



# VS125 Indoor Series

## AI Stereo Vision People Counter

### User Guide

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# Chapter 1. Preface

## Copyright Statement

This guide may not be reproduced in any form or by any means to create any derivative such as translation, transformation, or adaptation without the prior written permission of Xiamen Milesight IoT Co., Ltd (Hereinafter referred to as Milesight).

*Milesight* reserves the right to change this guide and the specifications without prior notice. The latest specifications and user documentation for all Milesight products are available on our official website <http://www.milesight.com>

## Safety Instruction

Milesight will not shoulder responsibility for any loss or damage resulting from not following the instructions of this operating guide.



### Warning:

Serious injury or death may be caused if any of these warnings is neglected.

- This installation must be conducted by a qualified service person and should strictly comply with the electrical safety regulations of the local region.
- To avoid risk of fire and electric shock, do keep the product away from rain and moisture before installation.
- Do not touch components which may be hot.
- Make sure the plug is firmly inserted into the power socket.
- Make sure the device is firmly fixed when installing.
- The device must not be disassembled or remodeled in any way.



### CAUTION:

Injury or equipment damage may be caused if any of these cautions are neglected.

- Do not place the device where the temperature is below/above the operating range.
- The device must never be subjected to shocks or impacts.
- Do not expose the device to where a laser beam equipment is used.
- To prevent heat accumulation, do not block air circulation around the device.



- Use a soft, dry cloth to clean the lens of the device. Stubborn stains can be removed using a cloth dampened with a small quantity of detergent solution, then wipe them dry.
- Do not use volatile solvents such as alcohol, benzene or thinners as they may damage the surface finishes.

## Gender Recognition Statement

Milesight respects and embraces all dimensions of diversity, including gender identity anywhere along or beyond the spectrum of gender expression.

For technical reasons, the algorithm embedded in the people counter recognizes only easily discernible, visual indications when determining whether a person is more likely to be female or male. A reliable detection of the biological sex of a person is neither possible nor intended. We intend no disrespect to the gender with which a person identifies. The counts are merely a statistical measurement of a large number of people.

## Revision History

Data	Doc Version	Description
Jul. 17, 2024	V1.0	Initial version
Sep.30, 2024	V1.1	<ol style="list-style-type: none"> <li>1. Add Multi-Device Stitching;</li> <li>2. Add Staff Detection;</li> <li>3. Add Group Counting;</li> <li>4. Add Heatmap;</li> <li>5. Support TCP/IP Communication for cellular version.</li> </ol>
Jan.4, 2025	V1.2	<ol style="list-style-type: none"> <li>1. Add configuration of Wi-Fi passwords at login, user passwords are required to contain 4 styles.</li> <li>2. Add Validation.</li> <li>3. Add U-turn automatic filtering.</li> <li>4. Add Record Track Start/Stop Points and show Static Track Line.</li> <li>5. Add I/O Settings.</li> <li>6. Add Obstacle Exclusion and Detection Mode Select.</li> <li>7. Support Individual Filter of Group Counting.</li> </ol>

Data	Doc Version	Description
		<ul style="list-style-type: none"> <li>8. Supports automatic replacement of device information when subscribing to a topic.</li> <li>9. Add LED indicator switch and diagnostic function.</li> <li>10. Modify the display style of real-time track line and preview layout.</li> <li>11. Modify field of view angle.</li> <li>12. Remove the HTTP access feature.</li> </ul>
Jun. 30, 2025	V1.3	<ul style="list-style-type: none"> <li>1. Add View Direction Detection.</li> <li>2. Add Staff Badge and Staff Epaulet.</li> <li>3. Modify the display style of preview layout and Dashboard.</li> <li>4. Optimize the interface for displaying the Recording Space in Validation.</li> </ul>
Sep. 22, 2025	V1.4	Add VS125-LW Version.

# Chapter 2. Product Introduction

## Overview

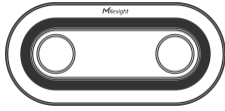
VS125 is a professional people counting sensor that is based on deep learning AI and Binocular Stereo Vision technology. This sensor possesses an impressive accuracy of up to 99.8% in people counting, and it delivers exceptional performance even in low light environment and total darkness. Besides that, it can achieve rich attributes recognition including gender, children and staff. It is designed with privacy protection that complies with GDPR.

VS125 offers various connectivity options (Cellular and PoE) for seamless connectivity and efficient space management across applications. Additionally, it provides rich interfaces for versatile connection options (RS485/D0/DI), expanding the possibilities for integration and customization. The VS125 can be easily installed, making it ideal in retail stores, malls, offices, subways, and other locations.

## Key Features

- Up to 99.8% people counting accuracy with AI and stereo vision technology
- Great lighting adaptability that allows it to work well in low light environments and complete darkness
- With high ceiling mounting of up to 6m, support automatic tilt correction and automatic infrared light adjustment (Standard Version)
- Supports a minimum installation height of 1.9 meters and provides a detection range of up to 40 square meters at an installation height of 3.5 meters (Low&Wide Version)
- Customer-defined preview privacy settings, no data with personal information is transmitted, complies with GDPR
- Support line crossing people counting, regional people counting and dwell time detection
- Rich attribute recognition abilities including gender, group counting, children, staff identification etc, provide deeper insights
- Supports heat map functionality for analyzing foot traffic intensity and distribution
- Support Multi-Device Stitching which enables the linking of multiple devices, allowing for up to 16-device stitching to expand coverage
- Support local data storage and data retransmission function for secured data collection
- Provide multiple connectivity options (PoE, Cellular)
- Supports RS485/DI/D0 multiple interfaces and has strong scalability
- Quick and easy management with Milesight Devicehub and Milesight Development Platform
- High compatibility of data transmission with HTTP(s)/MQTT(s) protocol and API, supports customized push content methods

## Packing List



1 × VS125 Device



4 × Ceiling Mounting Kits



1 × Multi-interface Cable

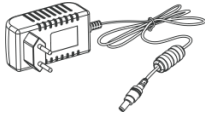


1 × Warranty Card



1 × Quick Guide

## Cellular Version Only Accessories:

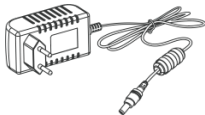


1 x Power Adapter



1 x SIM-eject Tool

## PoE Version Only Accessories:



1 x Power Adapter (Optional)



### Note:

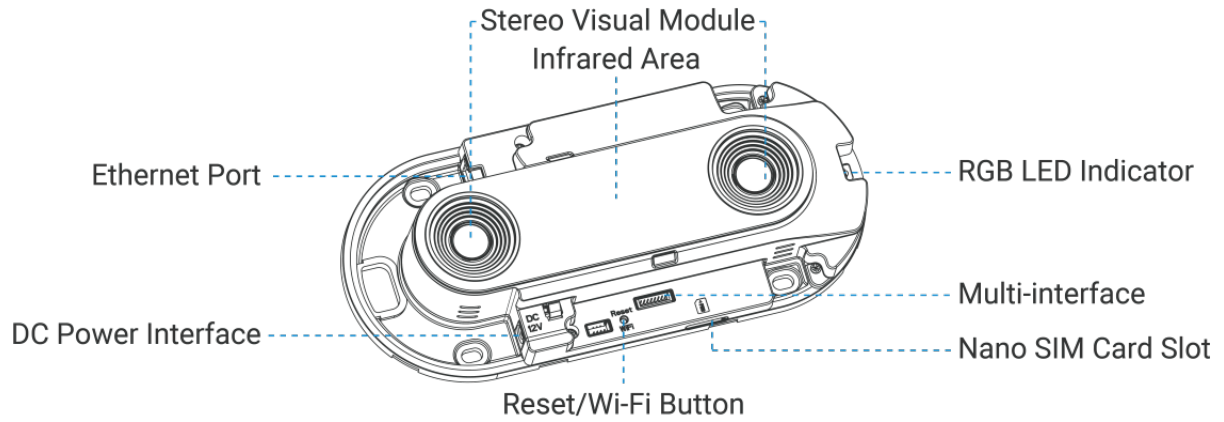
1. The device supports mounting kits and people counter accessories. For more information, please scan the QR code.



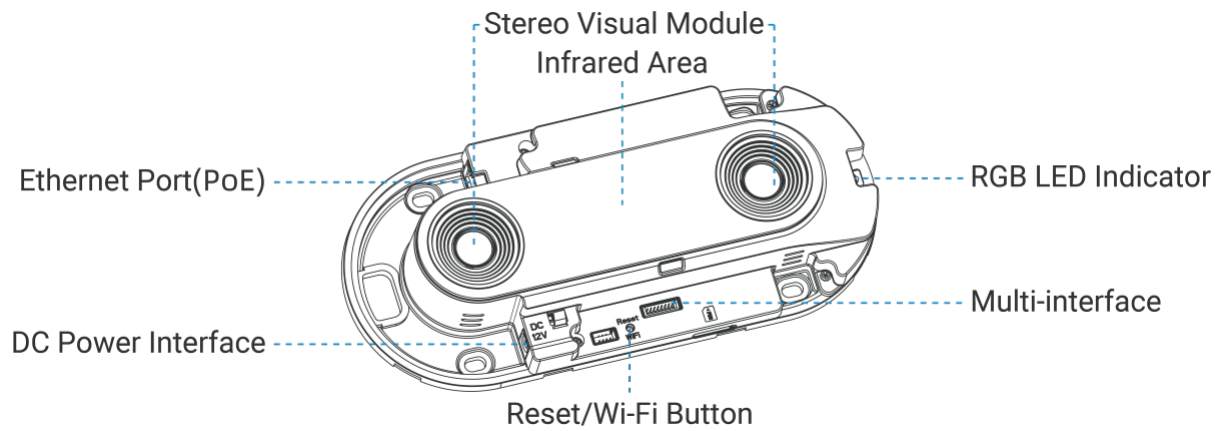
2. If any of the above items is missing or damaged, please contact your sales representative.

## Hardware Overview

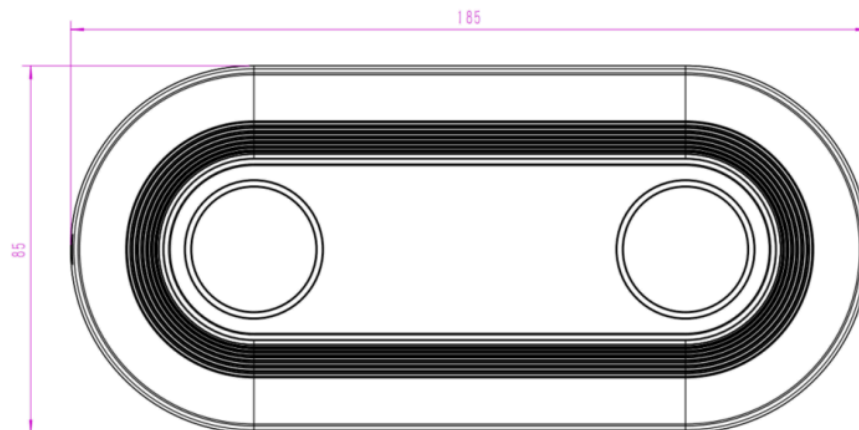
### Cellular Version:



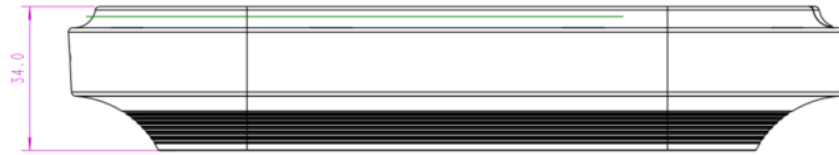
### POE Version:



## Dimensions (mm)



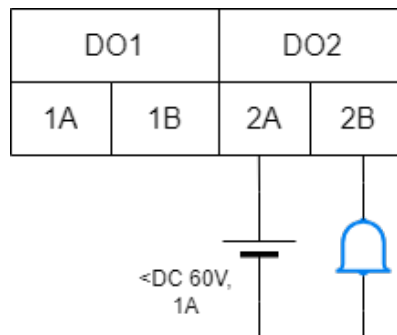




## Button and LED Indicators

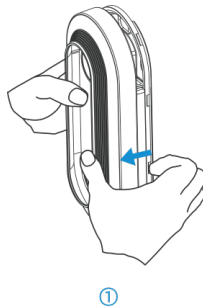
Function	Action	LED Indication
Turn On/Off Wi-Fi	Press and hold the power button for more than 3 seconds.	Turn On/Off: Blue light blinks for 3 seconds. Wi-Fi On: Blue light on. Wi-Fi Off: Green light on.
Reset to Factory Default	Press and hold the power button for more than 10 seconds.	Green light blinks until the reset process is completed.

## Wirings

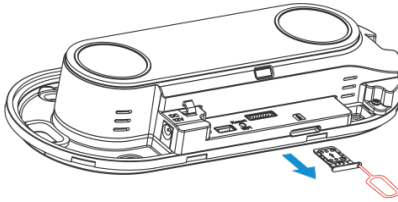


## SIM Card Installation (Cellular Version Only)

**Step 1:** Remove the cover plate.

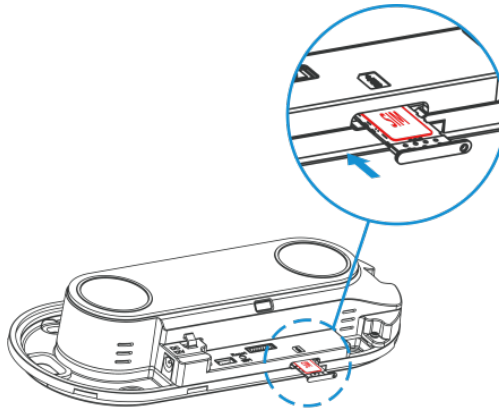


**Step 2:** Use the SIM-eject tool to pop open the SIM tray.



②

**Step 3:** Place the Nano SIM card into the sim card slot and insert it back to device.



③

# Chapter 3. Power Supply

Powered by DC Power Adapter (12V, 1A)

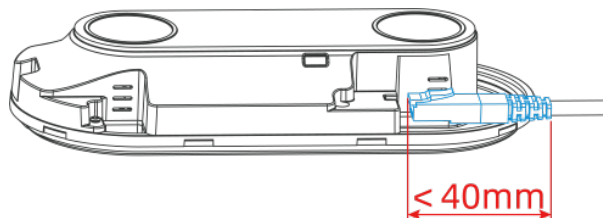


Powered by PoE Switch (PoE Version Only, 802.3af standard)



**Note:**

Ensure the length of the Ethernet Cable crystal head is less than 40mm.



# Chapter 4. Installation

## Recommended Scenarios

Recommendation	Application Scenario	Example
<b>Recommended</b>  <i>For the detailed installation range, please see <a href="#">Covered Detection Area</a>.</i>	Various public spaces and their entrances/exits	Shopping malls, Retail stores
	Areas where space utilization needs to be optimized	Offices, Libraries
	Areas requiring personnel scheduling and management	Train stations, Airports
<b>Not Recommended</b>	Locations where the device may be exposed to rain	Park
	Private Area	Bathroom



### Note:

1. **The device is suitable for a wide range of scenarios, the table lists only some typical application examples.** If your scenarios are not listed above, please enquire Milesight for details.
2. The reference area size is for 1 device unit. If your scenarios are large, please install multiple units.

## Preparation before Installation

### Installation Note

- It is recommended to inform people at the deployment site in advance that their images will be collected (through signage, user agreements, etc.) and obtain their consent before installation. Additionally, inform them that they may opt out if they do not consent to image collection.
- The device is sensitive to ambient light, so it's best to avoid placing it in areas where light conditions fluctuate significantly.
- To minimize false detections caused by reflections, avoid installing the device near mirror-like surfaces such as glass doors or mirrors. If unavoidable, position detection lines or areas away from these surfaces.

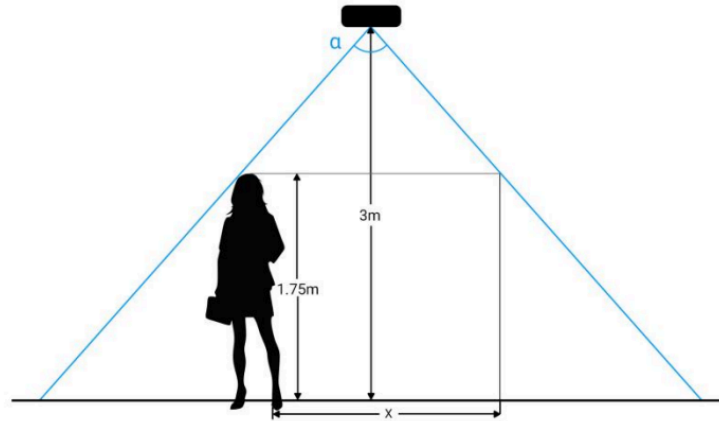
- When the device is installed at the door of the fan switch, the device needs to be installed on the opposite side of the door.
- For installation on door frames or above doorways, use the multifunctional bracket (available from Milesight or other sources). Adjust the bracket to ensure the device's field of view remains clear of obstructions.
- Make sure there are no obstacles in the device's live view.
- For optimal depth detection performance, install the device in areas with rich environmental textures (e.g., patterned floors or walls). Avoid uniform surfaces such as plain white walls or solid-colored floors, as these may reduce accuracy.
- Keep the device parallel to the ground whenever possible. If unavoidable, ensure the tilt angle remains within 10 degrees.

## Covered Detection Area

**Table 1. Parameter Definition**

Parameters	Explanation	Value
H	Installation height	VS125: 2.2 ~ 6 m VS125-LW: 1.9 ~ 3.5m
h	Target height	Example 1.7 m
$\alpha$	Horizontal field of view angle	VS125: 101° VS125-LW: 130°
$\beta$	Vertical field of view angle	VS125: 70° VS125-LW: 117°
x	Length of detection range	$2 \times \tan(\alpha/2) \times (H-h+0.05)$
y	Width of detection range	$2 \times \tan(\beta/2) \times (H-h+0.05)$

The detection area depends on the device's field of view angle, installation height, and target height. The following figure uses the horizontal field of view angle, an installation height of 3 meters, and a target height of 1.75 meters as an example for illustration:



For example, if the pedestrians' height is 1.75 m, the detection area corresponding to each installation height is as follows:

**Table 2. Standard Version (VS125):**

Installation Height (m)	Detection Area (m)
2.2	1.21 × 0.7
2.5	1.94 × 1.12
3.0	3.16 × 1.82
3.5	4.37 × 2.52
4.0	5.58 × 3.22
4.5	6.80 × 3.92
5.0	8.01 × 4.62
5.5	9.23 × 5.32
6.0	10.44 × 6.02

**Table 3. Low-and-Wide Version (VS125-LW):**

Installation Height (m)	Detection Area (m)
1.9	0.86 × 0.65
2.0	1.28 × 0.98
2.2	2.14 × 1.63

Installation Height (m)	Detection Area (m)
2.5	3.43 × 2.61
3.0	5.57 × 4.24
3.5	7.71 × 5.87

## Installation Step



### Note:

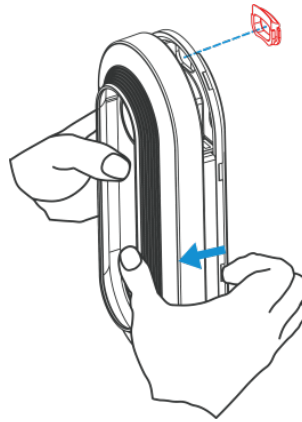
Check that the device and accessories are complete according to the **Quick Start Guide** in the unit's box.

### Ceiling Mount

**Installation condition:** ceiling thickness > 30mm.

**Step 1:** Remove the cover.

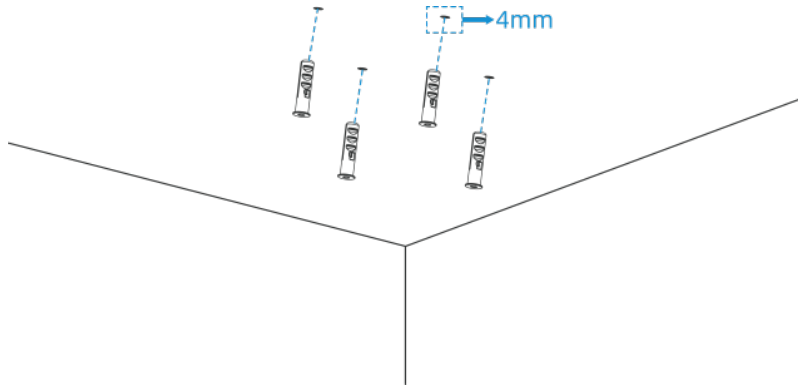
(If the wires need to be protruded from the side of the device, remove the blocking rubber.)



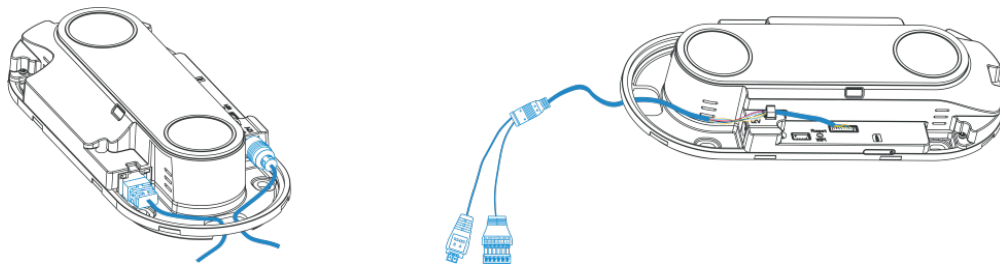
**Step 2:** Drill 4 holes with a diameter of 4mm according to the hole position of the device screw.

(If you need to hide the power cord into the ceiling, drill another wire hole.)

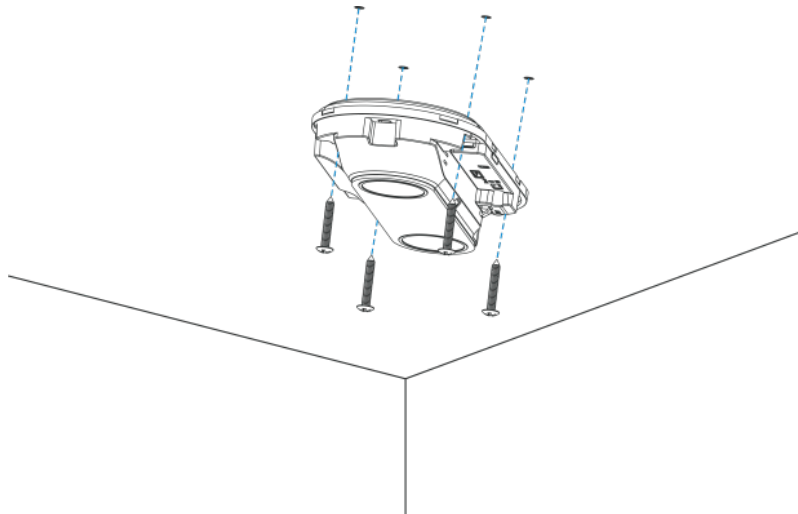
Insert the expansion bolts into the ceiling holes.



**Step 3:** Connect all required wires, and pass them through the wire holes behind the device.  
(If using the alarm I/O, connect the Multi-interface to the device.)



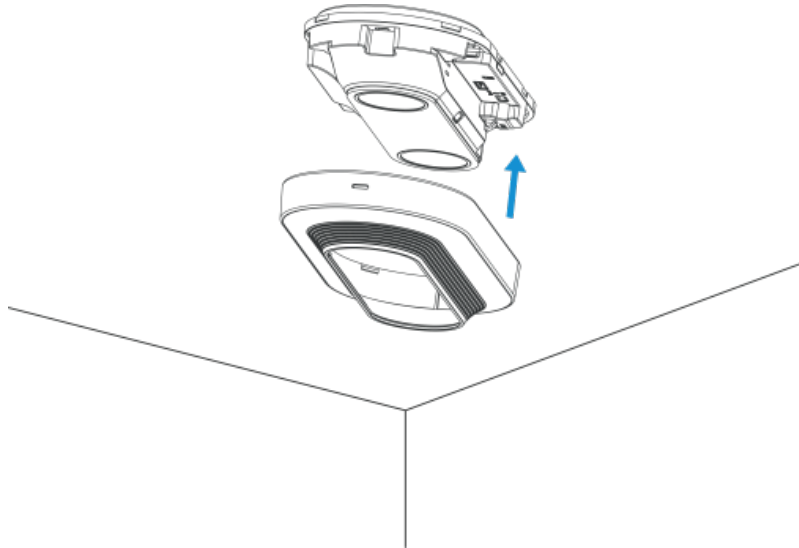
**Step 4:** Fix the device to the wall plugs via mounting screws.



**Step 5:** Peel off the lens protective film.

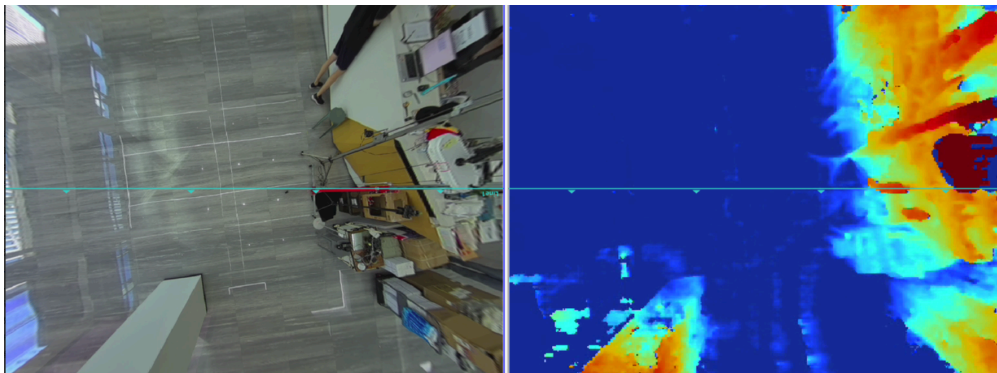
**Step 6:** Fix the cover back to device.





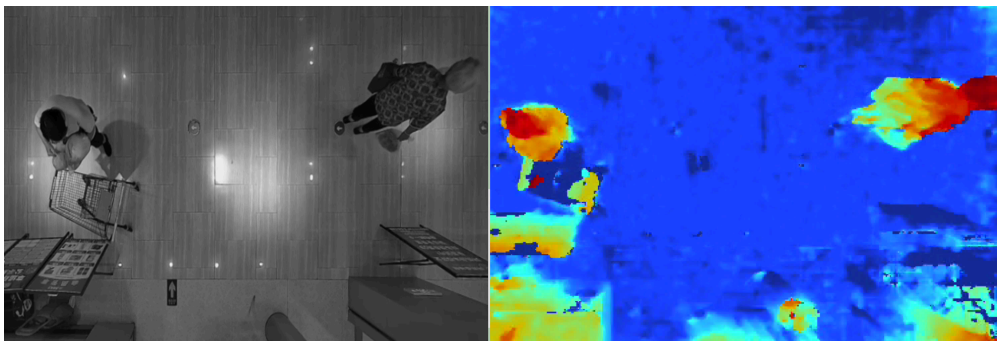
**Step 7:** Check live view.

**Normal Environment:**



Light blue or blue spot patterns appear on the ground, and taller objects appear increasingly red in the image.

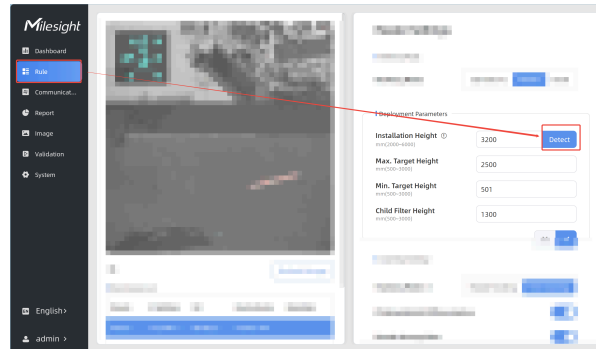
**Normal Targets:**



Targets show a clear color gradient, indicating good depth perception.

