➢ Working well even in low-light or completely dark environments with great lighting adaptability

➢ Free from privacy concerns without image capturing

➢ Automatically detect the optimal installation height, facilitating fast deployment and intelligent detection

Highly-compatible Connectivity

➢ High compatibility of data transmission via Ethernet port (HTTP/MQTT/CGI)

➢ Equip with various serial ports like Alarm I/O and RS485

➢ Support local data storage and data retransmission to collect data securely

➢ Easy configuration via Ethernet port for web GUI configuration

➢ Quick and easy management with Milesight DeviceHub

◆ Specifications

People Counting	
ToF FoV	98 ° Horizontal, 80 ° Vertical
ToF Light Beam	940nm (Invisible)
Measuring Accuracy	< 3.5cm
Detection Range	0.5 to 3.5 m
Installation Height	≤ 3.5m
Recognition Rate	Up to 99.8%
Advanced Feature	Customized Multiple Counting Lines, U-turns Filtering, Bi-directional Counting, Children/Adults Differentiation, Staff Detection, Multi-Device Stitching, Data Retransmission, Dwell Time Detection, Regional People Counting, Heat Map
Wireless Transmission	
Ethernet Port	1 × RJ45 10/100 Mbps (PoE PD)
Network Protocol	HTTP, HTTPS, MQTT, MQTTS, NTP,etc.
Other Interfaces	
Alarm I/O	1/1
Serial Interface	1 × RS485
Button	1 × Reset Button
LED Indicators	1 × RGB LED Indicator
Physical Characteristics	

Local Storage	Store up to one million data records and supports to export csv file
Power Supply	802.3at PoE+
Power Consumption	Typical 9.4 W, max 23.8 W
Operating Temperature	-20°C ~ +50°C
Relative Humidity	0 ~ 95% (Non-condensing)
Ingress Protection	IP40
Dimension	180 × 26 × 72 mm
Weight	226g
Installation	Ceiling Mounting, Extended Ceiling Mounting & Lintel Mounting (with Optional Multifunctional Bracket)

◆ Monitored Area

Installation Height (m)	Monitored Area (m)	Detection Area(m)
2.5	5.75 × 4.20	1.84 × 1.34
2.6	5.98 × 4.36	2.07 × 1.51
2.7	6.21 × 4.53	2.30 × 1.68
2.8	6.44 × 4.70	2.53 × 1.85
2.9	6.67 × 4.87	2.76 × 2.01
3.0	6.90 × 5.03	2.99 × 2.18
3.1	7.13 × 5.20	3.22 × 2.35
3.2	7.36 × 5.37	3.45 × 2.52
3.3	7.59 × 5.54	3.68 × 2.69
3.4	7.82 × 5.71	3.91 × 2.85
3.5	8.05 × 5.87	4.14 × 3.02