If the live view does not display a normal image, check the following in order:

1. Ensure the lens protective film has been removed.
2. Verify the device is installed level (within 10 degrees of horizontal).
3. Check for objects close to the device and within its field of view (e.g., pendant lights, downlights)
4. Go to **<Rule>** page, use the automatic height detection then save.



Switch to **<Dashboard>** to check live view again:

- If the depth map appears predominantly blue, manually increase the installation height based on the auto-detected value. (A step size of  $\pm 50\text{mm}$  is recommended.)
  - If the depth map appears predominantly red, decrease the installation height accordingly. (A step size of  $\pm 50\text{mm}$  is recommended.)
5. Check for a loose lens or housing deformation, even if no visible damage is present.
  6. If the issue persists, contact your Milesight sales representative.

## Factors Affecting Accuracy

Factors affecting line detection:

1. The device can not recognize well if the ground is smooth and lacks patterns.
2. It is indistinguishable when the color of targets and the floor is similar.
3. Objects imaged similarly to people have a probability of being misdetected.
4. The device may not accurately recognize people walking at extremely fast speeds (more than 2.5 m/s).
5. Detection accuracy decreases in crowded scenes (distance between targets less than 30cm).
6. When the target is obscured by adjacent objects or other targets, the more occlusion features present, the higher the risk of missed detection.

7. When two people pass through the detection line at the same time and are in close proximity to each other (one in and one out), it is possible that both people will miss the count.
8. At the edge of the FOV, when one target disappears and another target appears simultaneously, an ID inheritance phenomenon may occur.
9. For Low-and-Wide Version, when installed at a height of 3.3~3.5 meters, shorter targets (such as children) are more likely to be missed.

## Chapter 5. Access the Sensor

The device provides user-friendly web GUI for configuration access via Wi-Fi or Ethernet port. Users need to customize the password when using the device for the first time. The default settings are as below:

Wi-Fi SSID: **People Counter\_xxxxxx** (can be found on the device label)

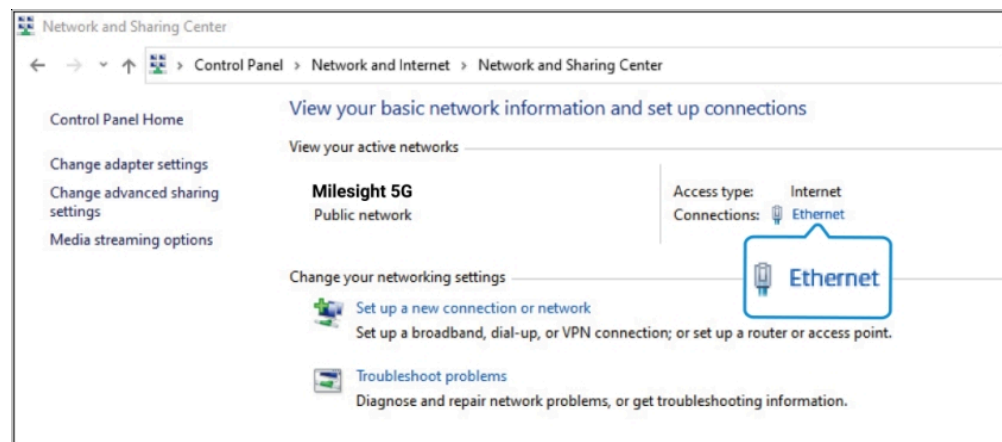
Wi-Fi IP: **192.168.1.1**

Ethernet IP: **192.168.5.220**

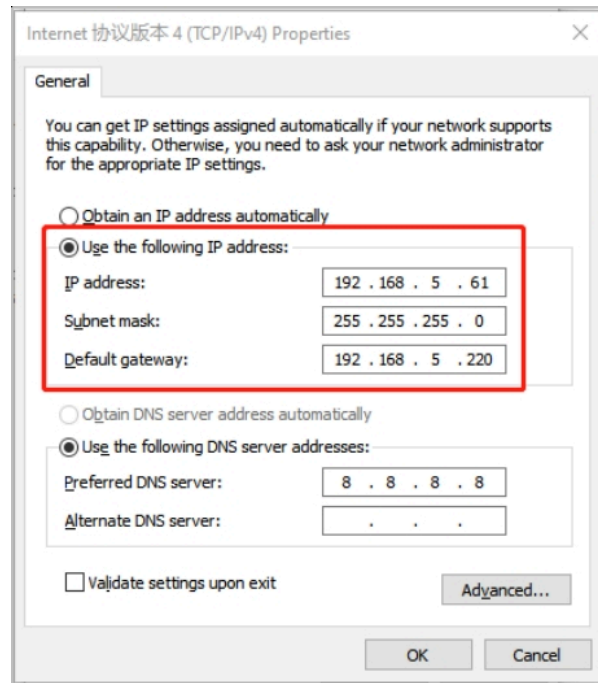
### Step 1:

- **Wireless Method:** Enable the Wireless Network Connection on your computer, search for corresponding for Wi-Fi SSID to connect it, then type 192.168.1.1 to access the web GUI.
- **Wired Method (PoE Version Only):** Connect the device to computer via Ethernet port, change the IP address of computer to 192.168.5.0 segment as below:

1. Go to Start → Control Panel → Network and Internet → Network and Sharing Center → Ethernet → Properties → Internet Protocol Version 4 (TCP/IPv4).

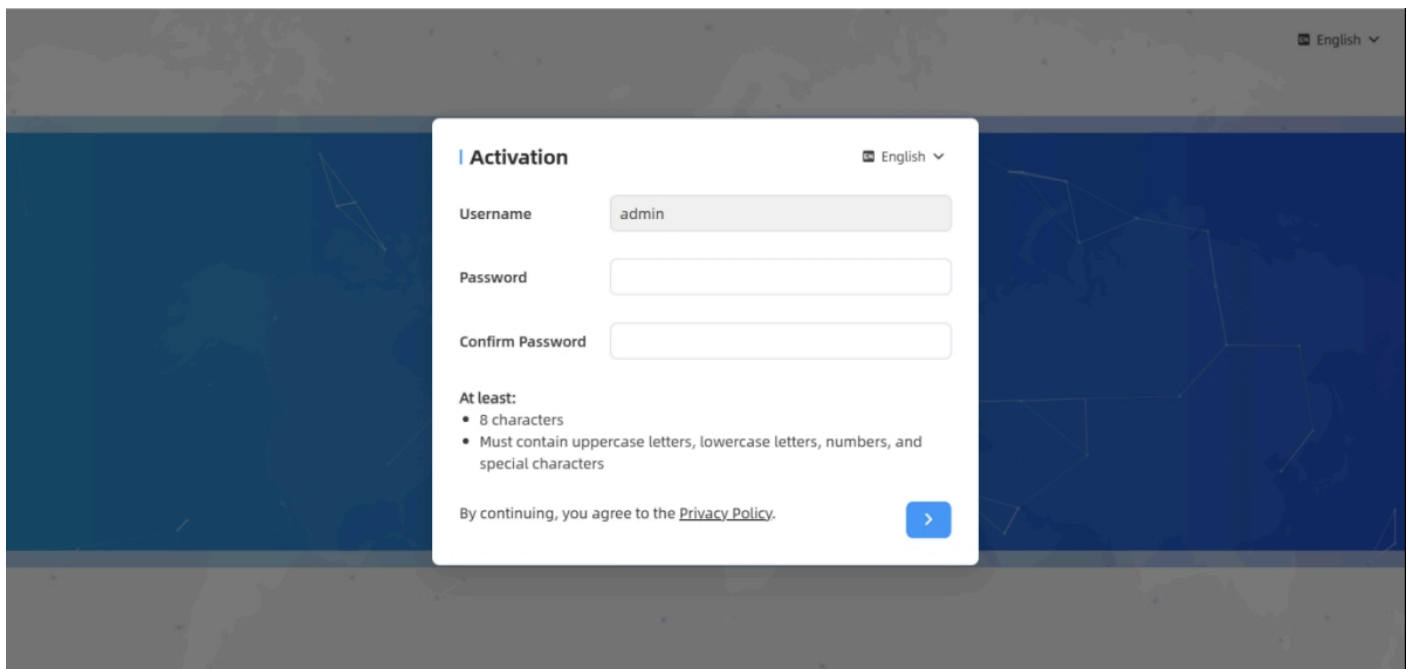


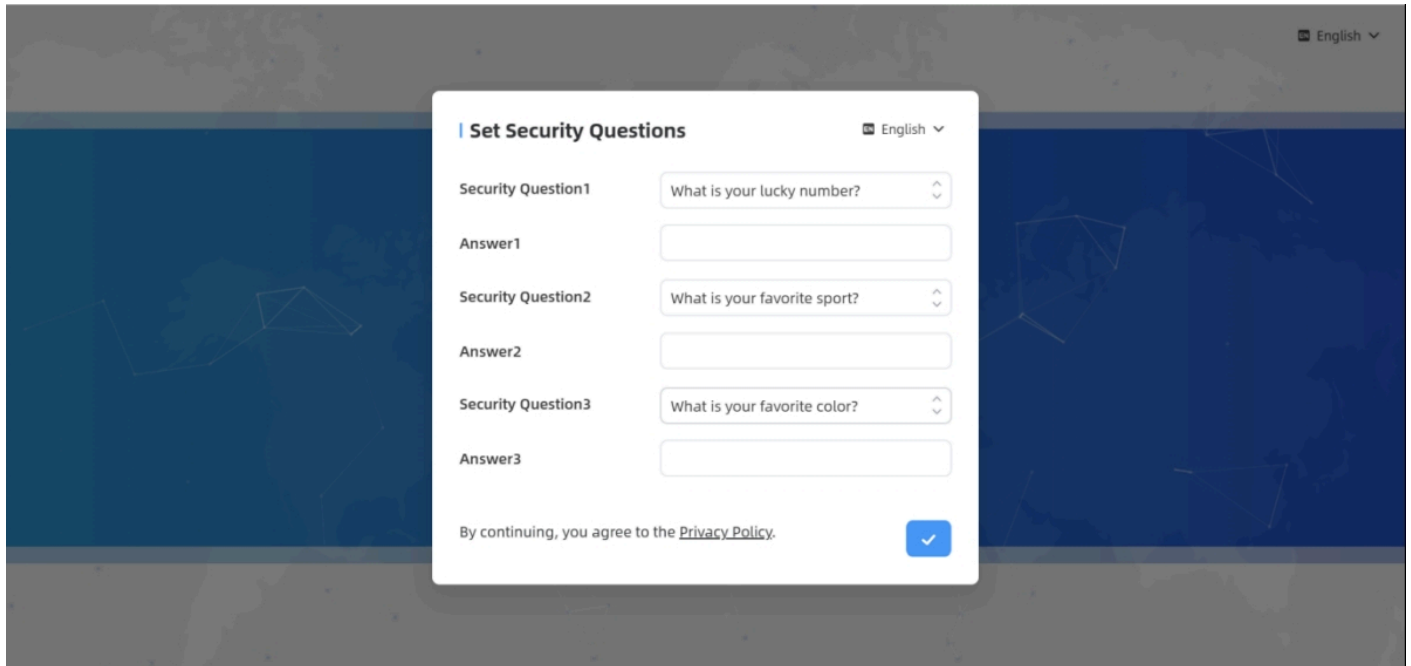
2. Enter an IP address that in the same segment with sensor ( e.g. 192.168.5.61, but please note that this IP address shall not conflict with the IP address on the existed network).



3. Then open the Browser and type 192.168.5.220 to access the web GUI.

**Step 2:** Users need to set the password and three security questions when using the sensor for the first time.





The screenshot shows a 'Set Security Questions' dialog box with a title bar and a language dropdown set to 'English'. It contains three sets of questions and answers. The first set has the question 'What is your lucky number?'. The second set has the question 'What is your favorite sport?'. The third set has the question 'What is your favorite color?'. At the bottom, there is a checkbox for agreeing to the 'Privacy Policy'.

**Set Security Questions** English ▾

Security Question1 What is your lucky number? ▾

Answer1

Security Question2 What is your favorite sport? ▾

Answer2

Security Question3 What is your favorite color? ▾

Answer3

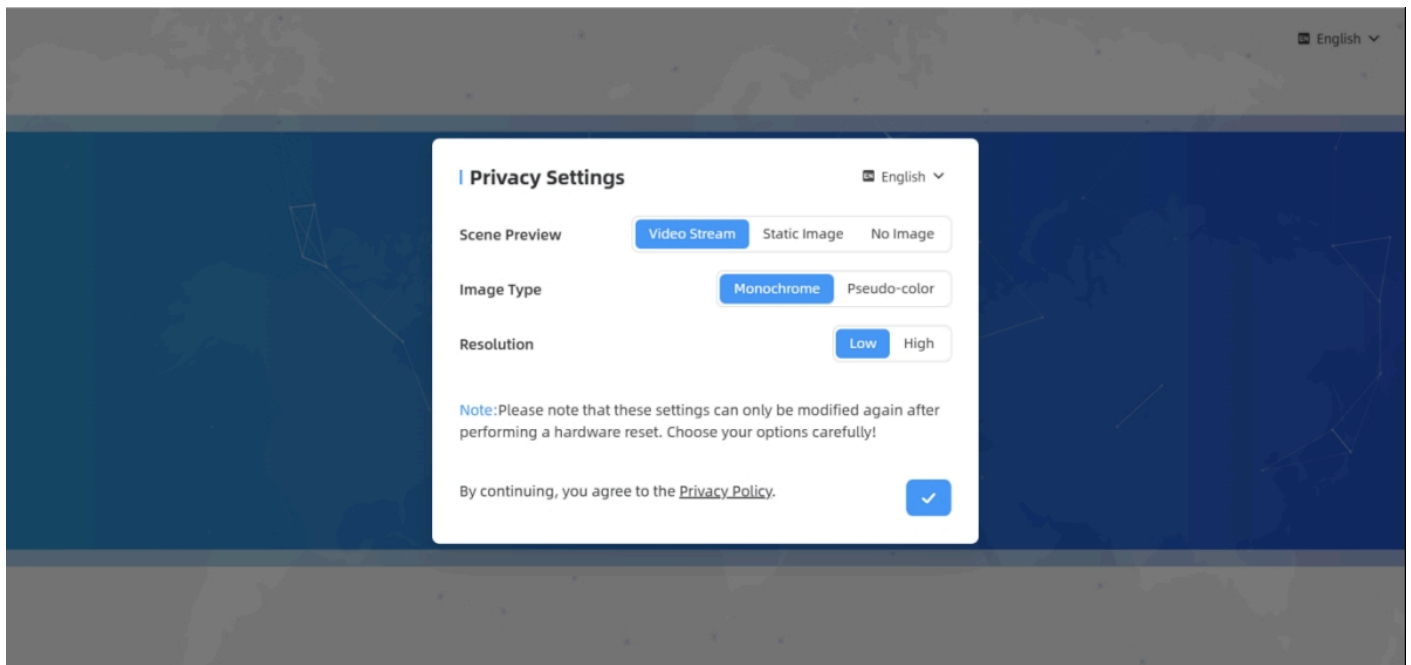
By continuing, you agree to the [Privacy Policy](#). ☒

**Step 3:** Configure the privacy settings to select preview image modes on the dashboard.



**Note:**

If you need to reset the privacy settings, hold on reset button for 10s to reset device to factory default.



The screenshot shows a 'Privacy Settings' dialog box with a title bar and a language dropdown set to 'English'. It contains three settings: 'Scene Preview' with options 'Video Stream', 'Static Image', and 'No Image'; 'Image Type' with options 'Monochrome' and 'Pseudo-color'; and 'Resolution' with options 'Low' and 'High'. At the bottom, there is a note about hardware reset and a checkbox for agreeing to the 'Privacy Policy'.

**Privacy Settings** English ▾

Scene Preview

Image Type

Resolution

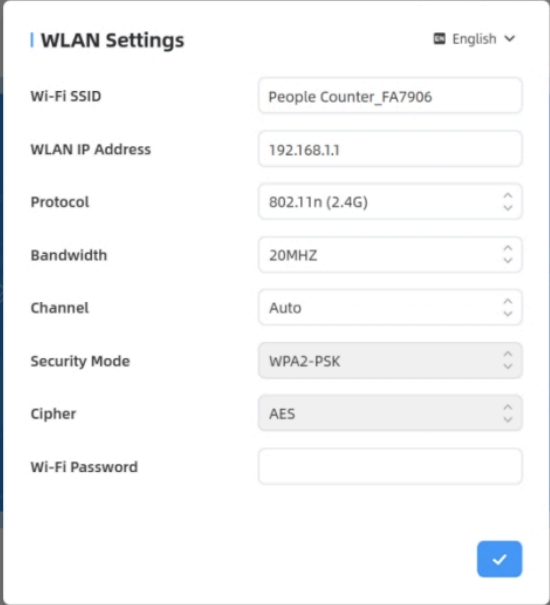
Note: Please note that these settings can only be modified again after performing a hardware reset. Choose your options carefully!

By continuing, you agree to the [Privacy Policy](#). ☒

Parameters	Description
Scene Preview	<p>Select video stream preview, static image preview or no image preview as needed.</p> <p><b>Video Stream:</b> Live preview of the video, displaying dynamic scenes and people.</p> <p><b>Static Image:</b> A still image to view the scene.</p> <p><b>No Image:</b> No image displayed.</p>
Image Type	<p>Select Monochrome or Pseudo-color image type.</p> <p><b>Monochrome:</b> Black, white and gray image.</p> <p><b>Pseudo-color:</b> Color-enhanced image.</p>
Resolution	<p>Select Low or High.</p> <p><b>Low:</b> Display a less clear images, but still allow viewing of scenes and moving people</p> <p><b>High:</b> Display clear scenes and people faces</p>

**Step 4:** After configuration, log in with username (admin) and custom password.

**Step 5:** Set the Wi-Fi password.



The image shows a 'WLAN Settings' dialog box overlaid on a dark blue background with a faint world map. The dialog box has a title bar with 'WLAN Settings' and a language dropdown set to 'English'. It contains several configuration fields: 'Wi-Fi SSID' with the value 'People Counter\_FA7906', 'WLAN IP Address' with '192.168.1.1', 'Protocol' with '802.11n (2.4G)', 'Bandwidth' with '20MHZ', 'Channel' with 'Auto', 'Security Mode' with 'WPA2-PSK', 'Cipher' with 'AES', and an empty 'Wi-Fi Password' field. A blue checkmark button is at the bottom right.

Setting	Value
Wi-Fi SSID	People Counter_FA7906
WLAN IP Address	192.168.1.1
Protocol	802.11n (2.4G)
Bandwidth	20MHZ
Channel	Auto
Security Mode	WPA2-PSK
Cipher	AES
Wi-Fi Password	

**Note:**

1. Password and Wi-Fi password must be 8 to 63 characters long and contain numbers, lowercase letters, uppercase letters and special characters. If the password is entered incorrectly five times, the account will be locked for 10 minutes.
2. It is recommended that users regularly update their passwords to enhance device security and prevent unauthorized access.
3. You can click the "forgot password" in login page to reset the password by answering three security questions when you forget the password if you set the security questions in advance.



# Chapter 6. Operation Guide


## Basic Counting Settings


To ensure proper device operation, users are required to complete the basic counting settings first, which includes setting deployment parameters, device strategies, enable line crossing or region people counting.

### Deployment Parameters

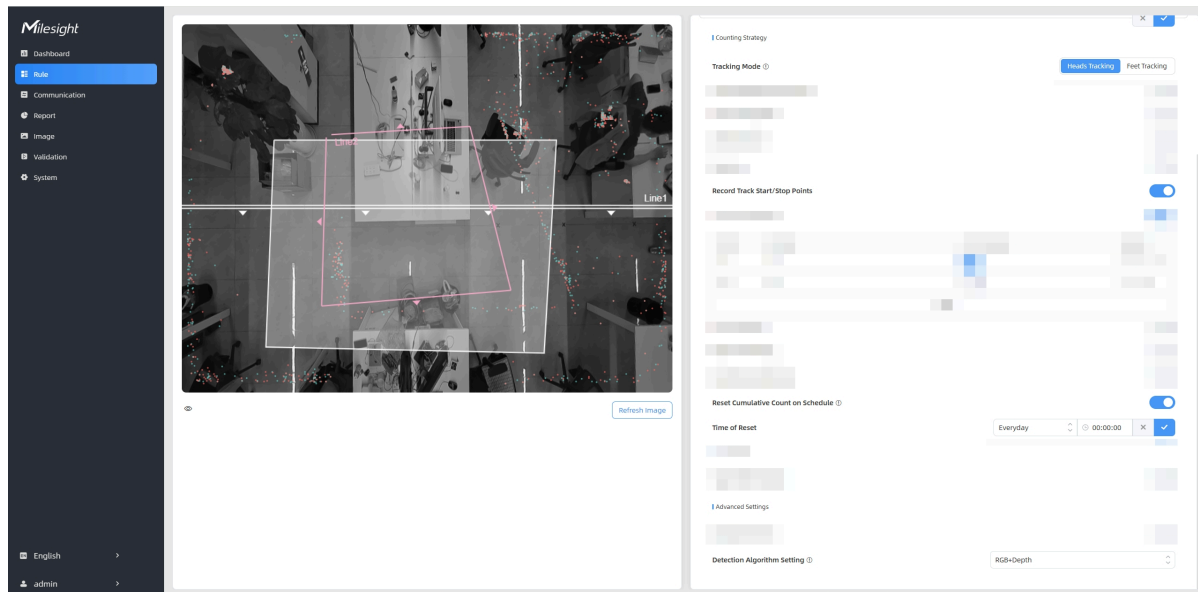
Deployment parameters typically include the installation height of the device, the height of the target to be counted, and the corresponding target height setting when other counting strategies are enabled.

The screenshot shows the Milesight web interface. On the left is a sidebar with navigation links: Dashboard, Rule (selected), Communication, Report, Image, Validation, System, English, and admin. The main area displays the 'Rule' configuration page. The 'Working Mode' is set to 'Standalone'. The 'Deployment Parameters' section is highlighted with a red box and contains the following settings: 'Installation Height' (3000 mm) with a 'Detect' button, 'Max. Target Height' (2000 mm), 'Min. Target Height' (1000 mm), and 'Child Filter Height' (1300 mm). Below this, the 'Counting Strategy' section shows 'Tracking Mode' set to 'Heads Tracking' and 'Children&Adult Differentiation' enabled.

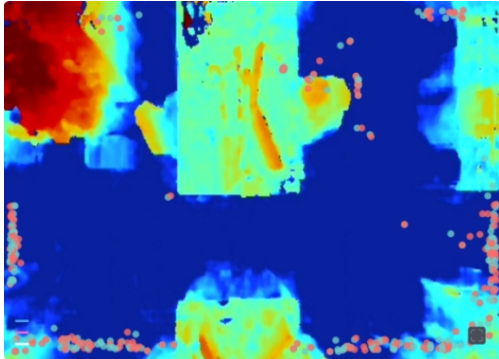
Parameters	Description
Installation Height	<p>Set the device installation height. Click <b>Detect</b> to detect the current installation height automatically.</p> <div> <b>Note:</b><ol style="list-style-type: none"><li>For optimal performance, it is recommended to use attribute recognition functions (such as Gender Recognition, Child &amp; Adult Differentiation, Staff Detection, View Direction Detection) at installation heights below 4 meters for the Standard Version</li></ol></div>

Parameters	Description
	 <p>(VS125) and below 3.3 meters for the Low-and-Wide Version (VS125-LW).</p> <p>2. When the ground lacks patterns or textures or during low-light conditions at night, the automatic height detection may be inaccurate.</p>
Max. Target Height	Set the maximum target height, then the device will ignore the objects higher than this setting value.
Min. Target Height	Set the minimum target height, then the device will ignore the object shorter than this setting value.
Child Filter Height	Set the max child height when children distinction feature is enabled.

## Device Strategies



Parameters	Description
Tracking Mode	<p>Select the tracking mode of counting, including Heads Tracking and Feet Tracking:</p> <p>When the device detects both feet of the target in the FOV, it generates a trajectory line based on the movement path of the feet.</p>

Parameters	Description
	When the target's head and shoulders are detected, a corresponding trajectory line is generated according to the movement path of the head and shoulders.
Detection Algorithm Setting	<p>Select the detection algorithm according to the real applications.</p> <p><b>RGB+Depth:</b> Suitable for most scenarios.</p> <p><b>RGB:</b> Switch this mode when there are many false detections. Suitable for scenes with a large number of non-human objects mistakenly detected as people. For instance, the entrances and exits of a warehouse.</p> <p><b>Depth:</b> Switch this mode when there are many false detections. Suitable for scenes with a large number of human-like objects. For example, a doll shop.</p>
Record Track Start/Stop Points	<p>Enable to record the start track points and end track points of people in the live view for the position adjustment of the detection line. It can store 5000 track points at most, with green as the starting point and red as the stop point.</p> 
Reset Cumulative Count on Schedule	<p>Enable to periodically reset cumulative count on schedule.</p> <p>Cumulative Count includes:</p> <p>Total In/Out counting of each detection line.</p> <p>Max./Avg. Dwell Time of each detection region.</p> <p>Total Effective Audience and Avg. Attention Time of each attention region.</p>

## Line Crossing Counting

Users can draw detection lines to count the number of people entering or exiting.




### Note:

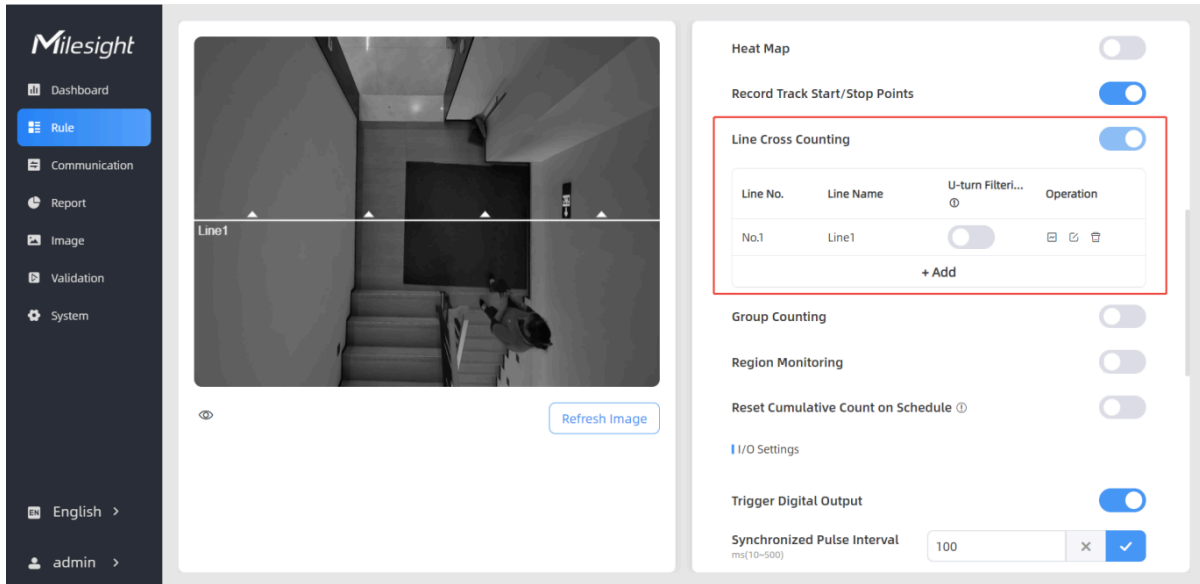
1. Ensure that the detected target can pass through the detection line completely. It's recommended that the detection line is perpendicular to the In/Out direction and on the center of the detection area without other objects around.




2. Redundant identification spaces are needed on both sides of the detection line for the target detection. This ensures stable target recognition and tracking before crossing the detection line, which will make the detection and count more accurate.
3. It is recommended to draw the detection line as close to the center of the image as possible, and ensure that the target has already been detected before crossing the line.

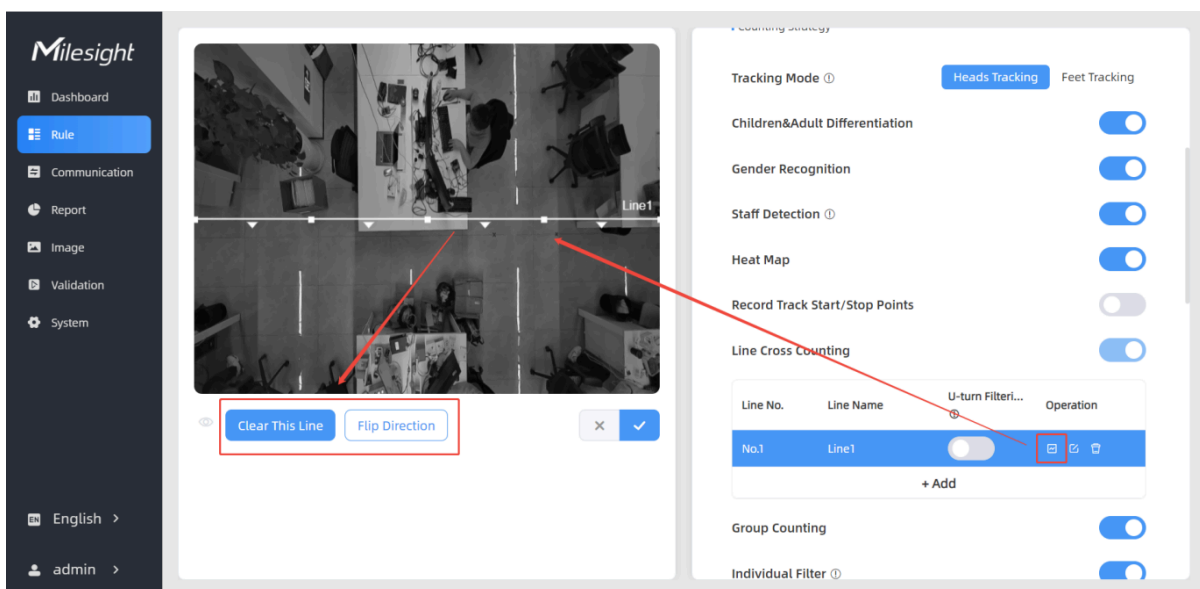
**Step 1:** Please ensure that the [deployment parameters](#) and [device strategies](#) have been configured before using this feature.



**Step 2:** Find the list of detection lines. Click **+Add** to draw a new detection line or click  to edit the existed detection line on the live view.



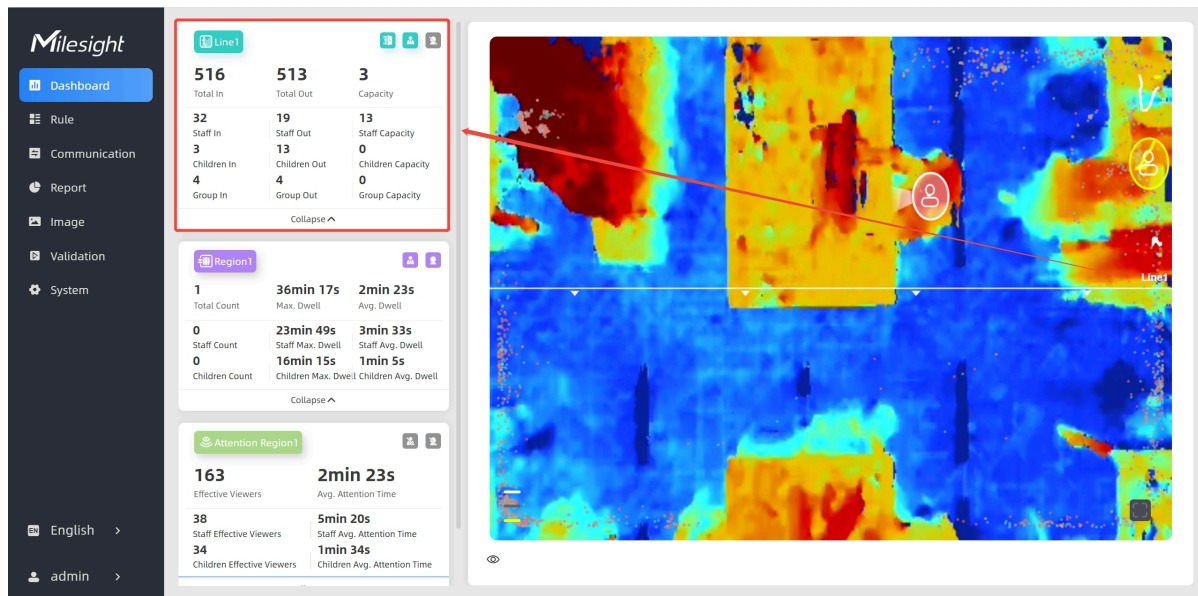
**Step 3:** Left-click to start drawing and drag the mouse to draw a line, left-click again to continue drawing a different direction edge, and right-click the mouse to complete the drawing. The line can be dragged to adjust the location and length. One device supports at most 4 broken lines with maximum 4 segments each.

**Step 4:** If users want to redraw this line, click **Clear This Line** or drag the vertices of the broken line to adjust. The arrow direction of the detection line depends on your drawing direction. If users need to flip the line, click **Flip Direction**. Then click  to finish drawing.

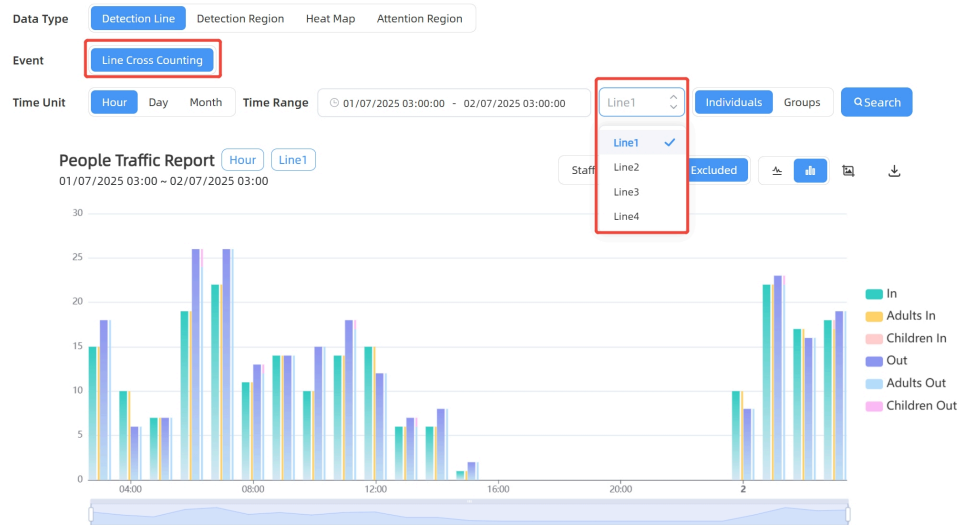


**Step 5:** Users can click  to customize the name of line. If users need to delete a certain line, click  .

**Step 6:** Users can see the effect in [Dashboard](#).



To view line's data for a certain time period and generate report, please refer to [Report](#).



Be able to view "line\_periodic\_data" and "line\_total\_data" in the [periodic report](#) and "line\_trigger\_data" in the [trigger report](#).

```

"line_periodic_data": [{
  "line": 1,
  "line_name": "Line11111111111111111111111111111111",
  "line_uuid": "9a0440de-3188-4f6d-b886-bb20c97bd26b",
  "total": {
    "female_in": 0,
    "female_out": 0,
    "in": 0,
    "male_in": 0,
    "male_out": 0,
    "out": 0
  },
},

"line_total_data": [{
  "line": 1,
  "line_name": "Line11111111111111111111111111111111",
  "line_uuid": "9a0440de-3188-4f6d-b886-bb20c97bd26b",
  "children": {
    "female_in_counted": 0,
    "female_out_counted": 0,
    "in_counted": 0,
    "male_in_counted": 0,
    "male_out_counted": 0,
    "out_counted": 0
  },
  "total": {
    "female_in_counted": 0,
    "female_out_counted": 0,
    "in_counted": 0,
    "male_in_counted": 0,
    "male_out_counted": 0,
  },
},

"line_trigger_data": {
  [
    {
      "children": {
        "female_in": 8,
        "female_out": 2,
        "in": 14,
        "male_in": 8,
        "male_out": 2,
        "out": 6
      },
      "group": {
        "in": 0,
        "out": 0
      },
    }
  ]
}

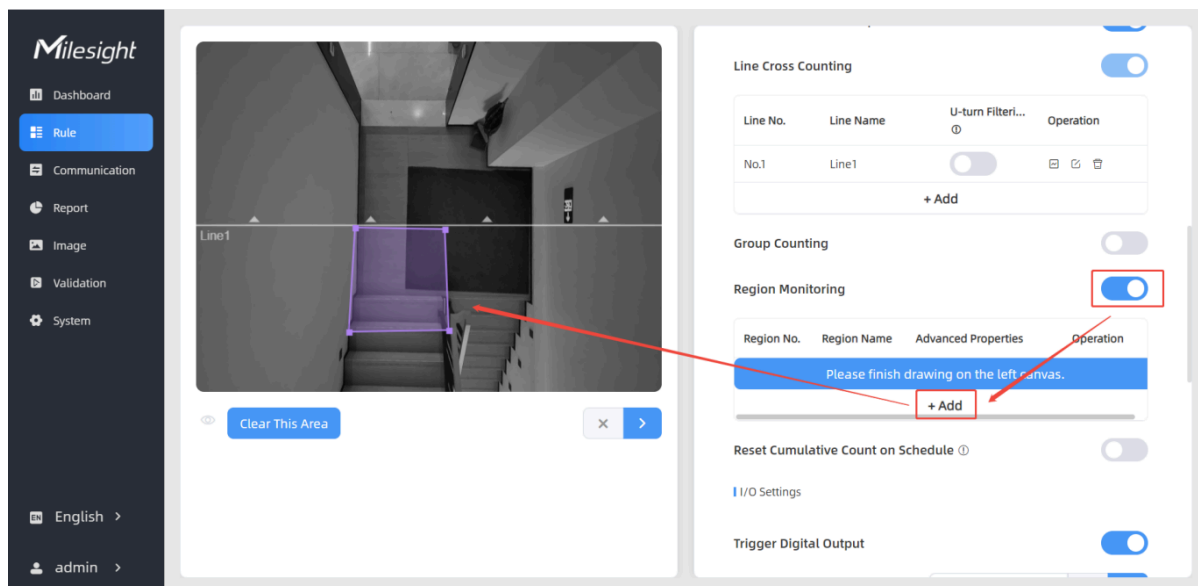
```

## Region People Counting

The device supports monitoring the number and the dwell time of people in the region, providing more valuable analysis data.

**Step 1:** Please ensure that the [deployment parameters](#) and [device strategies](#) have been configured before using this feature.

**Step 2:** Enable Region Monitoring. Click **+Add** to add the region monitoring on the live view. Up to 4 regions are supported with maximum 10 segments each.



**Step 3:** Customize the zone name and enable Region People Counting or Dwell Time Detection as needed.



### Advanced Properties

Zone Name

Region People Counting ☒

Pass-by Filtering   
s(0-3600)

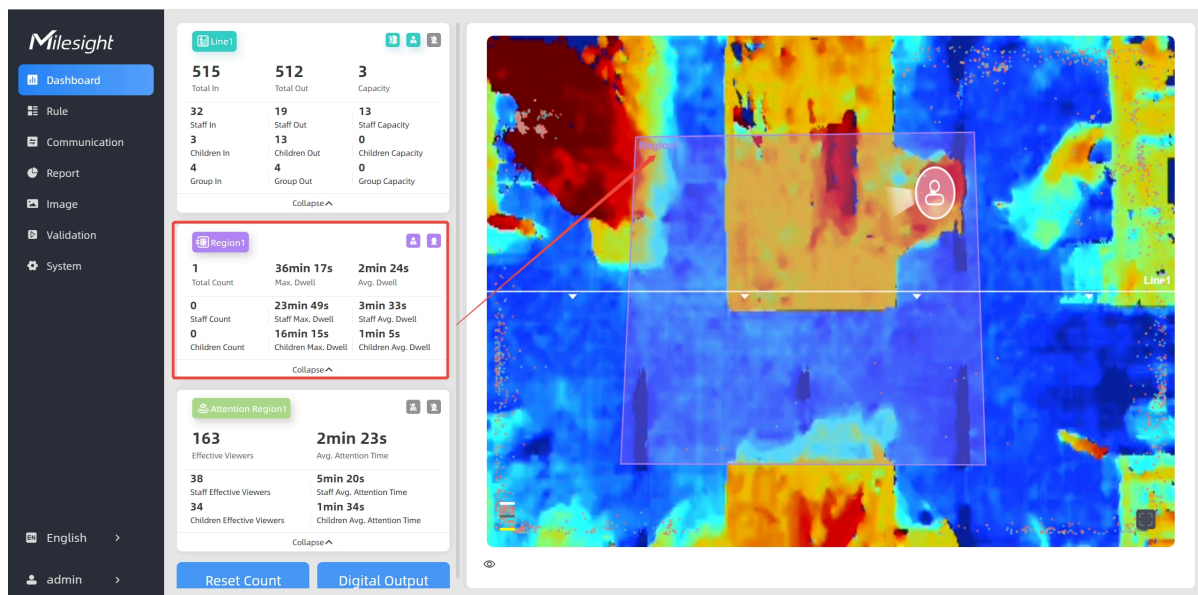
Dwell Time Detection ☒

Min. Dwell Time   
s(0-3600)

**Step 4:** The configuration is displayed in the list after the configuration is complete. You can redraw the areas by clicking the redraw button in the list. Click the edit button to modify the advanced settings of the areas or click delete button to delete the areas separately.

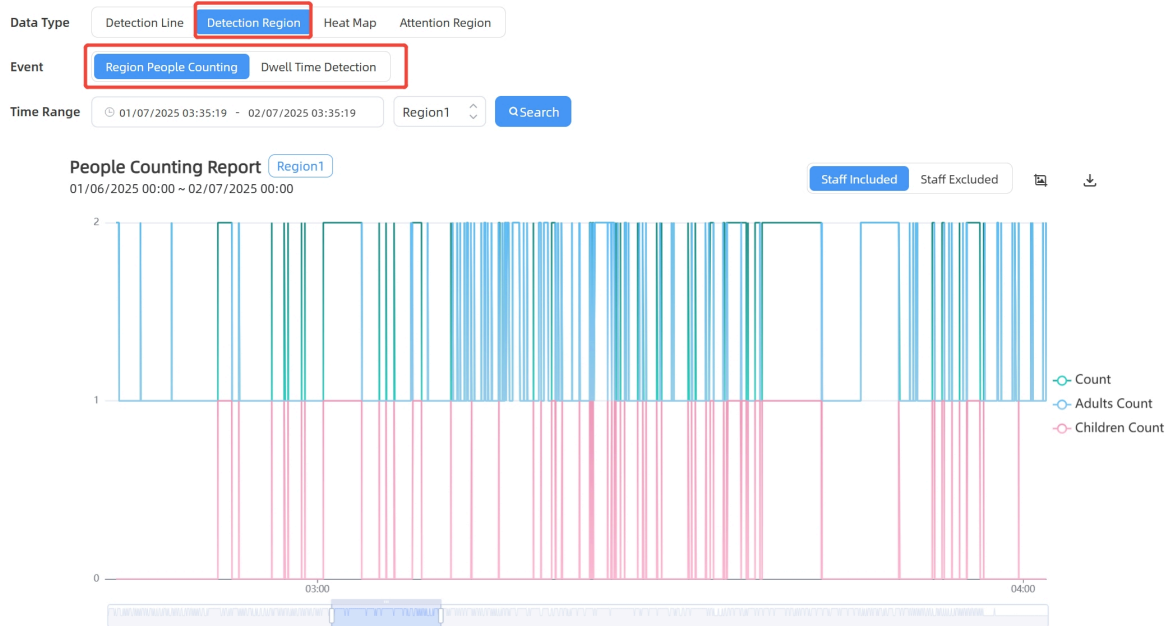
Region Monitoring <input checked="" type="checkbox"/>			
No.	Region Name	Advanced Properties	Operation
No.1	Region1	Region People Counting(5s)	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
+ Add			

**Step 5:** Users can see the effect in [Dashboard](#).



To view region's data for a certain time period and generate report, please refer to [Report](#).





Be able to view "region\_data" in the [periodic report](#) and "region\_trigger\_data" in the [trigger report](#).

```
"region_data": {
  "dwell_time_data": [{
    "avg_dwell_time": 308367,
    "children_avg_dwell_time": 0,
    "children_max_dwell_time": 0,
    "female_avg_dwell_time": 0,
    "female_max_dwell_time": 519934,
    "male_avg_dwell_time": 0,
    "male_max_dwell_time": 96799,
    "max_dwell_time": 519934,
    "staff_max_dwell_time": 1522,
    "staff_avg_dwell_time": 1522,
    "region": 1,
    "region_name": "Region1",
    "region_uuid": "bd1e6ce2-e113-4ce4-a9b6-0633f7083cac"
  }],
  "region_count_data": [{
    "total": {
      "current_female": 0,
      "current_male": 1,
      "current_total": 2
    },
    "children": {
      "current_female": 0,
```

```
"region_trigger_data":
{
  "region_count_data":
  [
    {
      "total": {
        "current_female": 0,
        "current_male": 1,
        "current_total": 2
      },
      "children": {
        "current_female": 0,
        "current_male": 1,
        "current_total": 2
      },
      "staff": {
        "current_female": 0,
        "current_male": 1,
        "current_total": 2
      },
      "region": 1,
      "region_name": "Region1",
      "region_uuid": "bd1e6ce2-e113-4ce4-a9b6-0633f7083cac"
    }
  ]
}
```

## Advance Property Settings

The advanced property function uses AI recognition to intelligently distinguish various target properties. Before using the advanced property function, please ensure that you have completed the setting of the [basic counting function](#).

### Children & Adult Differentiation

The device identifies individuals below the child filter threshold as children.



**Note:**

The operating installation height of this function is 2.2 ~ 4m for Standard Version (VS125) and 1.9~3.3m for Low-and-Wide Version (VS125-LW).

**Step 1:** Enable **Children & Adult Differentiation**, it will display the development parameters for child filter height.

Deployment Parameters

Installation Height ①  Detect  
mm(2000~6000)

Max. Target Height   
mm(500~3000)

Min. Target Height   
mm(500~3000)


**Child Filter Height**   
mm(500~3000)

Counting Strategy

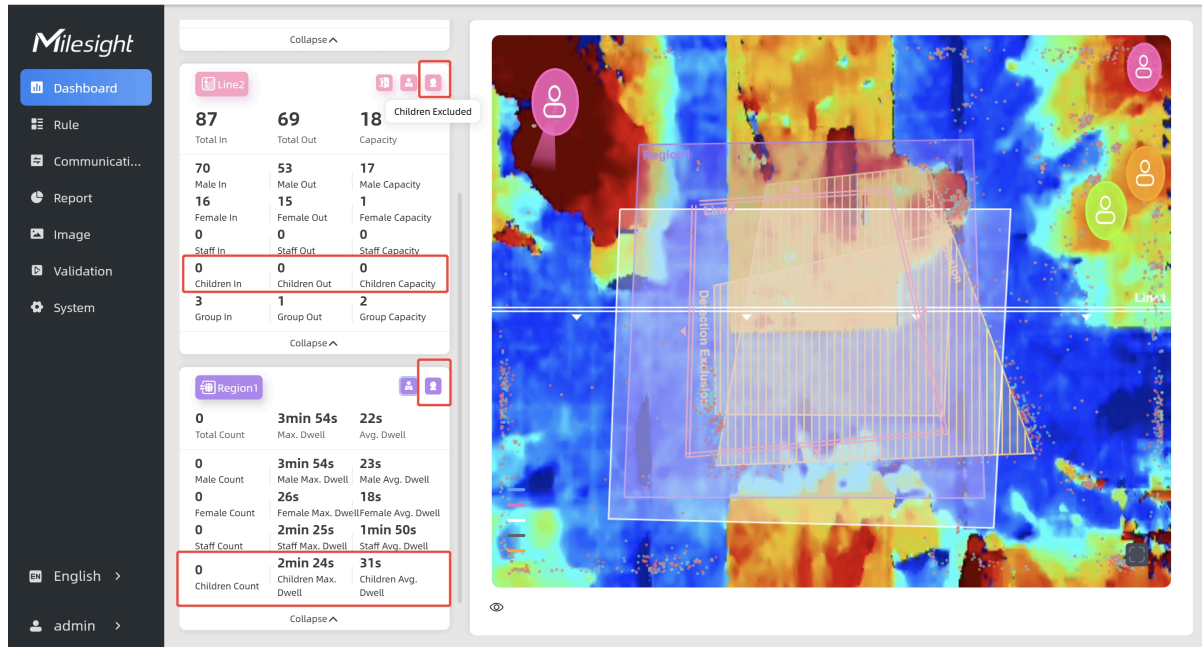
Tracking Mode ① Heads Tracking Feet Tracking

**Children&Adult Differentiation** ☒

**Step 2:** Enter a threshold value, anyone with a height below this will be identified as a child by the device.

Then click  to finish configuration.

**Step 3:** Users can see the effect in [Dashboard](#).



To view children's data for a certain time period and generate report, please refer to [Report](#).



Users can also view the data through [periodic report](#) and [trigger report](#).



#### Notice:

Children under 1.1m in height, children in strollers/shopping carts, children being held, and children covered by an adult have a probability of undercounting.

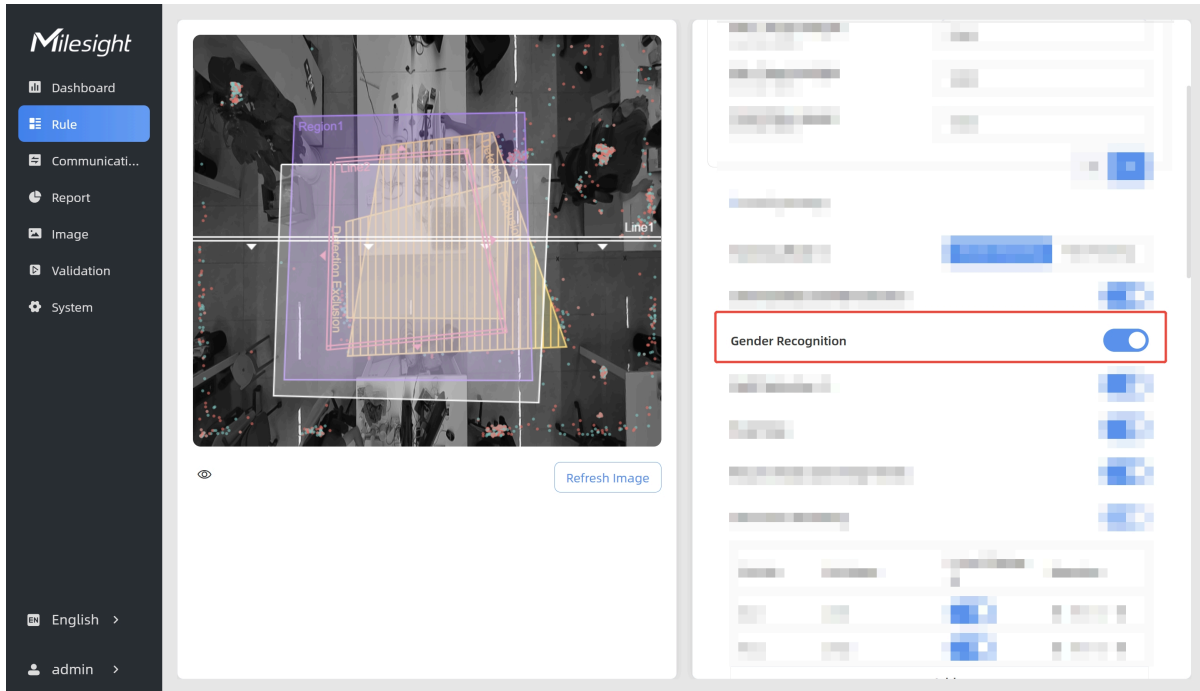
## Gender Recognition

The device will detect the people who are male or female.

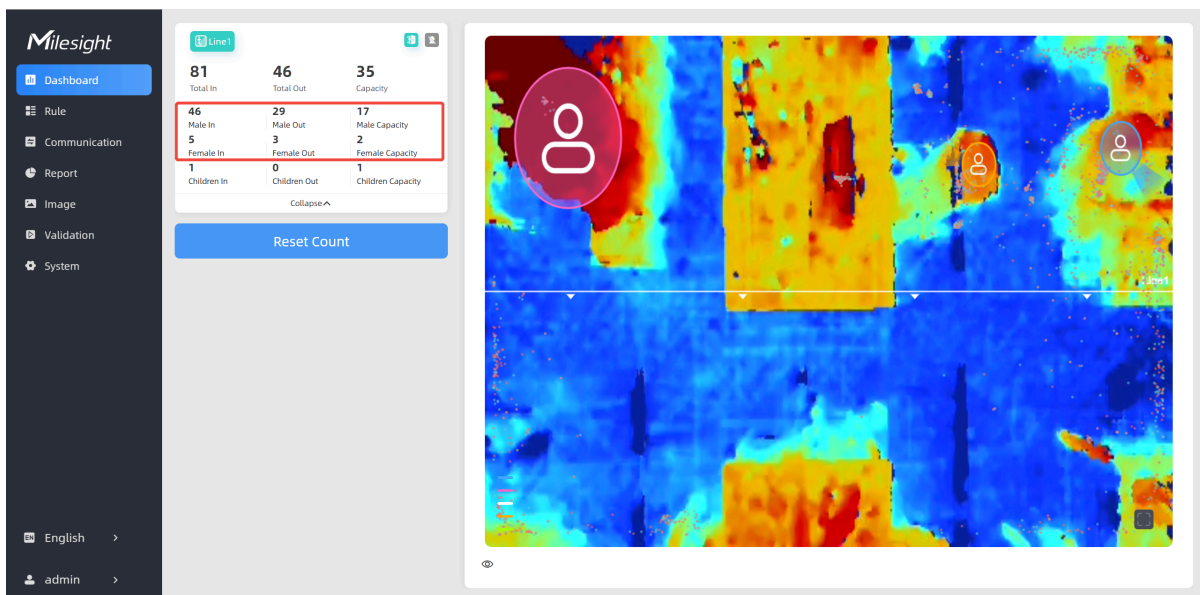


**Note:**

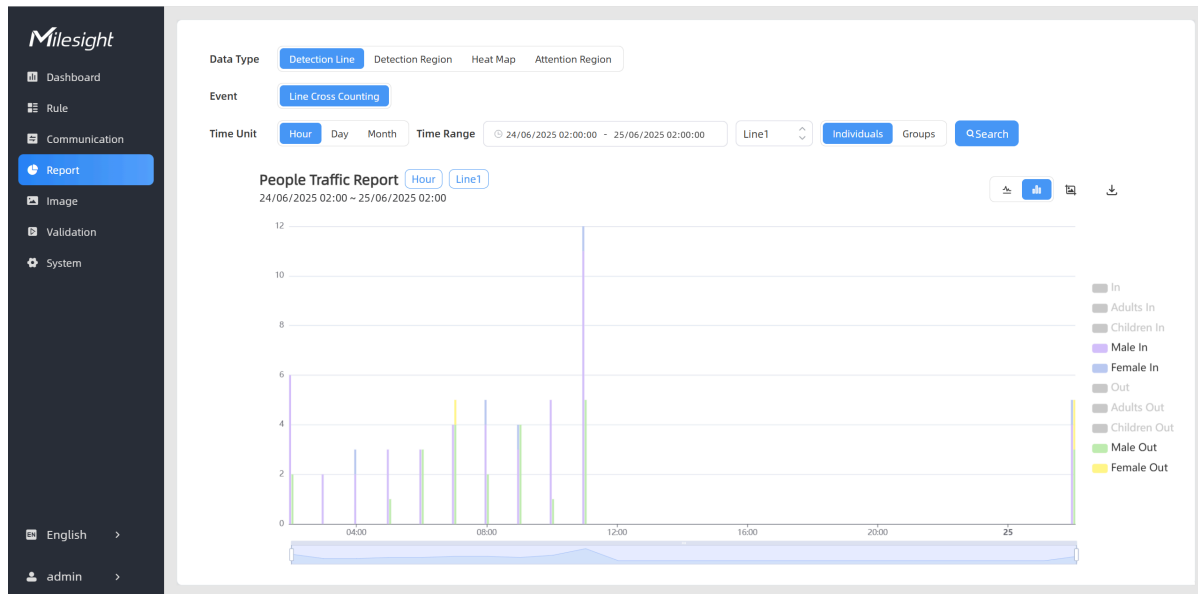
The operating installation height of this function is 2.2 ~ 4m for Standard Version (VS125) and 1.9~3.3m for Low-and-Wide Version (VS125-LW).



Enable **Gender Recognition**, users can see the effect in [Dashboard](#).



To view males' and females' data for a certain time period and generate report, please refer to [Report](#).



Users can also view the data through [periodic report](#) and [trigger report](#).



#### Notice:

1. Gender detection is prone to misdetection when the target has longer hair for men and shorter hair for women.
2. The device does not detect men and women when hair/clothing color is close to the color of the floor or when wearing large concealing accessories such as head scarves.

## Staff Detection

The device will detect staff members who wear a designated accessories.



#### Important:

1. The operating installation height of this function is 2.2 ~ 4m for Standard Version (VS125) and 1.9~3.3m for Low-and-Wide Version (VS125-LW).
2. The optimum detection height for **badges** is 2.2 ~ 3.5m. When the height exceeds 3.5 meters, the probability of missed detection will increase significantly due to reduced clarity. (Standard Version Only)

**Step 1:** Check the optional accessories are complete in the unit's box. For optimal detection, it is suggested to use the staff accessories provided by Milesight. Staffs are required to wear relevant accessories in designated locations.

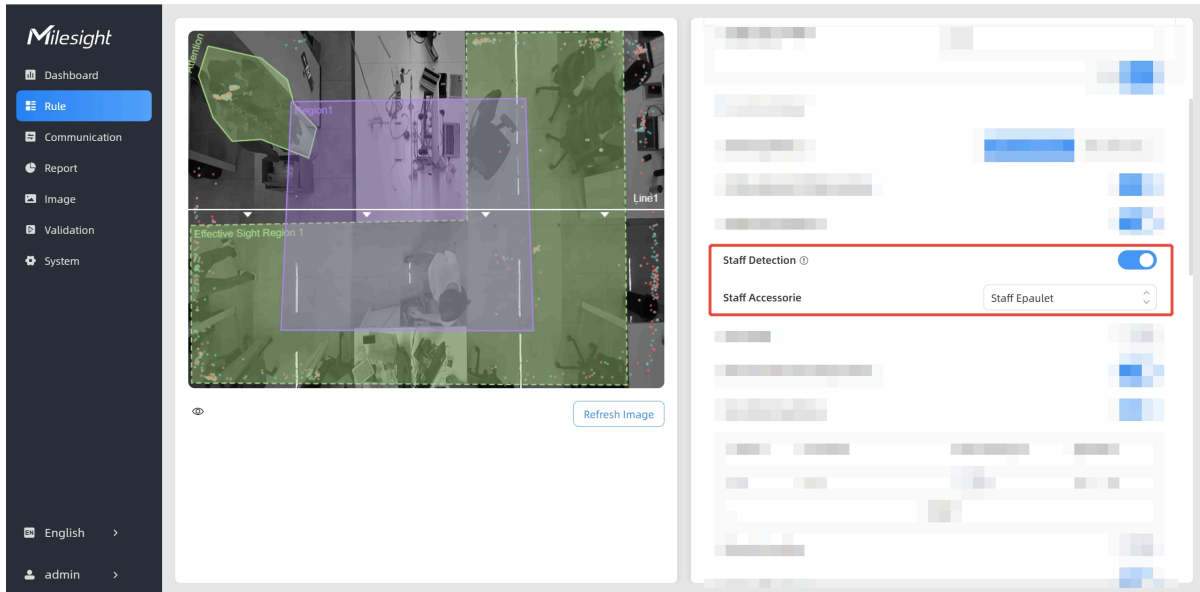
Staff Accessories	Wear Position
Staff Lanyard	Wear the lanyard around the neck.
Staff Badge	Wear the badge above the chest, on only one side. (Standard Version VS125 Only)
Staff Epaulet	Wear the epaulet on both the left and right shoulders. (Standard Version VS125 Only)



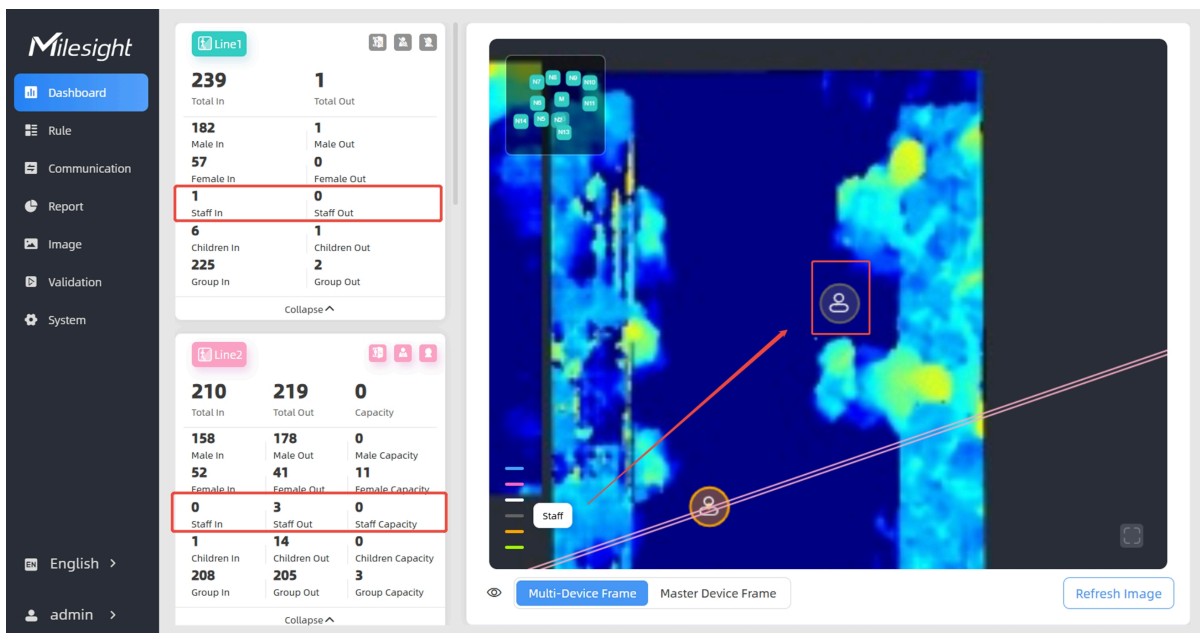
**Note:**

1. Staff accessories has two color options: black and red. If staff's clothes are more dark, it is recommended to use red staff accessories, to improve detection accuracy.
2. Staff lanyards, badges, epaulettes are subject to separate testing and should not be mixed. It means multiple types of accessories should not be present in the same scene at the same time.
3. Please ensure that the accessories are not obstructed by collars, scarves, hair, or other objects when worn, and try to keep it fully visible.

**Step 2:** Enable **Staff Detection**, select the corresponding accessory.



**Step 3:** Users can see the effect in [Dashboard](#).



To view staffs' data for a certain time period and generate report, please refer to [Report](#).

Data Type: Detection Line Detection Region Heat Map Attention Region

Event: Line Cross Counting

Time Unit: Hour Day Month
 Time Range: 22/06/2025 08:00:00 - 23/06/2025 08:00:00
 Line1: Line1
Individuals Groups

Search

People Traffic Report Hour Line1
Staff Included Staff Excluded
📊 📈 📉 📄

22/06/2025 08:00 ~ 23/06/2025 08:00

Users can also view the data through [periodic report](#) and [trigger report](#).



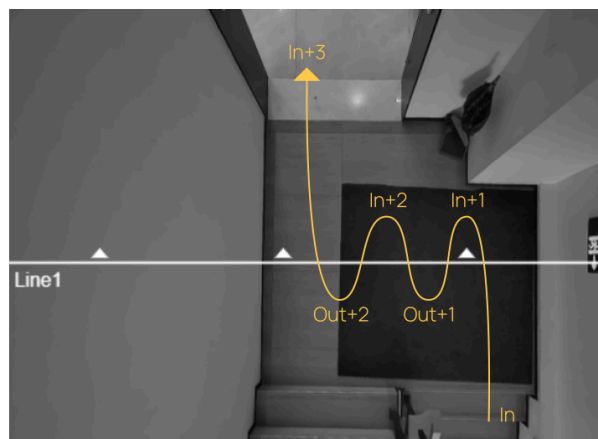
#### Notice:

1. When two people walk side by side, the person not wearing an staff accessory can easily be detected as an staff, while the person wearing an accessory cannot.
2. Wearing clothing with patterns similar to the staff lanyard (such as striped clothing) may result in false detection.
3. If the staffs' passing speed exceeds 2.5 m/s, there may be missed detections.

## U-turn Filtering

The device supports the U-turn filtering function, filtering out the people who are actually not in / out of the entrance, to avoid repeated counting. Users can draw an area for every line and the device will count the In and Out values only when people pass this area.

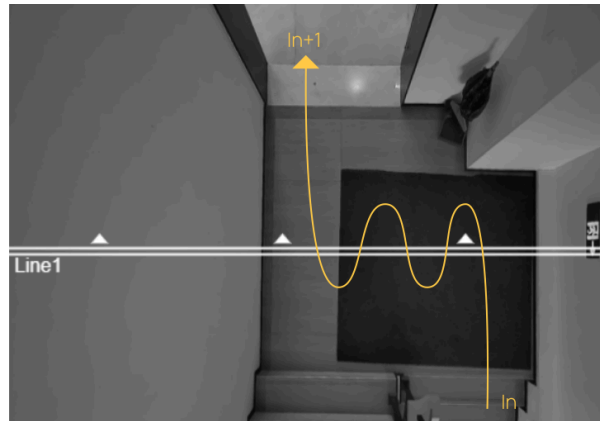
#### Disable U-turn filtering:



#### Enable U-turn filtering:

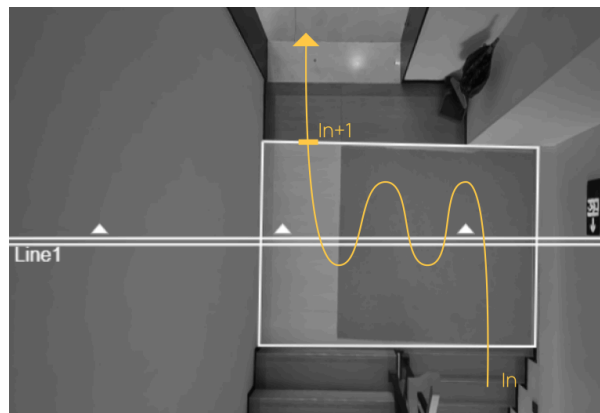


The device automatically filters out the wandering crowd in the live view.

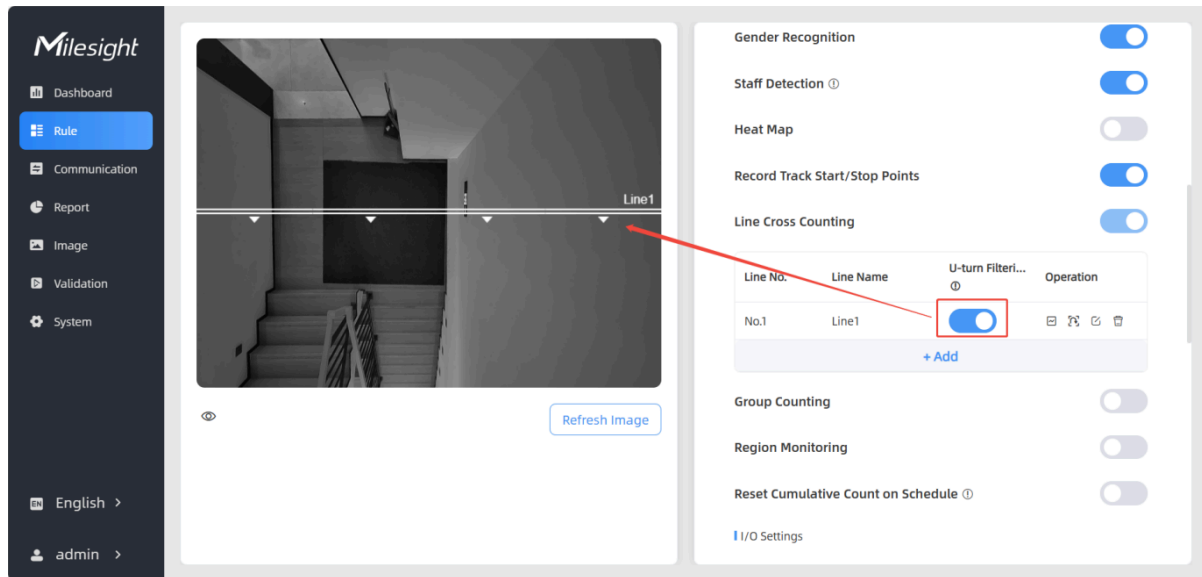


**Enable U-turn filtering & Draw areas:**


When you care about the timeliness of the statistics, you can choose to draw the U-turn area.

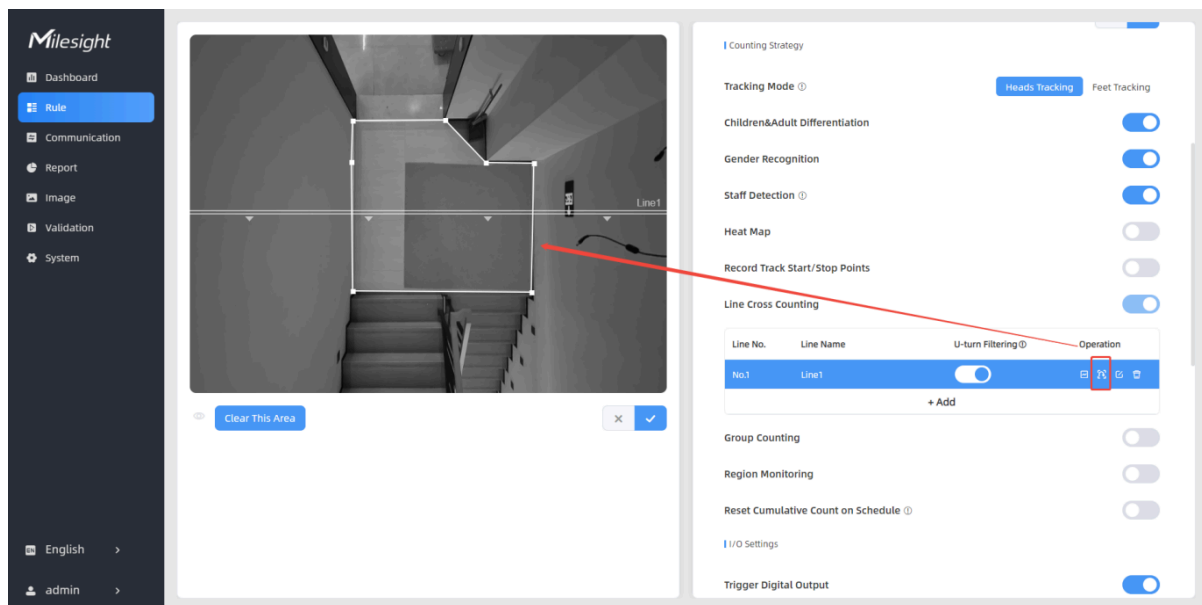


**Step 1:** Enable U-turn Filtering to filtering repeated counting.




If you requires to use U-turn area filtering, please continue below steps:

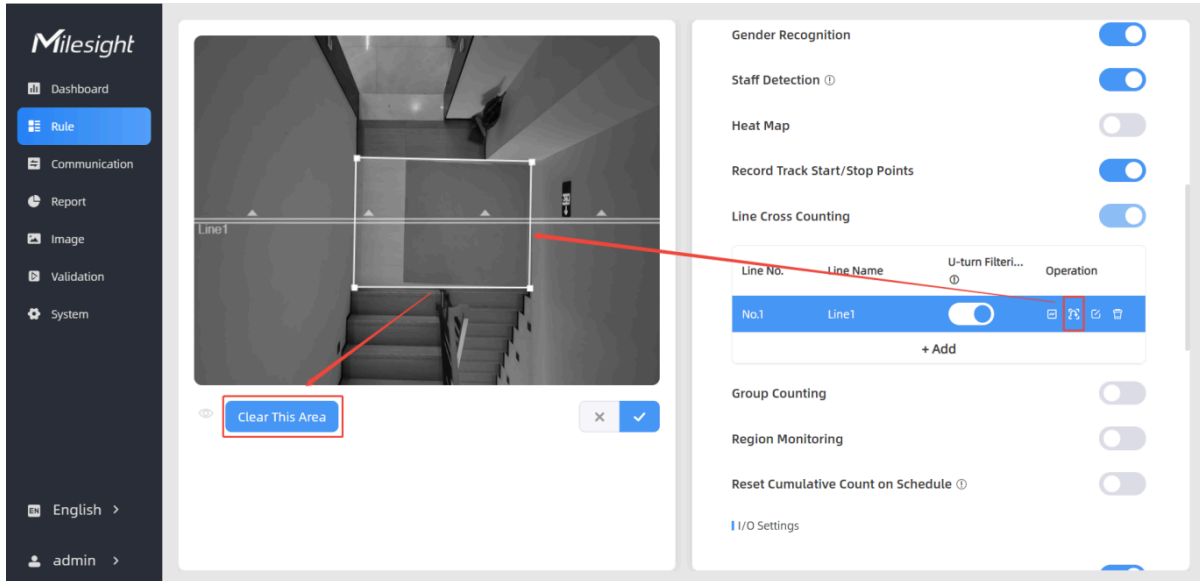
**Step 2:** Click  to edit U-turn areas for existed detection line on the live view.



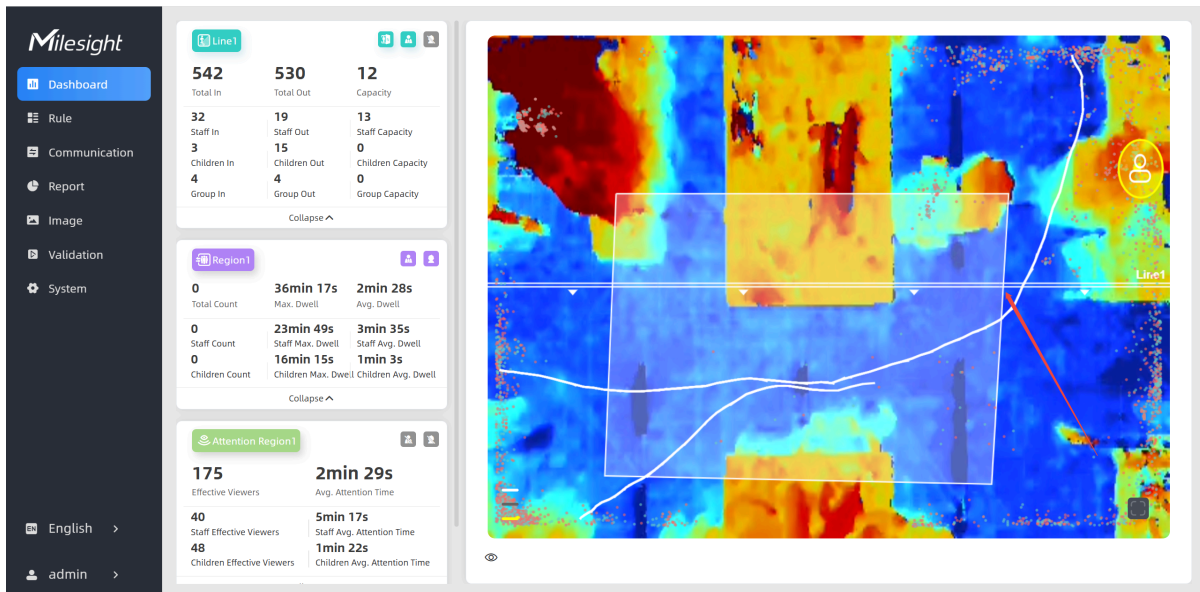
**Step 3:** Left-click to start drawing and drag the mouse to draw an edge. Then left-click again to continue drawing a different direction edge. Right-click the mouse to complete the drawing. The area can be dragged to adjust the location and length. One device supports up to 4 areas with maximum 10 segments each.

**Step4:** If users want to redraw the area, click **Clear This Area** or drag the vertices of the area to adjust. Then click  to finish drawing.

**Step 5:** If users need to delete a certain U-turn area, click , then click **Clear This Area**.



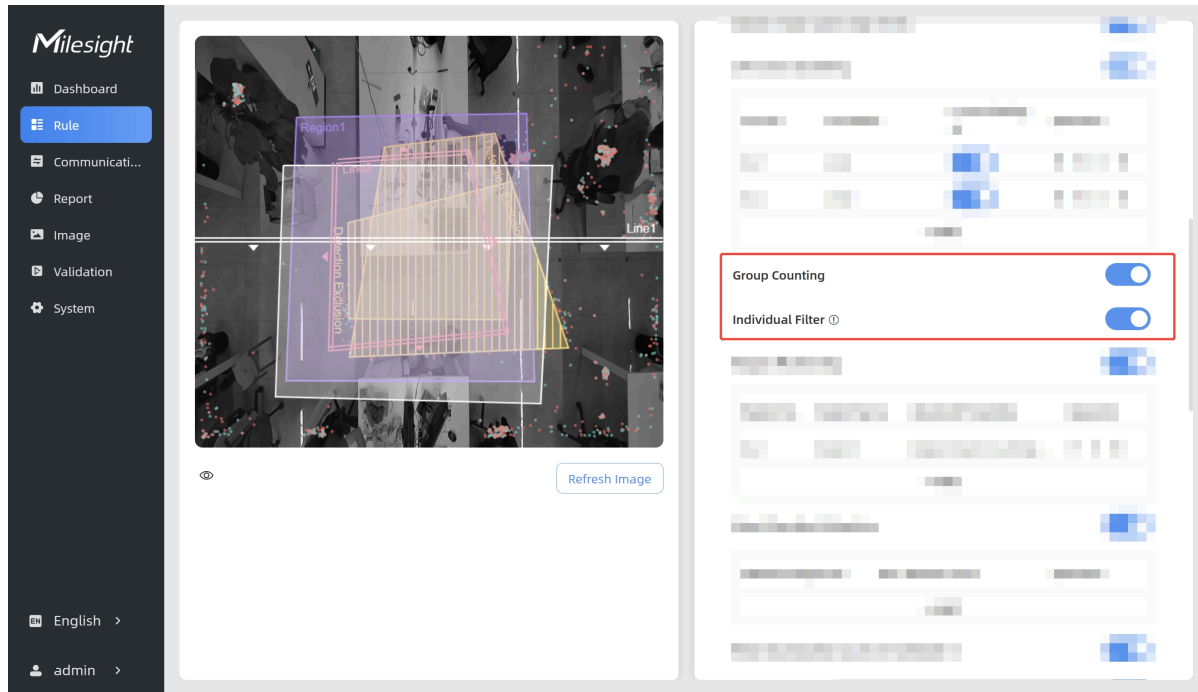
**Step 6:** Users can see the effect in [Dashboard](#).



## Group Counting

The device is capable of simultaneously recognizing and counting multiple people entering or passing through the detection area during the same period of time. By analyzing distance, movement direction,

and speed differences, it provides deeper insights into customers' behaviors. **This function is only applicable for line cross people counting.**



**Step 1:** Click to enable the **group counting** function, the device considers a group of people as a single group.

**Step 2:** Choose to enable or disable **Individual Filter**. When enabled, device will only count two or more individuals as a group.

**Step 3:** Users can see the effect in [Dashboard](#) .

Line2

171

Total In

136

Total Out

35

Capacity

<div>138</div> <div>Male In</div>	<div>110</div> <div>Male Out</div>	<div>28</div> <div>Male Capacity</div>
<div>32</div> <div>Female In</div>	<div>25</div> <div>Female Out</div>	<div>7</div> <div>Female Capacity</div>
<div>0</div> <div>Staff In</div>	<div>0</div> <div>Staff Out</div>	<div>0</div> <div>Staff Capacity</div>
<div>0</div> <div>Children In</div>	<div>0</div> <div>Children Out</div>	<div>0</div> <div>Children Capacity</div>
<div>10</div> <div>Group In</div>	<div>2</div> <div>Group Out</div>	<div>8</div> <div>Group Capacity</div>

Collapse ^

To view groups' data for a certain time period and generate report, please refer to [Report](#).

Data Type

Detection Line

Detection Region

Heat Map

Attention Region

Event

Line Cross Counting

Time Unit

Hour

Day

Month

Time Range

22/06/2025 07:00:00

-

23/06/2025 07:00:00

Line1

Individuals

Groups

Search

Users can also view the data through [periodic report](#) and [trigger report](#).

### View Direction Detection

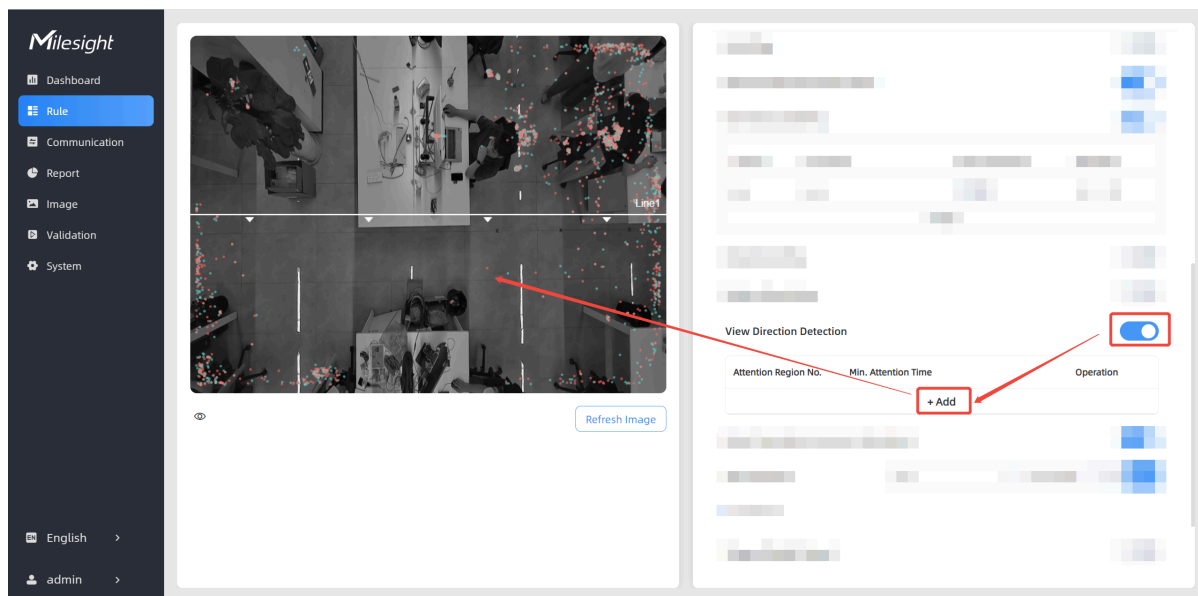
The device is able to effectively evaluate the actual reach of the advertisement by tracking the target's view track.

Rather than directly tracking the specific line of sight of the eyeballs, the device recognizes the direction of vision by detecting the orientation of the target's head. Therefore, if the target rotates eyes but keeps head still, the device may not accurately sense the change in line of sight.

**! Important:**

1. The operating installation height of this function is 2.2 ~ 4m for Standard Version (VS125) and 2.2~3.3m for Low-and-Wide Version (VS125-LW).
2. This feature is Not Supported when tracking mode is Feet Tracking.
3. This feature is only available in Standalone mode because the presentation of vision direction may differ when multiple devices are stitched.

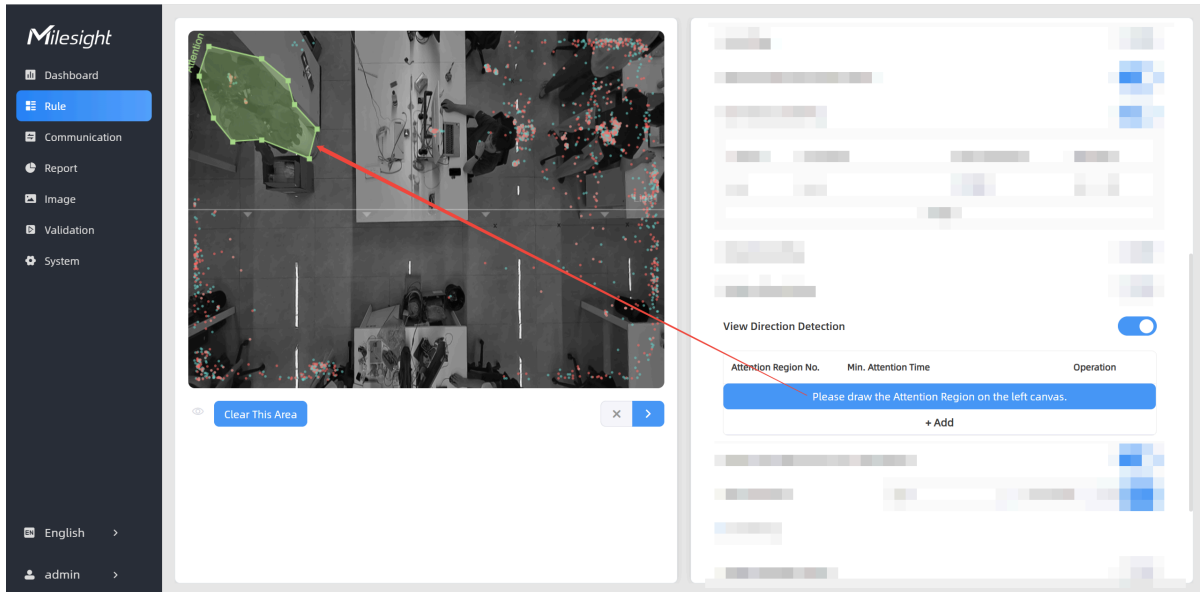
**Step 1:** Enable **View Direction Detection**, click **+Add** to drawing on the live view.




**Step 2:** Draw the Attention Region which requires attention to find out the effectiveness of such as billboards, new product displays, or shelves within.

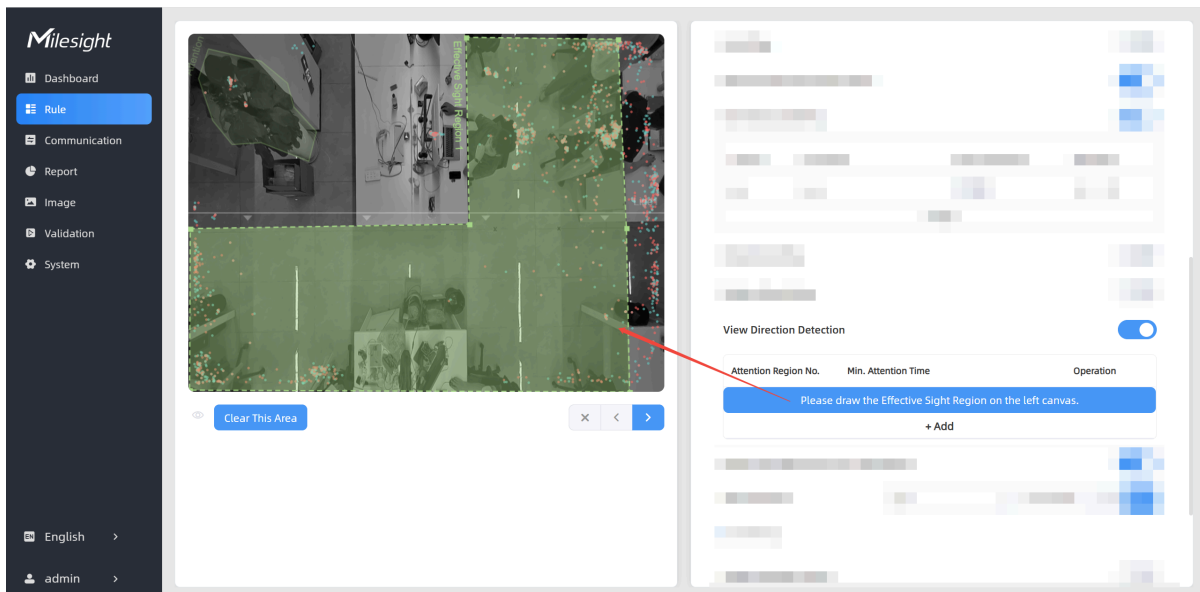
Left-click to start drawing and drag the mouse to draw an edge. Then left-click again to continue drawing a different direction edge. Right-click the mouse to complete the drawing. The region can be dragged to adjust the location and length. One device supports up to 6 regions with maximum 10 segments each.


Then click .



**Step 3:** Draw the Effective Sight Region. Within this region, the device analyzes the direction of the target's gaze, and if it overlaps with the Attention Region and remains there for more than 1 second, it begins to accumulate the duration of attention. If the line of sight moves out of the Attention Region, the timing is paused; when it overlaps again, accumulation resumes. Each device supports up to 6 regions, with a maximum of 10 segments per region.

Follow the same steps as in the previous step. Then click .



**Step 4:** Set Min. Attention Time. When the duration of the overlap of the target's gaze direction with the Attention Region exceeds the set threshold, it will be considered as a Effective Viewer. Click  to finish the configuration.

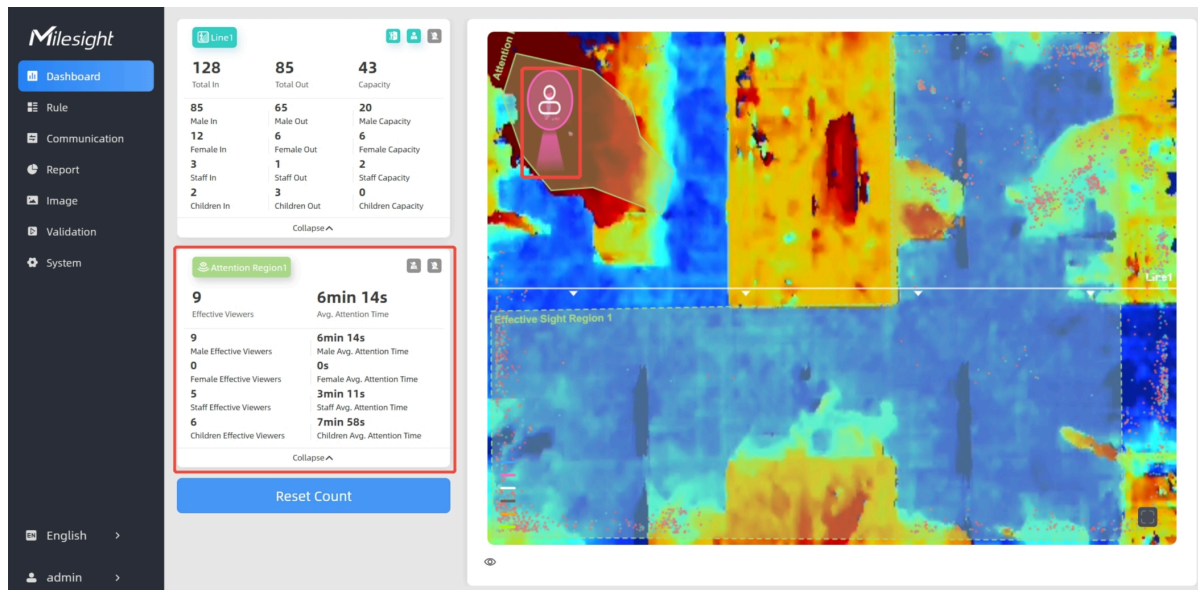
## | Advanced Properties

Min. Attention Time  
s(1~60)

3

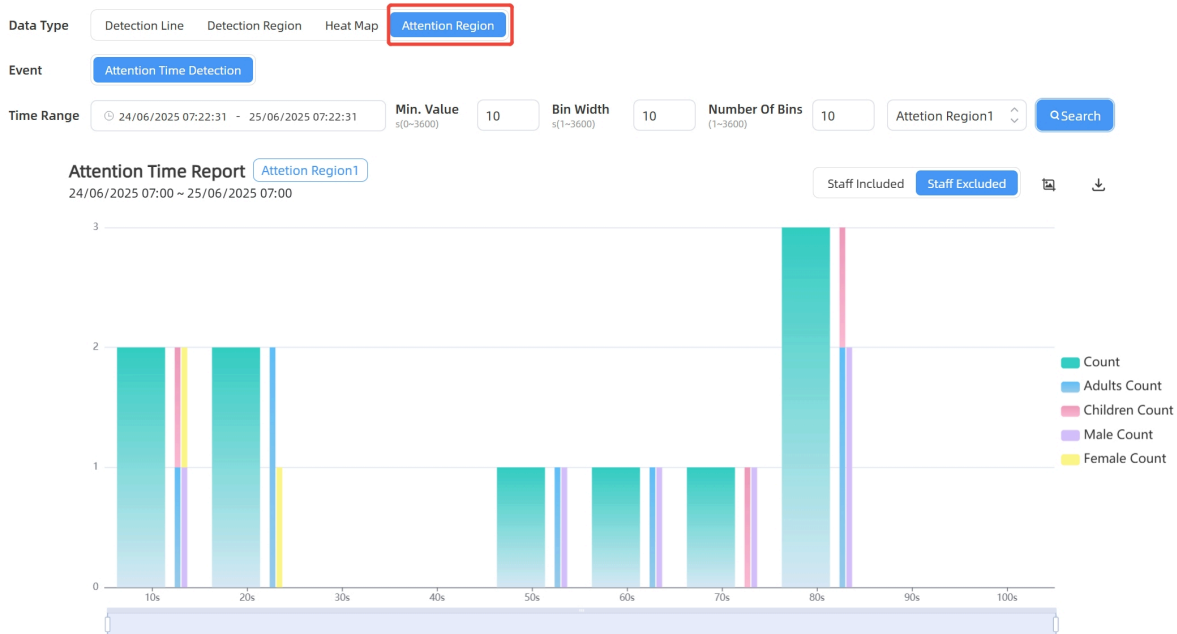


**Step 5:** Users can see the effect in [Dashboard](#).



To view attention region's data for a certain time period and generate report, please refer to [Report](#).





Users can also view "attention\_region\_total\_data" in [periodic report](#) and "attention\_region\_trigger\_data" in [trigger report](#).

## Obstacle Exclusion

When there is an immovable static obstacle within the detection range of the device, and the detection line or region cannot be adjusted to avoid the obstacle, this function can be activated to filter out obstacles similar to humans.

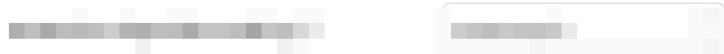
### Advanced Settings

Obstacle Exclusion



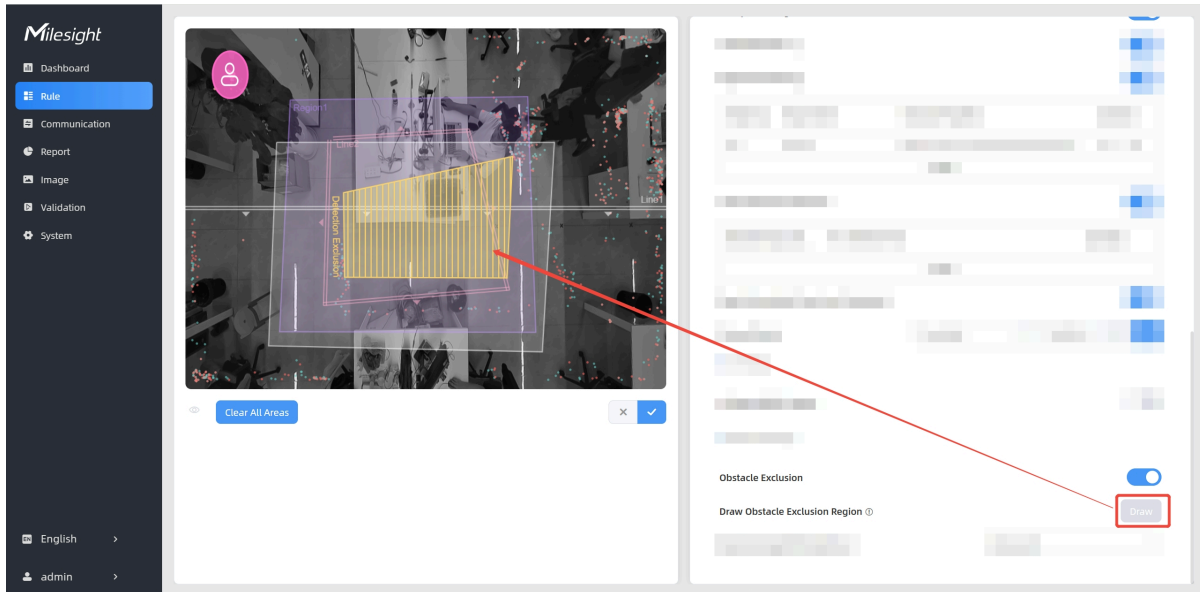
Draw Obstacle Exclusion Region ⓘ

**Draw**



**Step 1:** Enable **Obstacle Exclusion**, click **Draw** button.

**Step 2:** Left-click the live view to start drawing and drag the mouse to draw an edge. Left-click again to continue drawing a different direction edge. Right-click the mouse to complete the drawing.



The region can be dragged to adjust the location and length.

One device supports up to 4 regions with maximum 10 segments each.


**Step 3:** Choose the method of exclusion.

**Detection Exclusion:** Select it when you don't want to detect anything in this area. You can just draw the highest part of the obstacle, the device will use this highest part as a reference to automatically exclude this specific area.

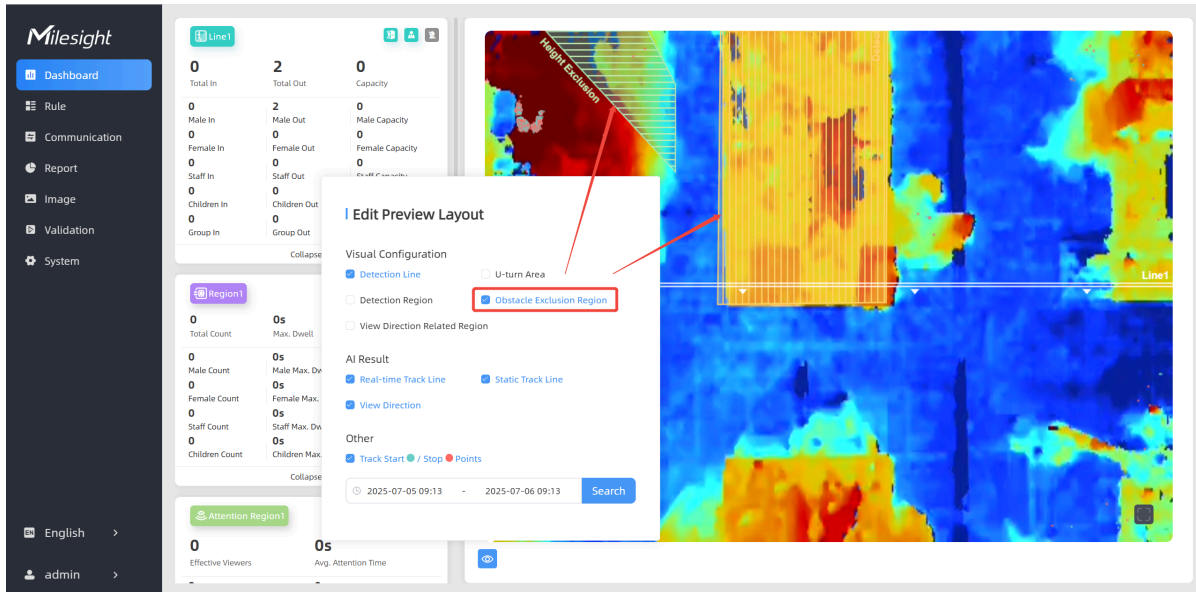
(For example, in a shelf scene, you can just frame the top end of the shelf, then the shelf won't be mistakenly detected as a person.)

**Height Exclusion:** Select it when you want to avoid mixing obstacles with targets and creating false detections. You can just box out the parts that are easy to confuse with the targets.

(For example, in the scene of a gate passage, you can draw the shape of the gate to avoid the device misjudging a child passing through as an adult, as the child may blend into the shape of the gate.)

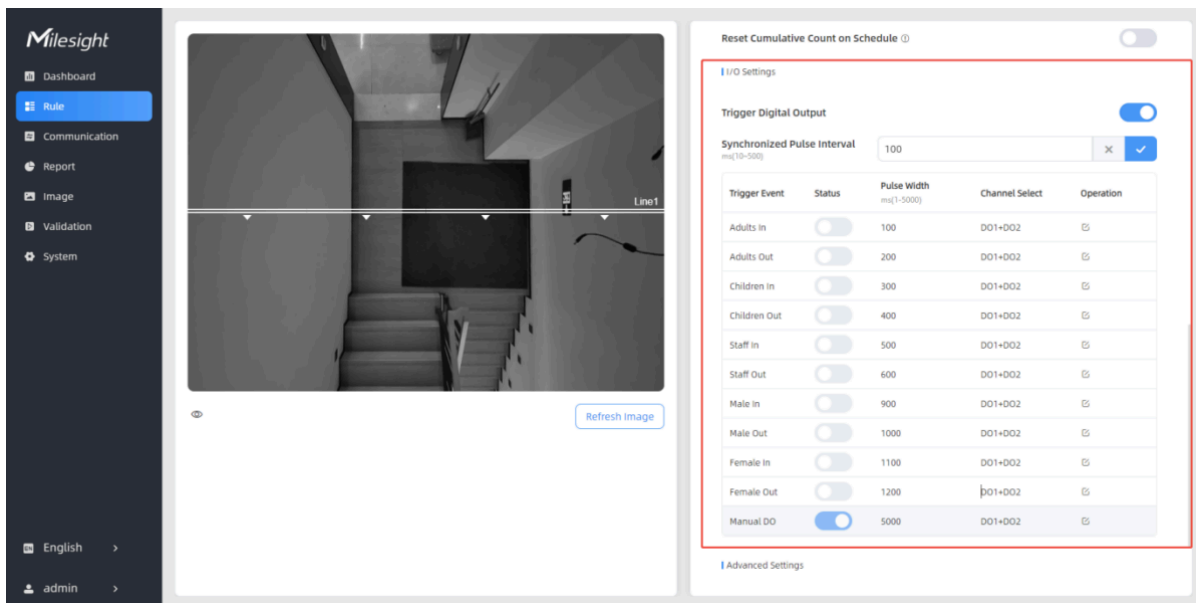
**Step 4:** Click  to complete drawing.

**Step 5:** Users can see the effect in [Dashboard](#).



## I/O Settings



























The device supports to send pulse signals when the target passes through the detection line. Please refer to the wiring diagram and use the Multi-interface Cable to connect the device in the correct sequence.




**Step 1:** Enable **Trigger Digital Output**, the digital output will send a preset width of high level.

**Step 2:** Fill in **Synchronized Pulse Interval**, the interval between multiple pulses when several people pass through or multiple events trigger at the same time.

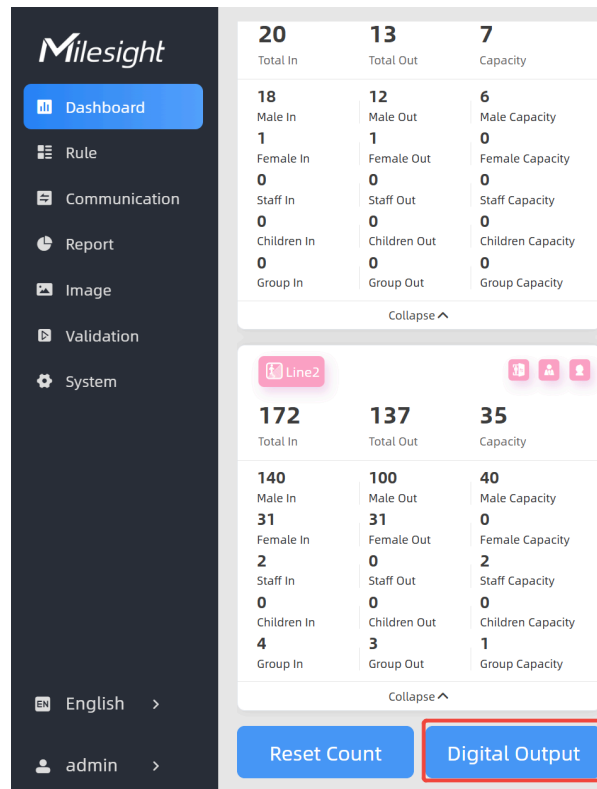
**Step 3:** Enable trigger events.

Trigger Event	Status	Pulse Width ms(1-5000)	Channel Select	Operation
Adults In		100	DO1+DO2	
Adults Out		200	DO1+DO2	
Children In		300	DO1+DO2	
Children Out		400	DO1+DO2	
Staff In		500	DO1+DO2	
Staff Out		600	DO1+DO2	
Group In		700	DO1+DO2	
Group Out		800	DO1+DO2	
Male In		900	DO1+DO2	
Male Out		1000	DO1+DO2	
Female In		1100	DO1+DO2	
Female Out		1200	DO1+DO2	
Manual DO		5000	DO1+DO2	

Parameters	Description
Trigger Event	<p>The events to trigger the DOs to send pulse signals.</p> <div>  <b>Note:</b>            If staff event triggers, sending staff pulse signals, does not synchronize gender or adult pulse signals.         </div>
Status	Enable or disable the event to trigger the output of a pulse signal.
Pulse Width	The duration of the pulse signal.
Channel Select	Select which DO port to output the pulse signal.

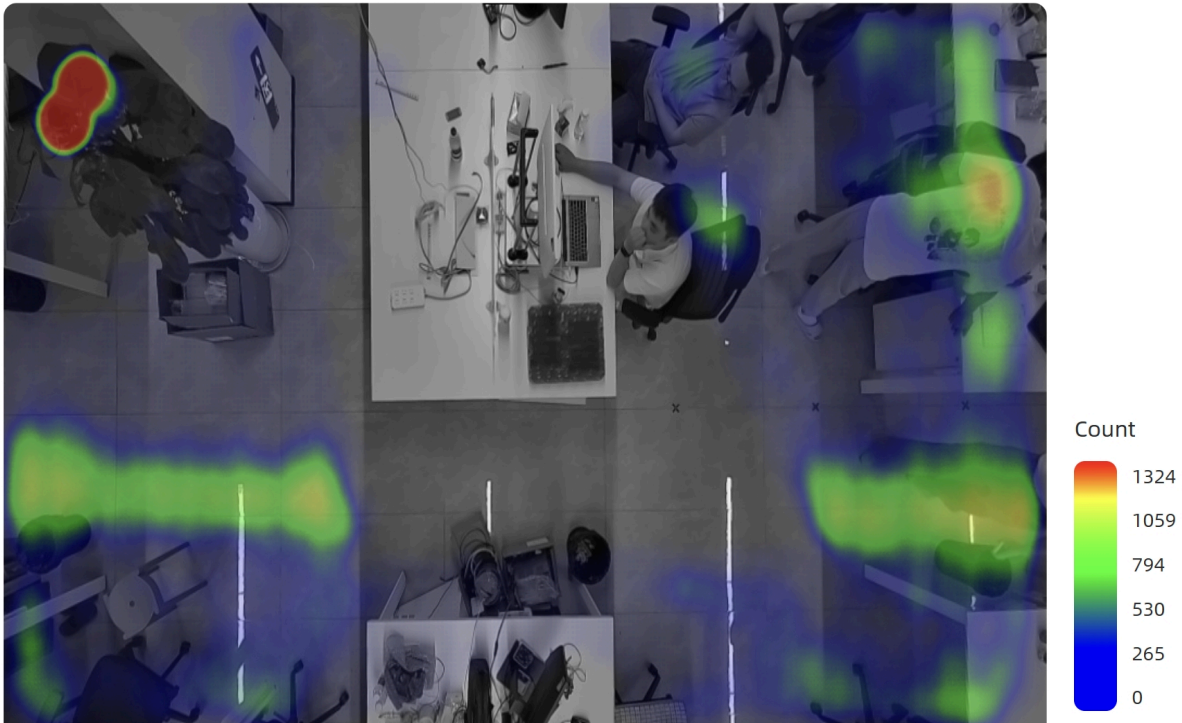
Parameters	Description
Operation	Click to edit the information.

**Step 4:** Users can see the effect in [Dashboard](#).



## Heat Map

Heat Map function analyzes personnel movement and displays intuitive and accurate statistical analysis results in different colors in a temporal or spatial pattern, as needed, to provide insights for better business management.



Support Motion Heat Map and Dwell Heat Map. The motion heat map shows where the most people flow. And the dwell heat map shows the areas where people stay for the longest time.

**Step 1:** Click to enable the **Heat Map** function, the device start to record.

**Step 2:** To view heat map's data for a certain time period and generate report, please refer to [Report](#).

<b>Data Type</b>	<input type="button" value="Detection Line"/> <input type="button" value="Detection Region"/> <input checked="" type="button" value="Heat Map"/> <input type="button" value="Attention Region"/>
<b>Event</b>	<input checked="" type="button" value="Motion Heatmap"/> <input type="button" value="Dwell Heatmap"/>
<b>Time Range</b>	<input type="button" value="🕒 22/06/2025 09:00:00 - 23/06/2025 09:00:00"/> <input checked="" type="button" value="🔍 Search"/>

## Multi-Device Stitching

### Overview

Multi-device stitching is mainly used to monitor a larger detection area than just the area covered by a single device. VS125 Series supports stitching up to 16 devices, with both the cellular and PoE versions being compatible for seamless integration, regardless of the version.

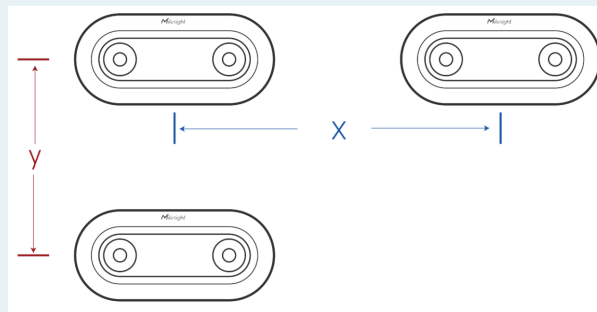
When using this feature, devices should be installed next to each other and ensure the **detection areas** are tangent or overlapping.



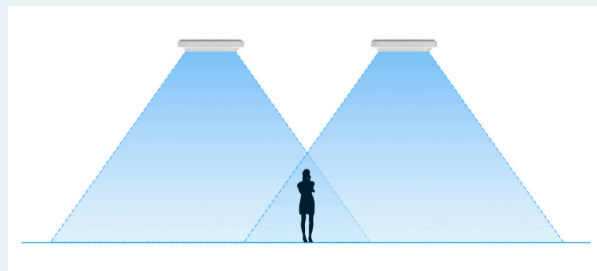
**Note:**

- VS125 and VS125-LW cannot be stitched with each other.
- The horizontal distance between the two devices must be less than x, and the vertical distance must be less than y.

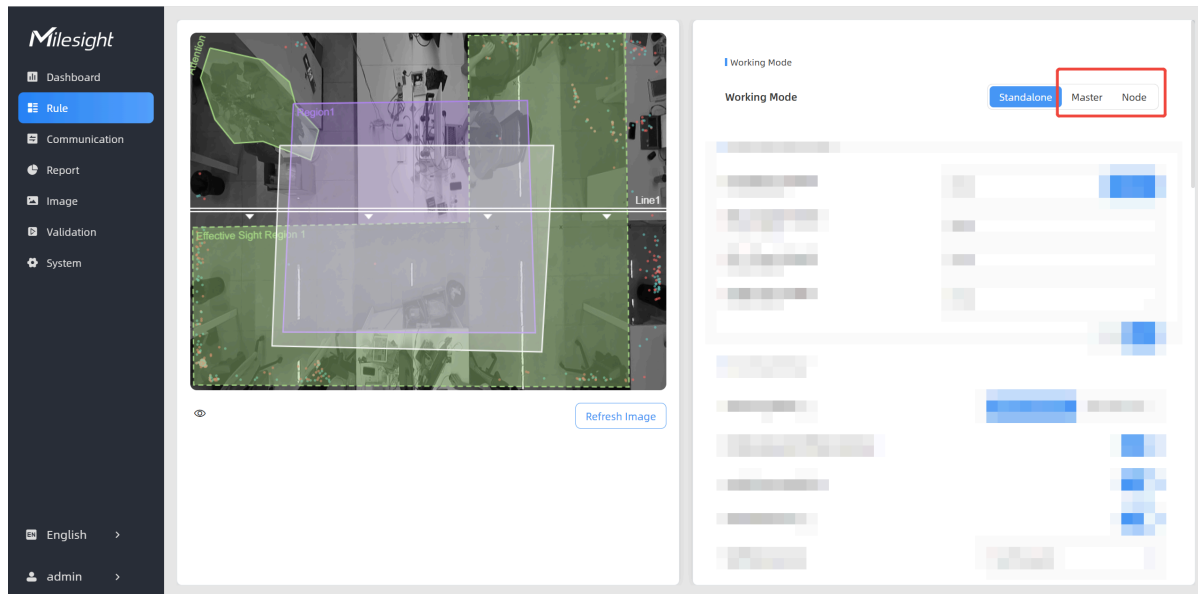
x and y indicates the detection range, refer to [Covered Detection Area](#) for the calculation formula.



- Ensure most targets near the edges of both devices' views can be fully captured and detected at the same time.



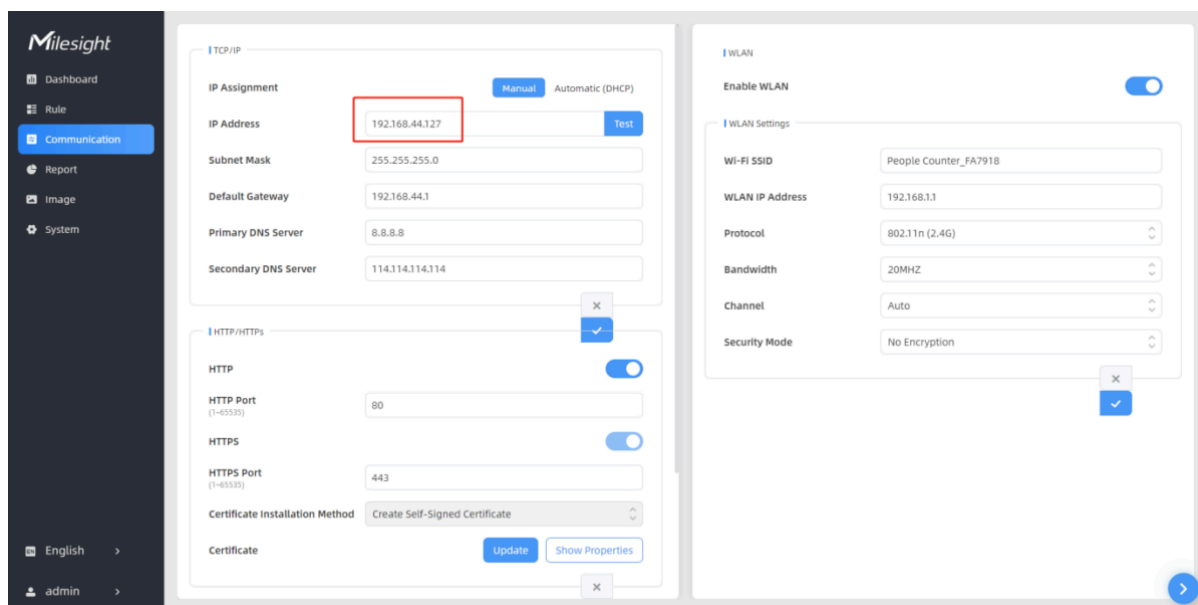
Before using this feature, set one device as **Master Mode** and other devices as **Node Mode**.



- **Master Mode:** Receive target tracks and view from the device, responsible for all counts, rule setting, data push and other functions.
- **Node Mode:** Only extends the view of the master device.

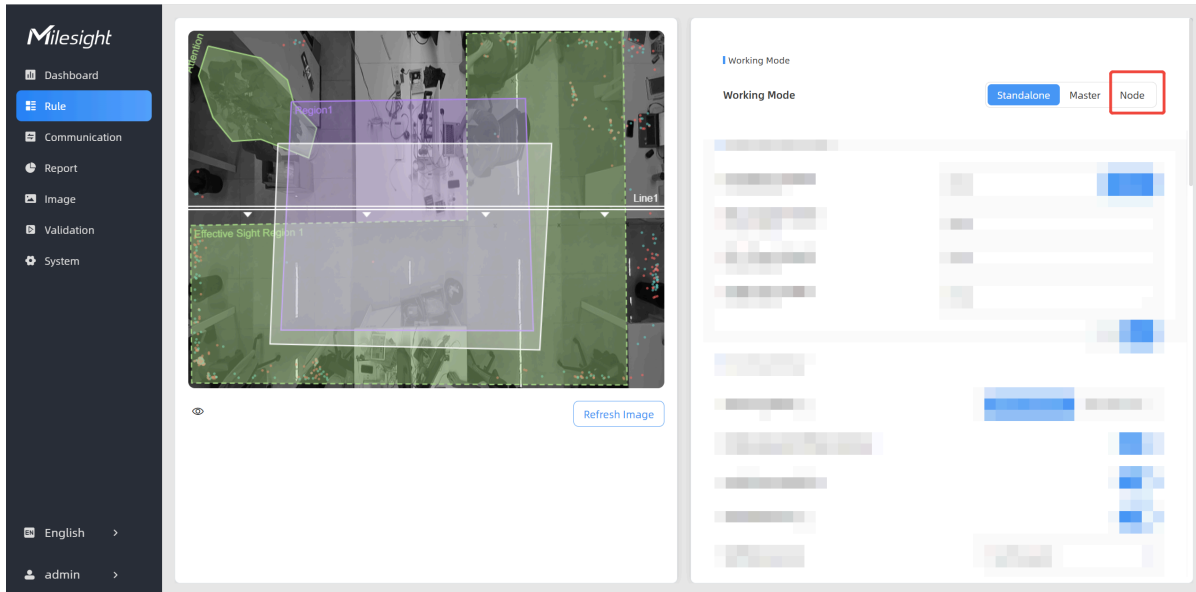
## Node Device Setting

**Step 1:** Access the web GUI of the node device, ensure the IP address is on the same network as the master device, so that the master device can detect the node device.

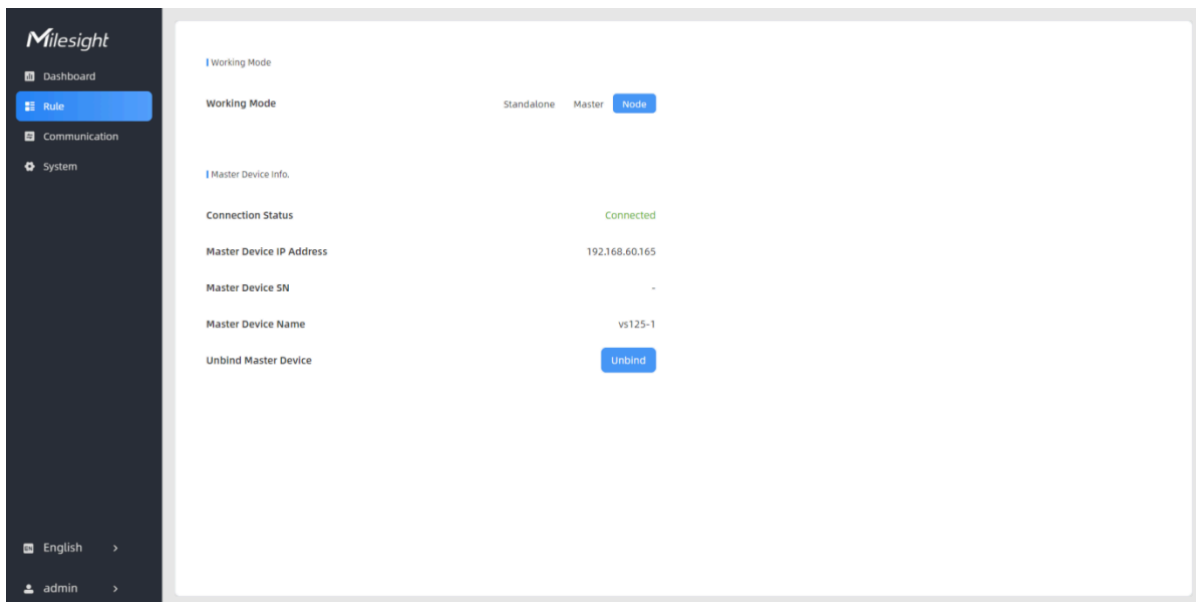


**Step 2:** Select work mode as Node and wait for the device to reboot.





Below is an explanation of the page and parameters for the node devices after successful stitching:



Parameters	Description
Connection Status	Show the connection status between the node device and master device.
Master Device IP Address	Show master device's IP address. When this IP address is under the same network with the node device, the node device can be bind to the master device.
Master Device SN	Show the master device's serial number.

Parameters	Description
Master Device Name	Show master device name.
Unbind Master Device	Click <b>Unbind</b> to release the connection status, this device will be deleted from the list of the master device.

## Master Device Setting

**Step 1:** Go to the master device web GUI, then click **Bind Node** in the Multi-Device List.

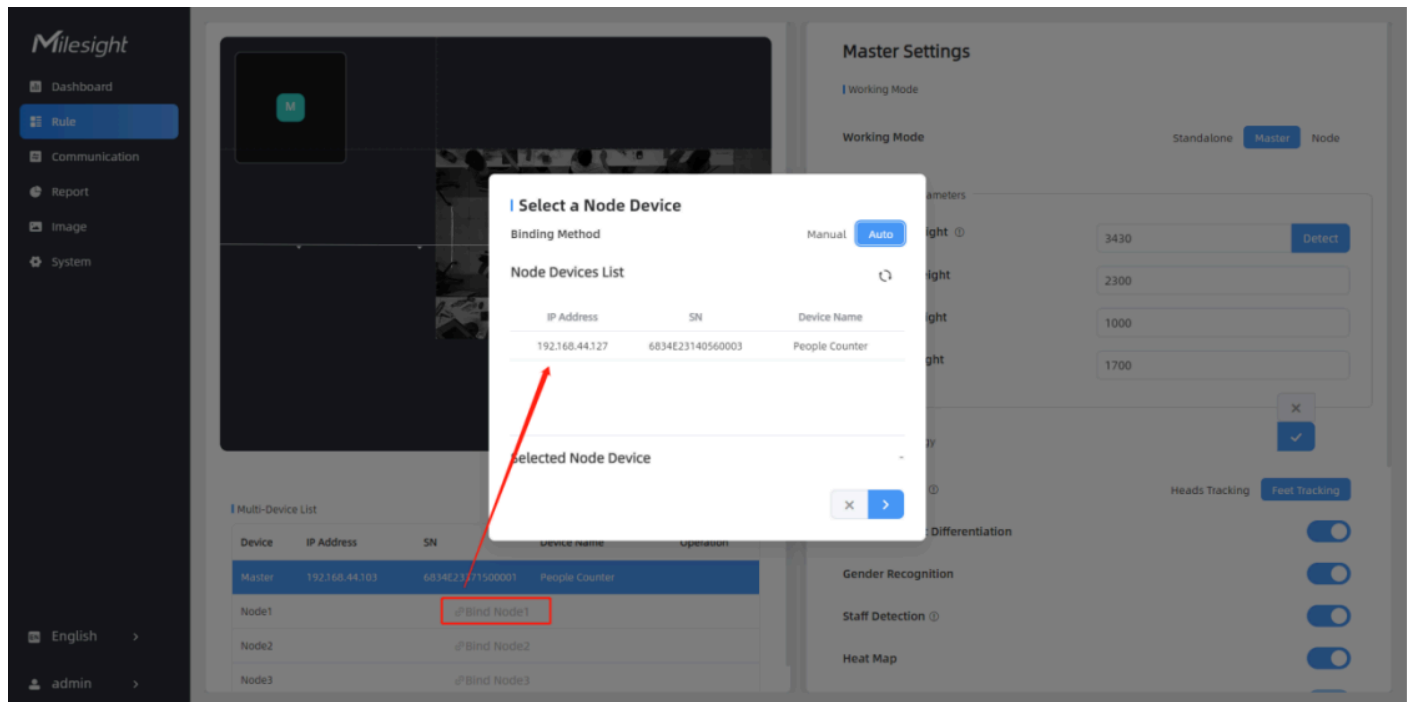
**Manual:** You can add a node device by the IP address, HTTP Port, Username or Password.



**Note:**

Please ensure that the device you want to add is on the same local network as the master device and has low latency.

**Auto:** The device will use multicast protocol to search for the unbound node devices under the same local network.



**Step 2:** Select the node device and type the login password of the node device.

### Confirm Authorization

Selected Node Device 192.168.44.127

Node Device Username

Node Device Password

**Step 3:** Fill in the **Installation Height** of the node device and relative position information if these parameters are already measured. If not, save the default settings.

Node Device Deployment Parameters

Installation Height  
mm(2000~6000)

Click the IP address on the right to access the preview of the stitched device.

### Bind the Node Device

Node Device Deployment Parameters

Installation Height  
mm(2000~6000)

Stitch Device Frame

Selected Node Device: 192.168.44.127

Stitching Point: (0/4)

Selected Stitched Device: 192.168.44.103

Stitching Point: (0/4)

Stitched Device

[192.168.44.103](#)

**Tips:**

- After image stitching, the device will clear the historical heatmap data.
- Please draw four points for each device to stitch device frame.
- The points can only be drawn on the floor in the frame.
- Please arrange the stitching points in a shape of a quadrangle.
- Please place the points as far from each other as possible, without being too close to the edges of the image.

**Important:**

If most detection targets cannot be fully displayed and detected on both devices at the same time on both devices at this time, please readjust the positions of the two devices.

Click on the parts that need to be overlapped on both frames to form a quadrilateral. It's recommended to place the overlapping area where detection targets rarely pass. If modifications are needed, please delete the corresponding points Point 3 . Click to complete the configuration.

### Bind the Node Device

Node Device Deployment Parameters

Installation Height  
mm(2000-6000)

×

✓

Stitch Device Frame

Selected Node Device: 192.168.44.127

Stitching Point: (4/4)

Point 1 Point 2 Point 3 Point 4

Selected Stitched Device: 192.168.44.103

Stitching Point: (4/4)

Point 1 Point 2 Point 3 Point 4

Stitched Device

192.168.44.103

Tips:

- After image stitching, the device will clear the historical heatmap data.
- Please draw four points for each device to stitch device frame.
- The points can only be drawn on the floor in the frame.
- Please arrange the stitching points in a shape of a quadrangle.
- Please place the points as far from each other as possible, without being too close to the edges of the image.

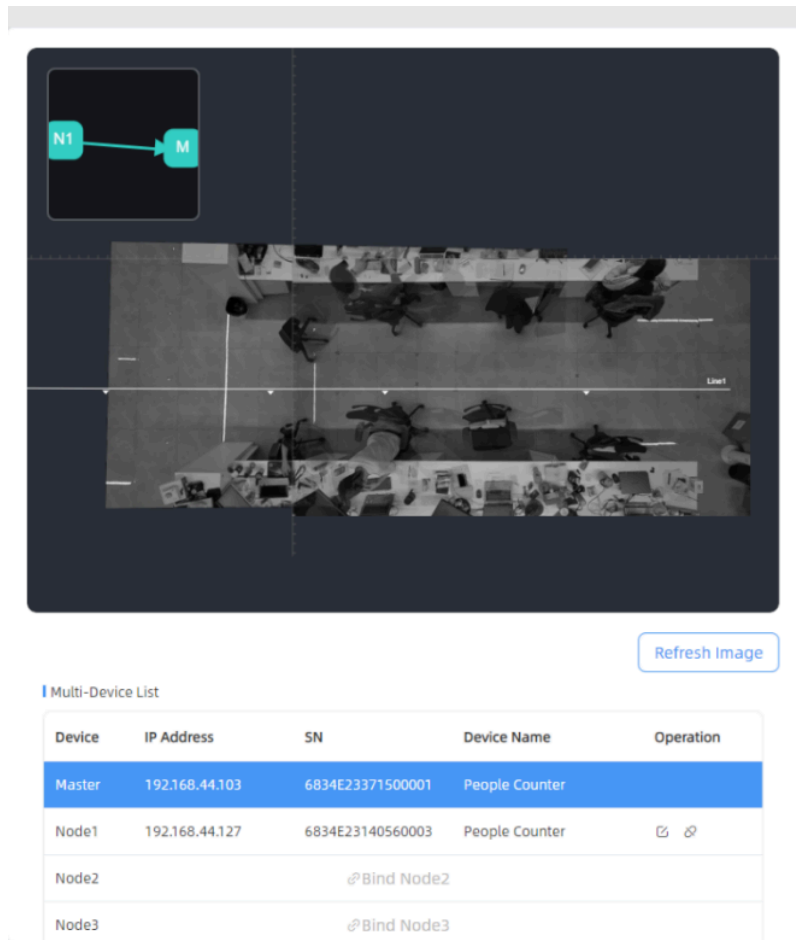
×

✓

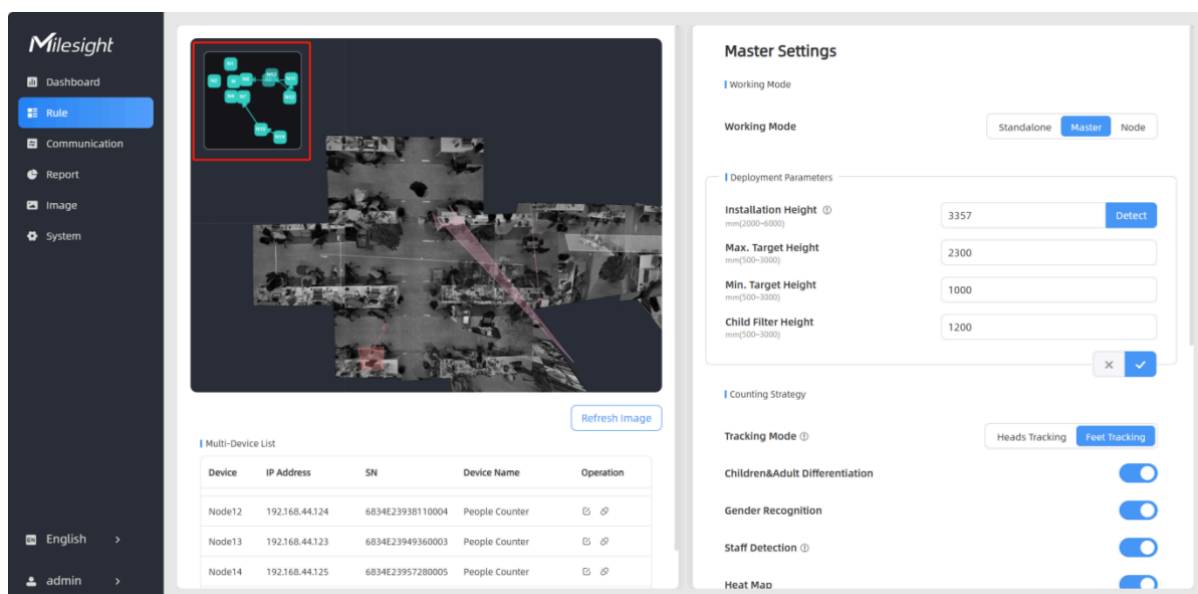
**Tip:**

You can use objects such as tiles, tables, or tape to mark the stitching points on the ground in overlapping areas. This makes devices stitching easier and aesthetically pleasing.

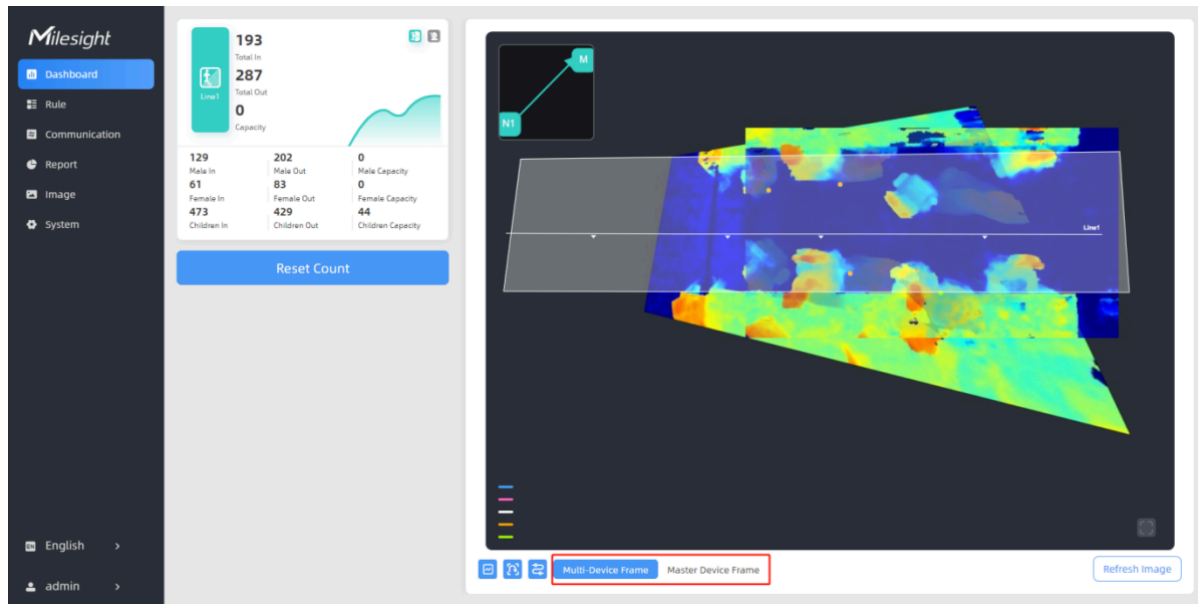
Below is the effect after stitching the two devices:



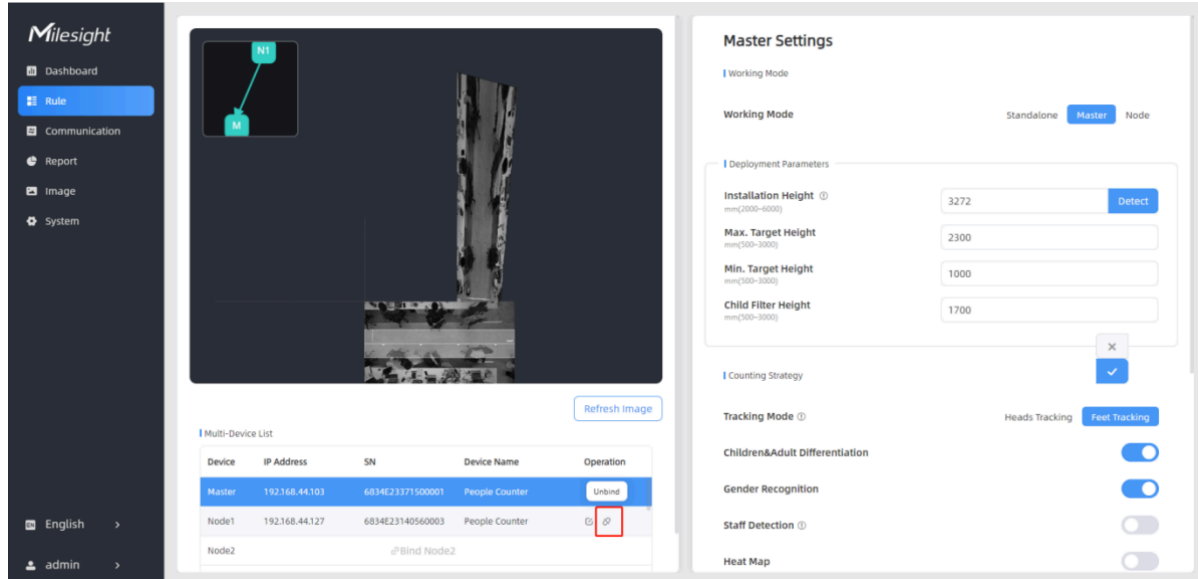
**Step 4:** For multiple devices, please follow step3 to stitch them sequentially. A small map in the upper left corner of the preview image shows the positions of the stitched devices.



**Step 5:** When all settings are completed, users can draw detection lines and even U-turn areas on the new stitching live view the same as standalone mode devices. The dashboard will automatically add two frames for viewing the stitching devices and the master device.



**Step 6:** Click **Unbind** to disconnect the node device if necessary.



## Communication

### Network Configuration

#### Cellular(Cellular Version Only)

The screenshot displays the Milesight web interface. On the left is a dark sidebar with navigation links: Dashboard, Rule, Communication (highlighted), Report, Image, and System. Below these are language and user options: English and admin. The main content area is divided into two panels. The left panel is titled 'Cellular' and shows 'Cellular Status' as 'Disconnected' with a 'Detail' button. Below this are 'Cellular Settings' including fields for APN, Username, Password, PIN Code, Authentication Type (set to None), a toggle for 'Restart When Dial-up failed', and ICMP settings (Server: 8.8.8.8, Max Retries: 3, Timeout: 5s, Interval: 15s). The right panel is titled 'WLAN' and shows 'Enable WLAN' as 'On'. It includes 'WLAN Settings' with fields for Wi-Fi SSID (People Counter\_343537), WLAN IP Address (192.168.1.1), Protocol (802.11n (2.4G)), Bandwidth (20MHz), Channel (Auto), and Security Mode (No Encryption). Both panels have save buttons at the bottom right.





Parameters		Description
Cellular	Cellular Status	<p>Display the connection status of the network, including “connect” and “disconnect”.</p> <p>You can also click “Detail” button to view the cellular status.</p>
Cellular Settings	APN	Enter the Access Point Name for cellular dial-up connection provided by local ISP. The max length is 31 characters.
	Username	Enter the username for cellular dial-up connection provided by local ISP. The max length is 31 characters.
	Password	Enter the password for cellular dial-up connection provided by local ISP. The max length is 31 characters.
	PIN Code	Enter a 4-8 characters PIN code to unlock the SIM.
	Authentication Type	Select the Authentication Type. None, PAP, CHAP, PAP and CHAP are optional.
	Roaming	Click to enable the Roaming.
	Restart When Dial-up Failed	Enable automatic device restart when multiple dial-up failed.

Parameters		Description
	ICMP Server	Configure the IP address of the ICMP detection server.
	ICMP Detection Max Retries	Set the maximum number of retries when ICMP detection failed.
	ICMP Detection Timeout	Configure ICMP detection timeout.
	ICMP Detection Interval	Configure ICMP detection interval.

### Cellular Status

Parameters		Description
Cellular Status	Refresh	Click this button to manually refresh the above status.
	Modem Status	<p>Show the corresponding detection status of the module and SIM card.</p> <ul style="list-style-type: none"> <li>• No SIM Card</li> <li>• SIM Card Error</li> <li>• PN Error</li> <li>• PIN Required</li> <li>• PUK Required</li> <li>• No Signal</li> <li>• Ready</li> <li>• Down SIM</li> </ul>
	Model	Show the model name of the cellular module
	Version	Show the version of the cellular module.
	Signal Level	Show the current signal strength of the network.
	Register Status	Show the connection status of the network, including "connect" and "disconnect".
	IMEI	Show the IMEI of the module.
	IMSI	Show IMSI of the SIM card.
	ICCID	Show ICCID of the SIM card.



Parameters		Description
	ISP	<p>Show the network provider which the SIM card registers on.</p> <div>  <b>Note:</b>            It will display "-" when the SIM card is not inserted or not recognized.         </div>
	Network Type	<p>Show the connected network type, such as LTE and 3G.</p> <div>  <b>Note:</b>            It will display "-" when the device is not connected to network.         </div>
	PLMN ID	Show the current PLMNID, including MCC, MNC, LAC, and Cell ID.
	LAC	<p>Show the location code of the SIM card.</p> <div>  <b>Note:</b>            It will display "-" when the SIM card is not inserted or not recognized.         </div>
	Cell ID	<p>Show the Cell ID of the SIM card location.</p> <div>  <b>Note:</b>            It will display "-" when the SIM card is not inserted or not recognized.         </div>
	Network Status	<p>Show the Network Status, IP Address, Netmask, Gateway and DNS Address of the current network. If the SIM card is not inserted or not recognized, it will display 0.0.0.0.</p>
	IP Address	
	Netmask	
	Gateway	
	DNS	

Parameters		Description
	Connection Duration	Show the cellular dial-up connection duration.

## TCP/IP

The device use Ethernet for data transmission and multi-device stitching.

For cellular version, data reporting is depended on the current network. When cellular network and Ethernet are all available, data reporting prioritizes the cellular network.

TCP/IP

IP Assignment

Manual

Automatic (DHCP)

IP Address

192.168.44.125

Test

Subnet Mask

255.255.255.0

Default Gateway

192.168.44.1

Primary DNS Server

8.8.8.8

Secondary DNS Server

114.114.114.114

×

✓

Parameters	Description
IP Assignment	Manual or Automatic (DHCP) is optional.
IP Address	Set the IPv4 address of the Ethernet port, the default IP is <b>192.168.5.220</b> .
Test	Click to test if the IP is conflicting.
Subnet Mask	Set the Netmask for the Ethernet port.
Default Gateway	Set the gateway for the Ethernet port's IPv4 address.
Primary DNS Server	Set the primary IPv4 DNS server.
Secondary DNS Server	Set the secondary IPv4 DNS server.

### HTTPs (PoE Version Only)

HTTPs

HTTPs

443

(1~65535)

Certificate Installation Method

Create Self-Signed Certificate

Certificate

Update

Show Properties

✕

✓

Parameters	Description
HTTPS	Start or stop using HTTPS.
HTTPS Port	Web GUI login port via HTTPS, the default is 443.
Certificate Installation Method	<p><b>Create Self-signed Certificate:</b> upload the “.pem/.crt/.cer” format certificates issued by awarding organizations for verification.</p> <p><b>Direct Installation Certificate:</b> upload the custom CA certificate, client certificate and secret key for verification.</p>
Certificate	Create the SSL certificate.

### 802.1x Protocol (PoE Version Only)

The IEEE 802.1x is an authentication protocol to allow access to networks with the use of RADIUS server.

802.1x

Authentication Type
MD5-Challenge

Enable
☒

EAPOL Protocol Version
802.1x-2001

Username

Password

Confirm Password

Parameters	Description
Authentication Type	It's fixed as MD5-Challenge.
Enable	Enable or disable 802.1x authentication.
EAPOL Protocol Version	802.1x-2001 or 802.1x-2004 is optional.
Username	Set the username for 802.1x authentication.
Password	Set the password for 802.1x authentication.
Confirm Password	Enter the password again.

## WLAN

WLAN

Enable WLAN

WLAN Settings

Wi-Fi SSID
People Counter\_FA7918

WLAN IP Address
192.168.1.1

Protocol
802.11n (2.4G)

Bandwidth
20MHZ

Channel
Auto

Security Mode
WPA2-PSK

Cipher
AES

Wi-Fi Password

X
✓

Parameters	Description
Enable WLAN	Enable or disable Wi-Fi feature. If disabled, users can use button to enable it.
Wi-Fi SSID	The unique name for this device Wi-Fi access point, defined as People Counter_xxxxxx (can be found on the device label).
WLAN IP Address	Configure WLAN IP address for web access, the default IP address is 192.168.1.1.
Protocol	802.11g (2.4 GHz) and 802.11n (2.4 GHz) are optional.
Bandwidth	20 MHz or 40 MHz are optional.
Channel	Select the wireless channel. Auto, 1,...11 are optional.
Security Mode	Fixed is WPA2-PSK.
Cipher	Fixed is AES .

Parameters	Description
Wi-Fi Password	Customize the password, 8-63 characters, including numbers, lowercase letters, uppercase letters and special characters.

## Recipient and API

### Recipient

The device supports to add data receivers (supports HTTP(s)/MQTT(s)). The device will proactively push data to the receivers according to the configured reporting scheme. For details on the data push format, please refer to [Communication Protocol](#).

Besides, users can get the people counting data or configure the device via [CGI](#).

Topic ⓘ

device/report/\$devsn

Parameters	Description
Recipient Name	Show the recipient name.
URL/Host	Show the URL/host of HTTP(s) server or MQTT broker.
Protocol	Show the report protocol.
Status	Show connection status from device to HTTP(s) server or MQTT broker.
Operation	Click to edit the information or delete the recipient.



**Note:**


Up to 8 receivers can be added.

## Recipient Settings

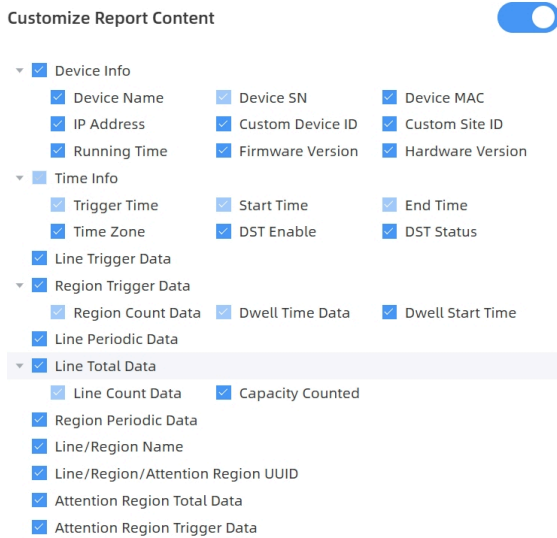
Recipient Name	<input type="text" value="Recipient"/>
Report Protocol	<input type="text" value="MQTT"/>
Host	<input type="text"/>
Port (1~65535)	<input type="text"/>
ClientID	<input type="text"/>
Username	<input type="text"/>
Password	<input type="password"/>
Topic ⓘ	<input type="text"/>
QoS	<input type="text" value="QoS 0"/>
TLS	<input checked="" type="checkbox"/>

×
>

Parameters	Description
Recipient Name	Customize the recipient name.
Report Protocol	HTTP(s) or MQTT is optional.
<b>HTTP(s)</b>	
URL	The device will post the people counting data in json format to this URL.
Connection Test	Click <b>Test</b> to send test message to URL to check connectivity.
Username	The username used for authentication.
Password	The password used for authentication.
<b>MQTT</b>	

Parameters	Description
Host	MQTT broker address to receive data.
Port	MQTT broker port to receive data.
Client ID	<p>Client ID is the unique identity of the client to the server.</p> <p>It must be unique when all clients are connected to the same server, and it is the key to handle messages at QoS 1 and 2.</p>
Username	The username used for connecting to the MQTT broker.
Password	The password used for connecting to the MQTT broker.
Topic	<p>Topic name used for publishing.</p> <p>These strings will be replaced with device info when subscribing to a topic:</p> <p>\$devsn: Device SN</p> <p>\$prdmd: Product Model</p> <p>\$devid: Customized Device ID</p> <p>\$siteid: Customized Site ID</p> 
QoS	QoS0, QoS1, and QoS2 are optional.
TLS	Enable the TLS encryption in MQTT communication.
Certificate Type	<p>CA Signed Server or Self Signed is optional.</p> <p><b>CA signed server certificate:</b> verifying with the certificate issued by Certificate Authority (CA) that is pre-loaded on the device.</p> <p><b>Self signed certificates:</b> upload the custom CA certificates, client certificates and secret key for verification.</p>
<b>Report Strategy</b>	



Parameters	Description
Trigger Report	Report immediately when there is a change of the line crossing people counting number or region people counting number.
Periodic Report	<p>Select the periodic report of “On the Dot” or “From Now On”.</p> <p><b>On the Dot:</b> The device will report at the top of each hour. For example, When the interval is set to 1 hour, it will report at 0:00, 1:00, 2:00 and so on; when the interval is set to 10 minutes, it will report at 0:10, 0:20, 0:30, and so on.</p> <p><b>From Now On:</b> Begin reporting from this moment onwards and regularly report based on the interval cycle.</p>
Periodic Report Scheme	
Period	
Data Retransmission	Enable to resend stored data packets from the disconnected period when the device's network connection is restored. Every recipient supports to receive 50,000 pieces of data at most.
Customize Report Content	<p>Customizable selection of content to be reported, avoiding data redundancy.</p> 

## MQTT API (Cellular Version Only)

The device provides MQTT API to support to receive [downlink commands](#) from MQTT broker to get people counting data and achieve the configuration.

MQTT API

Status

Disconnected

Host

112.48.19.183

Port

(1~65535)

10566

Topic

12345

Client ID

Username

admin

Password

••••••••

QoS

QoS 1

^

v


TLS

☐

×

✓

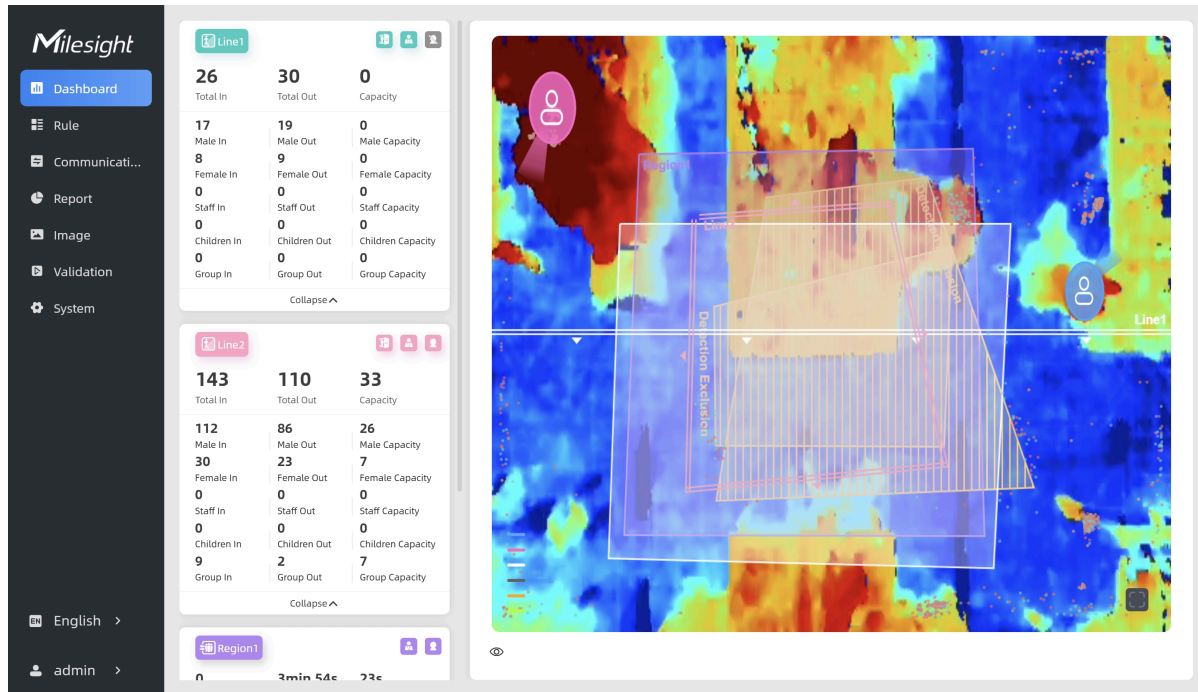
Parameters	Description
Status	Show connection status between device and MQTT broker.
Host	MQTT address to receive data.
Port	MQTT port to receive data.
Topic	<p>Topic name used for publishing.</p> <p>These strings will be replaced with device info when subscribing to a topic:</p> <p>\$devsn: Device SN</p> <p>\$prdmd: Product Model</p> <p>\$devid: Customized Device ID</p> <p>\$siteid: Customized Site ID</p>





Parameters	Description
	
Client ID	<p>Client ID is the unique identity of the client to the server.</p> <p>It must be unique when all clients are connected to the same server, and it is the key to handle messages at QoS 1 and 2.</p>
Username	The username used for connecting to the MQTT.
Password	The password used for connecting to the MQTT.
QoS	QoS0, QoS1, QoS2 are optional.
TLS	Enable the TLS encryption in MQTT communication.
Certificate Type	<p>CA Signed Server or Self Signed is optional.</p> <p><b>CA signed server certificate:</b> verifying with the certificate issued by Certificate Authority (CA) that is pre-loaded on the device.</p> <p><b>Self signed certificates:</b> upload the custom CA certificates, client certificates and secret key for verification.</p>


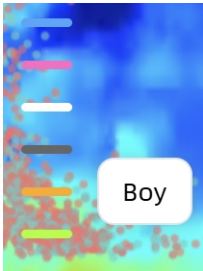
## Data Presentation

After completing the configuration of both the basic counting and advanced property, the device will offer multiple data presentation options, including dashboards, reports, command line outputs, etc. You can choose the appropriate method to view the data according to your needs.

## Dashboard

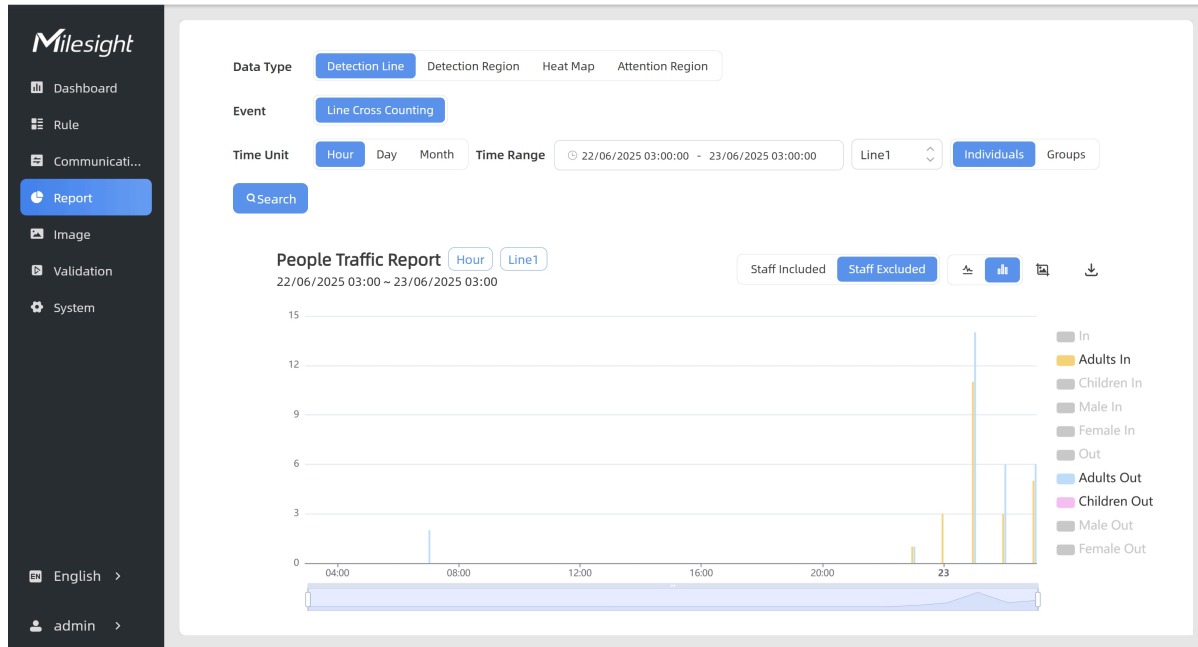


Parameters	Description
  	<p><b>Hide Capacity:</b> Hide the total count data capacity;</p> <p><b>Children Excluded:</b> Exclude children data from statistical data.</p> <p><b>Staff Excluded:</b> Exclude staff data from statistical data.</p>
Reset Count	Clear all accumulated entrance and exit people counting values.
Digital Output	<p>Click to output high level signal from alarm out interface when Manual DO event is enabled.</p> <p><b>Alarm Output:</b> dry contact</p>
	<p>Click to edit preview layout to show or hide the lines, areas and track points as needed.</p> <p><b>Real-time Track Line:</b> Show or hide the target's track line through the live view.</p>

Parameters	Description
	<p><b>Static Track Line:</b> Show or hide the history of the target's track line in the live view. Supports up to 1000 historical tracks, which will disappear when you refresh the page.</p> <p>Visual Configuration</p> <div> <input checked="" type="checkbox"/> Detection Line           <input checked="" type="checkbox"/> U-turn Area         </div> <div> <input checked="" type="checkbox"/> Detection Region           <input checked="" type="checkbox"/> View Direction Related Region         </div> <p>AI Result</p> <div> <input checked="" type="checkbox"/> Real-time Track Line           <input checked="" type="checkbox"/> Static Track Line         </div> <div> <input checked="" type="checkbox"/> View Direction         </div> <p>Other</p> <div> <input checked="" type="checkbox"/> Track Start <span style="color: green;">●</span> / Stop <span style="color: red;">●</span> Points         </div> <div> <input type="text" value="2025-06-24 07:45"/> - <input type="text" value="2025-06-25 07:45"/> <input type="button" value="Search"/> </div> <div> <p> <b>Note:</b></p> <p>If some of the options are not shown, please check if the corresponding function of the rule is enabled.</p> </div>
	<p>Show the property of targets.</p>

## Report

The device supports visual line chart or bar chart generation to display people traffic and supports report exporting. Before using this feature, do ensure that the device time is correct on **System** page.

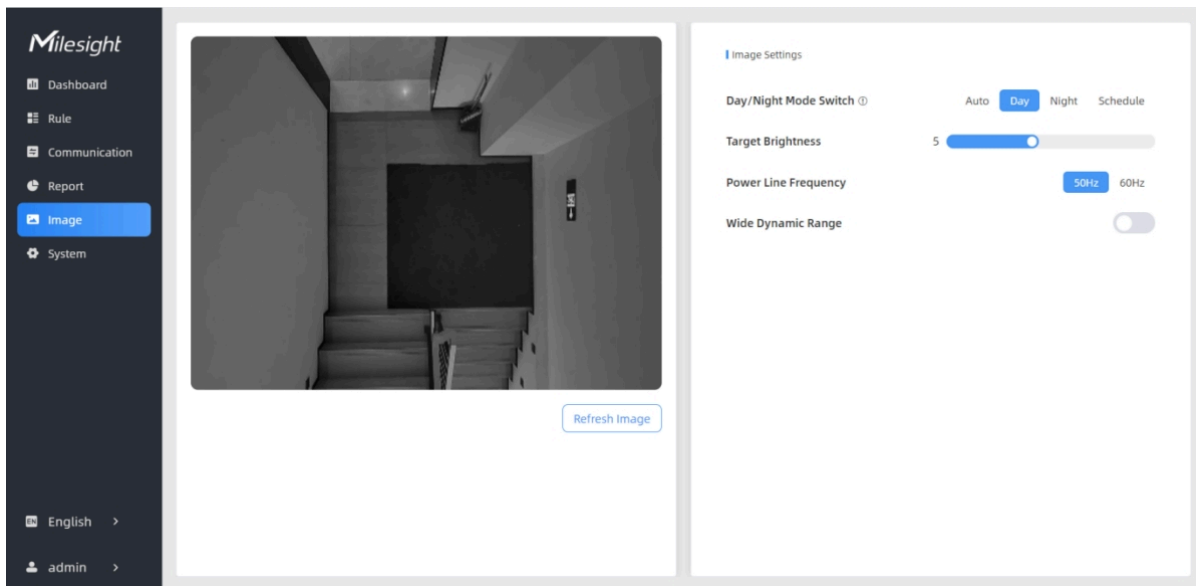


Parameters	Description
Data Type	Select the data type which you want to query the report, the relevant events will be displayed accordingly.
Event	
Time Unit	Select the unit to generate the graph or export the data.
Time Range	Select the time range to generate the graph.
	Click to generate or refresh the graph according to the previously selected option.
Staff Included	Select whether to include staff counting values on the graph.
	Select the display type as line or bar.
	Click to download the chart screenshot.
	Export the historical traffic data as CSV file according to the selected option. The device can store up to one million data records to CSV file.

Parameters	Description
<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #00FF00; margin-right: 5px;"></span> In</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #00BFFF; margin-right: 5px;"></span> Adults In</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #FFB6C1; margin-right: 5px;"></span> Children In</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #9370DB; margin-right: 5px;"></span> Out</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #FF6347; margin-right: 5px;"></span> Adults Out</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #FFD700; margin-right: 5px;"></span> Children Out</li> </ul>	The chart displays multiple data types. Click on any category will hide it from the chart.

## Image

The device has great lighting adaptability that allows it to work well in low light or even complete dark environments. It supports day and night mode switching based on the no-photosensitive scheme.

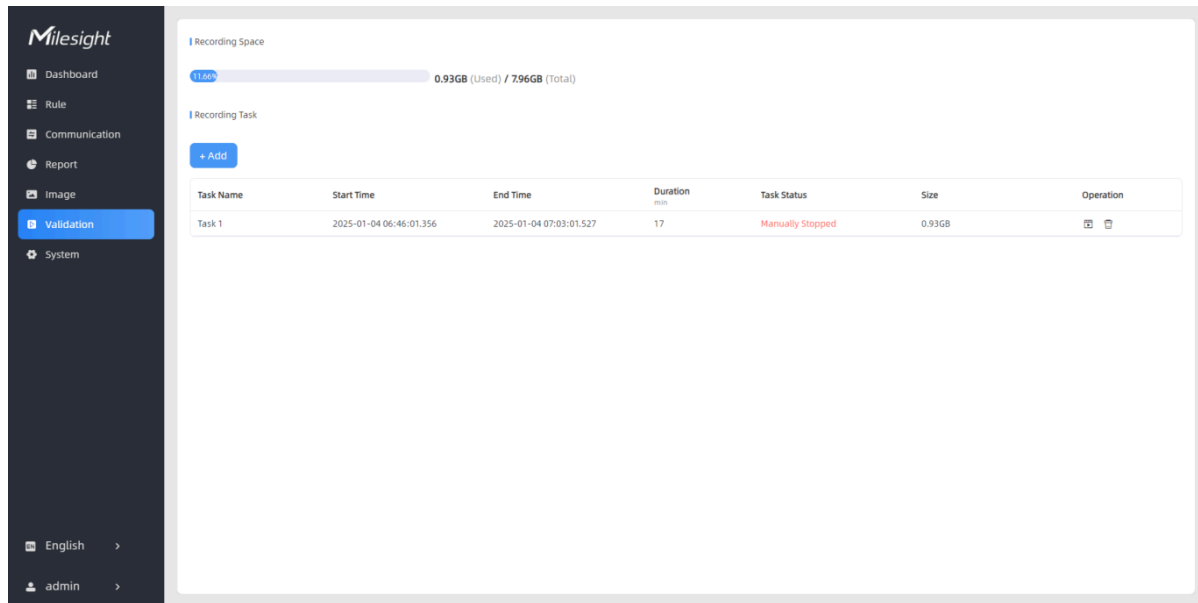


Parameters	Description
Day/Night Mode Switch	<p>Set image mode. Auto, Day, Night and Schedule are optional.</p> <p><b>Day:</b> black and white mode;</p> <p><b>Night:</b> infrared based black and white mode;</p> <p><b>Auto:</b> automatic switch day and night according to image brightness;</p> <p><b>Schedule:</b> switch day and night according to the configured schedule.</p>
Sensitivity	Set the sensitivity of the automatic day and night switching. The higher sensitivity, the easier to switch day and night.

Parameters	Description
Night Mode Duration	Set the schedule of the night mode.
Target Brightness	Set the brightness of the target to make image clearer. The higher brightness is, the brighter the target brightness is.
Power Line Frequency	Choose the frequency to avoid the image flashing.
Wide Dynamic Range	Enable or disable WDR. Enabling WDR can capture more detail in scenes where light conditions vary greatly.

## Validation

Video validation function can assist users in verifying the accuracy of people counting by setting up a video task of recording.



Parameters	Description
Task Name	Show the task name.
Start/End Time	Show the start time and end time of this video.
Duration	Show the length of the video.
Task Status	Show the video task status.
Size	Show the video size.



Parameters	Description
Operation	Click to check the video details, stop recording or delete the task.
<a href="#">+ Add</a>	Click to add a video task. One device can add up to 50 tasks.

## | Set a Task of Recording

Task Name

Taskname

Recording Mode

Record Now

Setting Time

Start Time

🕒 04/01/2025 07:52:13.000

Duration

30

min(1~60)

✕

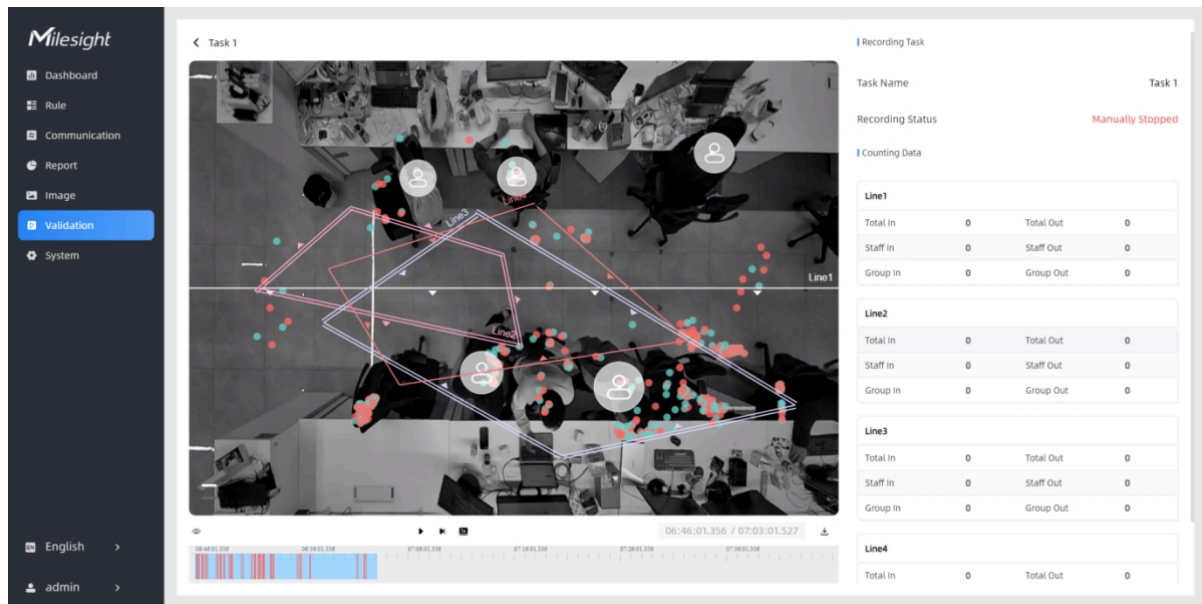
✓


Parameters	Description
Task Name	Customize a name for this task.
Recording Mode	Record Now or Setting Time is optional.
Start Time	Set the start recording time.
Duration	Set the duration of the recording, the duration of all tasks should not be more than 60 minutes.





### Note:

- The setting time range of different tasks can not be overlap.
- Detection rules cannot be modified during the recording process.
- If the validation videos need to be played locally, please use the specialized player provided by Mileight: [Mileight VS Player](#).



Parameters		Description
 Edit Pre-view Layout	Visual Configuration	Show/Hide relevant rules in the recording footage. <div> <input type="checkbox"/> Detection Line <input checked="" type="checkbox"/> U-turn Area </div> <div> <input checked="" type="checkbox"/> Detection Region <input checked="" type="checkbox"/> Obstacle Exclusion Region </div>
	AI Result	Show/Hide track line in the recording footage. <p><b>Real-time Track Line:</b> real-time trajectory line of the targets</p> <p><b>Static Track Line:</b> historical trajectory line of the targets</p>
	Other	Show/Hide track points in the recording footage.

Parameters		Description
Playback Button		Rewind/Pause/Play/Forward (supports switching between 0.5x, 1x, 2x, and 4x playback speed).
	15:20:50.035 / 15:21:04.000	Start time and end time of the recording.
		Download video stream footage to check problem.

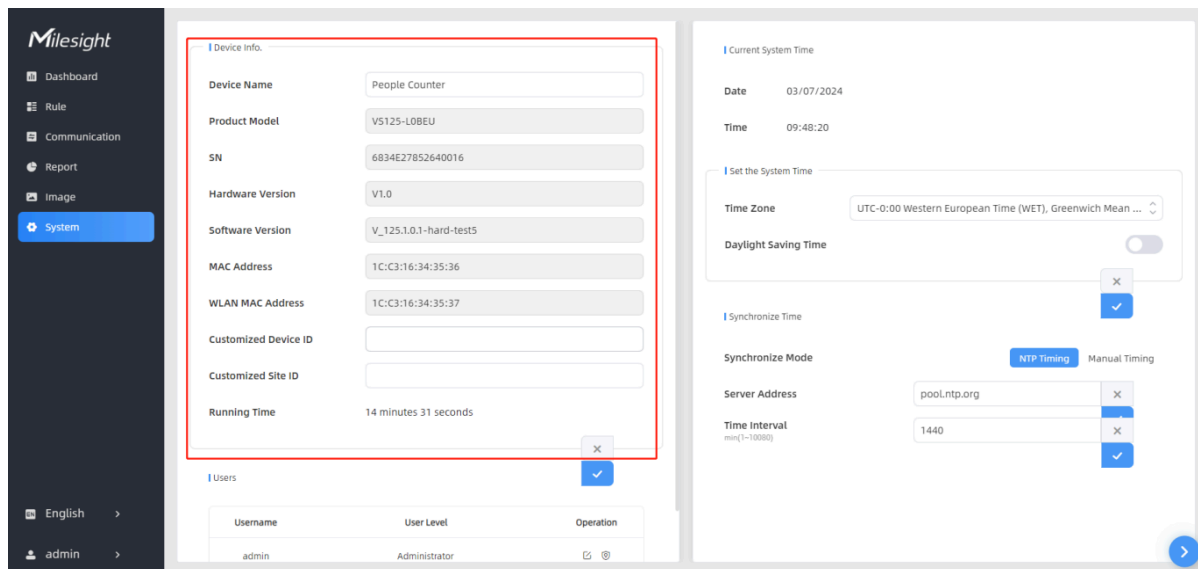
**Note:**

The playback progress bar of video stream footage highlights the video frame where the data changes.

## System

### Device Info

All information about the hardware and software can be checked on this page. Besides, users can modify the device name, customize device ID and site ID for large amounts of devices management.





The screenshot displays the Milesight System management interface. On the left is a dark sidebar with navigation options: Dashboard, Rule, Communication, Report, Image, and System (highlighted in blue). Below these are language and user settings.

The main content area is divided into two panels. The left panel, titled "Device Info", contains a red-bordered box with the following fields:
 

- Device Name: People Counter
- Product Model: VS125-LOBEU
- SN: 6834E27852640016
- Hardware Version: V1.0
- Software Version: V\_125.1.0.1-hard-test5
- MAC Address: 1C:C3:16:34:35:36
- WLAN MAC Address: 1C:C3:16:34:35:37
- Customized Device ID: (empty field)
- Customized Site ID: (empty field)
- Running Time: 14 minutes 31 seconds

 Below this box is a "Users" section with a table:
 



Username	User Level	Operation
admin	Administrator	 


The right panel, titled "Current System Time", shows:
 

- Date: 03/07/2024
- Time: 09:48:20
- Set the System Time section with a Time Zone dropdown (set to UTC-0:00 Western European Time (WET), Greenwich Mean ...), a Daylight Saving Time toggle (off), and a Synchronize Time button (checked).
- Synchronize Mode section with NTP Timing (selected) and Manual Timing (disabled).
- Server Address: pool.ntp.org
- Time Interval: 1440 min (range 1-10000)

## User

Users

Username	User Level	Operation
admin	Administrator	 
<a href="#">+ Add User</a>		

Parameters	Description
	<p>You can change the login password of this device.</p> <div> <div>Users modify</div> <div> <div>Username</div> <div>admin</div> </div> <div> <div>User Level</div> <div>Administrator</div> </div> <div> <div>Administrator Password</div> <div></div> </div> <div> <div>New Password</div> <div></div> </div> <div> <div>Confirm</div> <div></div> </div> <div> <div>At least:</div> <ul style="list-style-type: none"> <li>8 characters</li> <li>2 types of characters: Number, letter and symbol</li> </ul> </div> <div> <div>×</div> <div>✓</div> </div> </div>

Parameters	Description
	<div data-bbox="592 264 1188 854"> <p><b>Secure Question Settings</b> <span>Already Set</span></p> <p> <b>Password</b> <input type="text"/> </p> <p> <b>Security Question1</b> <input type="text" value="What is your lucky number?"/> </p> <p> <b>Answer1</b> <input type="text"/> </p> <p> <b>Security Question2</b> <input type="text" value="What is your favorite sport?"/> </p> <p> <b>Answer2</b> <input type="text"/> </p> <p> <b>Security Question3</b> <input type="text" value="What is your favorite game?"/> </p> <p> <b>Answer3</b> <input type="text"/> </p> <p> <input type="button" value="x"/> <input type="button" value="✓"/> </p> </div>
<p>+ Add User</p>	<p>Click to add a viewer, who will only have access to the "Dashboard" and "Report" interfaces.</p> <div data-bbox="592 1008 1188 1514"> <p><b>Add User</b></p> <p> <b>Username</b> <input type="text" value="viewer"/> </p> <p> <b>User Level</b> <input type="text" value="Viewer"/> </p> <p> <b>Password</b> <input type="text"/> </p> <p> <b>Confirm</b> <input type="text"/> </p> <p> <b>At least:</b> <ul style="list-style-type: none"> <li>8 characters</li> <li>2 types of characters: Number, letter and symbol</li> </ul> </p> <p> <input type="button" value="x"/> <input type="button" value="✓"/> </p> </div>

## Time Configuration

Current System Time

Date

25/06/2025

Time

03:04:51

Set the System Time

Time Zone

UTC-0:00 Western European Time (WET), Greenwich M...

Daylight Saving Time

☒

Start Time

Mar.

Last

Sun.

02:00

End Time

Oct.

Last

Sun.

03:00

DST Bias

60

min

✕

✓

Synchronize Time

Synchronize Mode

NTP Timing

Manual Timing

Server Address

pool.ntp.org

✕

✓

Time Interval

1440

min(1~10080)

✕

✓

Parameters	Description
Time Zone	Choose the time zone for your location.
Daylight Saving Time	Enable or disable Daylight Saving Time (DST). <b>Start Time:</b> the start time of DST time range. <b>End Time:</b> the end time of DST time range. <b>DST Bias:</b> the DST time will be faster according to this bias setting.
Synchronize Mode	NTP Timing or Manual Timing is optional.
Server Address	NTP server address to sync the time.
Time Interval	Set the interval to sync time with NTP server.
Setting Time	Set the device time manually.

Parameters	Description
Synchronize with computer time	Synchronize the time with your computer.

## Remote Management

Milesight provides remote management service for this device via Milesight DeviceHub platform or Milesight Development Platform. Before connecting, do ensure the device is connected to the network and Internet connection is stable.

Remote Management

Remote Management

Platform
IoT Development Platform

Status
Disconnected

Platform Settings

Remote Management Service

Auto Provisioning ①

Data Transfer Service

Periodic Report

Periodic Report Scheme
On the Dot From Now On

Period
1h

Trigger Report ①

✕ ✓


Parameters	Description
<b>Remote Management</b>	
Remote Management	Enable or disable to manage the device through Milesight platforms.
Platform	DeviceHub or IoT Development Platform is optional.
Status	Show the connection status between the device and the DeviceHub.
<b>IoT Development Platform</b>	

Parameters	Description
<b>Remote Management</b>	
Remote Management Service	Enable to change the device settings via Milesight Development platform.
Auto Provisioning	Enable to receive and deploy the configurations from Milesight Development Platform after the device is connected to Internet.
Data Transfer Service	Report people counting data to Milesight Development platform.
<b>DeviceHub 2.0 (PoE Version Only)</b>	
Server Address	IP address or domain of the DeviceHub 2.0 management server.
Synchronize Device Name	Enable or disable to synchronize device name on devicehub 2.0.
Synchronize Customized ID	Customize the device ID and site ID.
Parameters	Description
<b>Security Service</b>	
SSH	Enable or disable SSH access. The SSH port is fixed as 22.



## System Maintenance

Hardware Settings

LED Indicator Switch 

---

Reset

Recovery device basic configuration

Basic Recovery

Recovery device to factory settings

All Recovery

---

Reboot

Reboot the Device

Reboot


---


Upgrade

Software Version


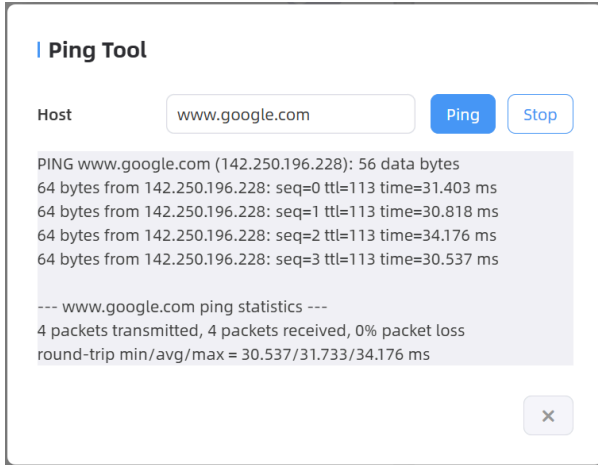
V\_125.1.0.3-a3

Upgrade Image



Upgrade 

Parameters	Description
Hardware Settings	<b>LED Indicator Switch:</b> Enable or disable LED indicator when device is in normal operation.
Reset	<b>Recovery device basic configuration:</b> keep the IP settings and user information when resetting.
	<b>Recovery device to factory settings:</b> reset device to factory default, which needs to verify admin password.
Reboot	Restart the device immediately.
Upgrade	Click the folder icon and select the upgrading file, then click the <b>Upgrade</b> button to upgrade. The update will be done when the system reboots successfully.

Parameters	Description
	 <b>Note:</b> The upgrade process takes about 1-10 minutes. Do not turn off the power and complete automatic restart after the upgrade.
Backup and Restore	<b>Export Config File:</b> Export configuration file.
	<b>Import Config File:</b> Click the file icon and select the configuration file, click <b>Import</b> button to import configuration file.
Diagnostics	<b>System Log:</b> Download log files that can be used for troubleshooting.
	<b>IP Ping:</b> Type the IP address or URL to test network connection. 

# Chapter 7. Communication Protocol

The device will post the people counting data in json format to HTTP URL or MQTT broker. For details on the configuration method, please refer to [Recipient](#).

## Trigger Report

### Line Crossing People Counting

```
{
  "device_info":
  {
    "cus_device_id": "123456",
    "cus_site_id": "789123",
    "device_mac": "24:E1:24:FA:0C:6C",
    "device_name": "People Counter",
    "device_sn": "6384E16179950009",
    "firmware_version": "V_125.1.0.1",
    "hardware_version": "V1.0",
    "ip_address": "192.168.60.183",
    "running_time": 58,
    "wlan_mac": "24:E1:24:54:23:0A"
  },
  "network_info": //Cellular version only
  {
    "network_status": "true", //True is connected, False is disconnected
    "iccid": "89860117838009934120",
    "imei": "860425047368939",
    "cell_id": "340db80",
    "lac": "5299"
  },
  "line_trigger_data":
  [
    {
      "children": {
        "female_in": 8,
        "female_out": 2,
        "in": 14,
```

```

    "male_in": 8,
    "male_out": 2,
    "out": 6
  },
  "group": {
    "in": 0,
    "out": 0
  },
  "staff": {
    "female_in": 0,
    "female_out": 0,
    "in": 0,
    "male_in": 0,
    "male_out": 0,
    "out": 0
  },
  "total": {
    "female_in": 20,
    "female_out": 22,
    "in": 27,
    "male_in": 20,
    "male_out": 22,
    "out": 27
  },
  "line": 1,
  "line_name": "Line11111111111111111111111111111111",
  "line_uuid": "9a0440de-3188-4f6d-b886-bb20c97bd26b"
},
{
  "children": {
    "female_in": 8,
    "female_out": 2,
    "in": 14,
    "male_in": 8,
    "male_out": 2,
    "out": 6
  },

```

```

"group": {
  "in": 0,
  "out": 0
},
"staff": {
  "female_in": 0,
  "female_out": 0,
  "in": 0,
  "male_in": 0,
  "male_out": 0,
  "out": 0
},
"total": {
  "female_in": 20,
  "female_out": 22,
  "in": 27,
  "male_in": 20,
  "male_out": 22,
  "out": 27
},
"line": 3,
"line_name": "Line33333333333333333333333333333333",
"line_uuid": "82ffe54d-0191-484b-a2fc-495628a8f2a1"
}
],
"time_info":
{
  "dst_status": false,
  "enable_dst": true,
  "time": "2024-05-30T20:11:32+08:00",
  "time_zone": "UTC+8:00 China Standard Time (CT/CST)"
}
}

```

## Region People Counting

```

{
  "device_info":

```

```

{
  "cus_device_id": "123456",
  "cus_site_id": "789123",
  "device_mac": "24:E1:24:FA:0C:6C",
  "device_name": "People Counter",
  "device_sn": "6384E16179950009",
  "firmware_version": "V_125.1.0.1",
  "hardware_version": "V1.0",
  "ip_address": "192.168.60.183",
  "running_time": 105,
  "wlan_mac": "24:E1:24:54:23:0A",
},
"network_info": //Cellular version only
{
  "network_status": "true", ////True is connected, False is disconnected
  "iccid": "89860117838009934120",
  "imei": "860425047368939",
  "cell_id": "340db80",
  "lac": "5299"
},

"region_trigger_data":
{
  "region_count_data":
[
  {
    "total": {
      "current_female": 0,
      "current_male": 1,
      "current_total": 2
    },
    "children": {
      "current_female": 0,
      "current_male": 1,
      "current_total": 2
    },
    "staff": {

```

```

        "current_female": 0,
        "current_male": 1,
        "current_total": 2
    },
    "region": 1,
    "region_name": "Region1",
    "region_uuid": "bd1e6ce2-e113-4ce4-a9b6-0633f7083cac"
}
]
},
"time_info":
{
    "dst_status": false,
    "enable_dst": true,
    "time": "2024-05-30T20:12:20+08:00",
    "time_zone": "UTC+8:00 China Standard Time (CT/CST)"
}
}

```

## Dwell Time Detection

```

{
    "device_info":
    {
        "cus_device_id": "123456",
        "cus_site_id": "789123",
        "device_mac": "24:E1:24:FA:0C:6C",
        "device_name": "People Counter",
        "device_sn": "6384E16179950009",
        "firmware_version": "V_125.1.0.1",
        "hardware_version": "V1.0",
        "ip_address": "192.168.60.183",
        "running_time": 106,
        "wlan_mac": "24:E1:24:54:23:0A"
    },
    "network_info": //Cellular version only
    {
        "network_status": "true", ////True is connected, False is disconnected
    }
}

```

```

"iccid": "89860117838009934120",
"imei": "860425047368939",
"cell_id": "340db80",
"lac": "5299"
},

"region_trigger_data":
{
  "dwell_time_data":
  [
    {
      "children": false,
      "duration": 96799,
      "dwell_end_time": "2024-05-30T20:12:20+08:00",
      "dwell_start_time": "2024-05-30T20:10:43+08:00",
      "people_id": 5,
      "region": 1,
      "region_name": "Region1",
      "region_uuid": "bd1e6ce2-e113-4ce4-a9b6-0633f7083cac",
      "gender": "male",
      "staff": true
    }
  ]
},

"time_info":
{
  "dst_status": false,
  "enable_dst": true,
  "time": "2024-05-30T20:12:20+08:00",
  "time_zone": "UTC+8:00 China Standard Time (CT/CST)"
}
}

```

## Effective Viewers-Single track disappears

```

{
  "device_info": {
    "cus_device_id": "123456",

```



```

"cus_site_id": "789123",
"device_mac": "24:E1:24:FA:0C:6C",
"device_name": "People Counter11",
"device_sn": "6384E16179950009",
"firmware_version": "V_125.1.0.4",
"hardware_version": "V1.0",
"ip_address": "192.168.60.183",
"running_time": 58
},
"network_info": {
  "network_status": "true",
  "iccid": "89860117838009934120",
  "imei": "860425047368939",
  "cell_id": "340db80",
  "lac": "5299"
},
"attention_region_trigger_data": {
  "region_attention_time_data": [
    {
      "region": 1,
      "region_uuid": "c2cff789-8311-4a73-8ff3-9348cf4fa0d9",
      "children": false,
      "attention_time_ms": 96799,
      "people_id": 5,
      "gender": "male",
      "staff": true
    },
    {
      "region": 2,
      "region_uuid": "c2cff789-8311-4a73-8ff3-9348cf4fa0d9",
      "children": false,
      "attention_time_ms": 96799,
      "people_id": 5,
      "gender": "male",
      "staff": true
    }
  ]
}

```

```

},
"time_info": {
  "dst_status": false,
  "enable_dst": true,
  "time": "2024-05-30T20:11:32+08:00",
  "time_zone": "UTC+8:00 China Standard Time (CT/CST)"
}
}

```

## Periodic Report

```

{
  "device_info": {
    "cus_device_id": "123456",
    "cus_site_id": "789123", //PoE version only
    "device_mac": "24:E1:24:FA:0C:6C", //PoE version only
    "device_name": "People Counter11",
    "device_sn": "6384E16179950009",
    "firmware_version": "V_125.1.0.4",
    "hardware_version": "V1.0",
    "ip_address": "192.168.60.183",
    "running_time": 141,
    "wlan_mac": "24:E1:24:54:23:0A"
  },
  "network_info": {//Cellular version only
  "network_status": "true", //True is connected, False is disconnected.
  "iccid": "89860117838009934120",
  "imei": "860425047368939",
  "cell_id": "340db80",
  "lac": "5299"
},
  "line_periodic_data": [{
    "line": 1,
    "line_name": "Line11111111111111111111111111111111",
    "line_uuid": "9a0440de-3188-4f6d-b886-bb20c97bd26b",
    "total": {
      "female_in": 0,
      "female_out": 0,

```



```

    },
    "children": {
      "female_in": 0,
      "female_out": 0,
      "in": 0,
      "male_in": 0,
      "male_out": 0,
      "out": 0
    },
    "staff": {
      "female_in": 0,
      "female_out": 0,
      "in": 0,
      "male_in": 0,
      "male_out": 0,
      "out": 0
    },
    "group": {
      "in": 0,
      "out": 0
    }
  }
],
"line_total_data": [{
  "line": 1,
  "line_name": "Line11111111111111111111111111111111",
  "line_uuid": "9a0440de-3188-4f6d-b886-bb20c97bd26b",
  "children": {
    "female_in_counted": 0,
    "female_out_counted": 0,
    "in_counted": 0,
    "male_in_counted": 0,
    "male_out_counted": 0,
    "out_counted": 0
  },
  "total": {
    "female_in_counted": 0,

```

```

    "female_out_counted": 0,
    "in_counted": 0,
    "male_in_counted": 0,
    "male_out_counted": 0,
    "out_counted": 0,
    "capacity_counted": 0
  },
  "staff": {
    "female_in_counted": 0,
    "female_out_counted": 0,
    "in_counted": 0,
    "male_in_counted": 0,
    "male_out_counted": 0,
    "out_counted": 0
  },
  "group" {
    "in_counted": 0,
    "out_counted": 0
  }
},
"region_data": {
  "dwell_time_data": [{
    "avg_dwell_time": 308367,
    "children_avg_dwell_time": 0,
    "children_max_dwell_time": 0,
    "female_avg_dwell_time": 0,
    "female_max_dwell_time": 519934,
    "male_avg_dwell_time": 0,
    "male_max_dwell_time": 96799,
    "max_dwell_time": 519934,
    "staff_max_dwell_time": 1522,
    "staff_avg_dwell_time": 1522,
    "region": 1,
    "region_name": "Region1",
    "region_uuid": "bd1e6ce2-e113-4ce4-a9b6-0633f7083cac"
  }
}

```

```

},
"region_count_data": [{
  "total": {
    "current_female": 0,
    "current_male": 1,
    "current_total": 2
  },
  "children": {
    "current_female": 0,
    "current_male": 1,
    "current_total": 2
  },
  "staff": {
    "current_female": 0,
    "current_male": 1,
    "current_total": 2
  },
  "region": 1,
  "region_name": "Region1",
  "region_uuid": "bd1e6ce2-e113-4ce4-a9b6-0633f7083cac"
}]
},
"attention_region_total_data": {
  "region_effective_audience_data": [
    {
      "region": 1,
      "region_uuid": "c2cff789-8311-4a73-8ff3-9348cf4fa0d9",
      "total": {
        "effective_audience": 1, //Including staffs and children
        "male_effective_audience": 1, //Including male staffs and boys
        "female_effective_audience": 1 ////Including female staffs and girls
      },
      "children": {
        "effective_audience": 1,
        "male_effective_audience": 1,
        "female_effective_audience": 1
      },
    }
  ]
}

```

```

    "staff": {
      "effective_audience": 1,
      "male_effective_audience": 1,
      "female_effective_audience": 1
    }
  }
],
"region_avg_attention_time_data": [//Excluding staffs and children
  {
    "region": 1,
    "region_uuid": "c2cff789-8311-4a73-8ff3-9348cf4fa0d9",
    "avg_time_s": 10,
    "children_avg_time_s": 10,
    "staff_avg_time_s": 10,
    "male_avg_time_s": 10,
    "female_avg_time_s": 10
  },
  {
    "region": 2,
    "region_uuid": "c2cff789-8311-4a73-8ff3-9348cf4fa0d8",
    "avg_time_s": 10,
    "children_avg_time_s": 10,
    "staff_avg_time_s": 10,

    "male_avg_time_s": 10,
    "female_avg_time_s": 10
  }
]
},
"time_info": {
  "dst_status": false,
  "enable_dst": true,
  "end_time": "2024-05-30T20:21:49+08:00",
  "start_time": "2024-05-30T20:20:49+08:00",
  "time_zone": "UTC+8:00 China Standard Time (CT/CST)"
}
}

```

## Chapter 8. MQTT API Command

### Search Report

#### Request example:

```
{
  "dst": "all",
  "type": 0,
  "command": "/api/v1/system/searchReport",
  "msgId": "1",
  "requestData": {
    "event": 0,
    "startTime": "2025-01-22T08:00:00.000",
    "endTime": "2025-01-23T08:00:00.000",
    "lineParam": {
      "lineId": 0,
      "timeUnit": 0,
      "mode": 0
    },
    "regionCount": {
      "regionId": 0
    },
    "dwellDetect": {
      "regionId": 0,
      "timeMin": 10,
      "timeBinWidth": 10,
      "numOfBins": 10
    },
    "heatMap": {
      "type": 0
    }
  },
  "uuid": "1d4f62b5-37f0-4bda-80f8-a5625613fc6e"
}
```



Parameter	Type	Description
dst	string	all: send to all recipients that subscribe the MQTT API topic SN: send to a certain recipient
type	number	0: request, 1: response
msgId	number	Identifier of this request
requestData	object	
event	number	0: Line crossing counting 1: Region people counting 2: Dwell time detection 3: Heat map 4: History Point
startTime		
endTime		
lineParam		
regionCount		
dwellDetct		
heatMap		
uuid	string	A random unique ID defined by user

**Response example: Success**

```
{
  "code":0,
  "message":"ok",
  "msgId":"1",
  "src":"6834E16184430017",
  "transmitTime":2,
```

```
"type":1
}
```

Parameter	Type	Description
code	integer	
message	string	
msgId	number	Identifier of this request
src	string	SN for response
type	number	0: request, 1: response

## Get Report Result

### Request example:

```
{
  "dst": "all",
  "type": 0,
  "command": "/api/v1/system/getReportResult",
  "msgId": "1",
  "requestData": {
    "uuid": "1d4f62b5-37f0-4bda-80f8-a5625613fc6e",
    "event": 0
  }
}
```

Parameter	Type	Description
dst	string	all: send to all recipients that subscribe the MQTT API topic SN: send to a certain recipient
type	number	0: request, 1: response
msgId	number	Identifier of this request
requestData	object	
uuid	string	A random unique ID defined by user

Parameter	Type	Description
event	number	0: Line crossing counting 1: Region people counting 2: Dwell time detection 3: Heat map

**Response example**

```
{
  "code": 0,
  "data": {
    "event": 0,
    "isReady": true,
    "line": [
      {
        "children": {
          "femaleIn": 0,
          "femaleOut": 1,
          "in": 6,
          "maleIn": 6,
          "maleOut": 0,
          "out": 1
        },
        "group": {
          "in": 9,
          "out": 3
        },
        "staff": {
          "femaleIn": 0,
          "femaleOut": 0,
          "in": 0,
          "maleIn": 0,
          "maleOut": 0,
          "out": 0
        }
      },

```

```

    "time": "2024-08-15T09:00:00.000",
    "total": {
      "femaleIn": 0,
      "femaleOut": 1,
      "in": 9,
      "maleIn": 9,
      "maleOut": 2,
      "out": 3
    }
  }
],
"message": "ok",
"transmitTime": 1
}

```

Parameter	Type	Description
code	integer	
data	object []	Return data
event	number	0: Line crossing counting 1: Region people counting 2: Dwell time detection 3: Heat map
isReady	boolean	
line	object	
Children	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	

Parameter	Type	Description
maleIn	integer	
Out	integer	
staff	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
total	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
time	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
group	object	
femaleIn	integer	
femaleOut	integer	

Parameter	Type	Description
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
region	object	
Children	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
staff	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
total	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	

Parameter	Type	Description
time	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
dwel	object	
Children	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
staff	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
total	object	
femaleIn	integer	
femaleOut	integer	
In	integer	

Parameter	Type	Description
maleIn	integer	
maleIn	integer	
Out	integer	
time	object	
femaleIn	integer	
femaleOut	integer	
In	integer	
maleIn	integer	
maleIn	integer	
Out	integer	
heatmap	object	
height	number	Height of the heatmap data grid
width	number	Width of the heatmap data grid
max	number	The Maximum value of heat map
min	number	The minimum value of heat map
values	object[]	
X	number	
Y	number	
value	number	
historyPoints		
values	object[]	Trajectory Point Types: 0: Start Trajectory Point 1: Stop Trajectory Point
X	number	
Y	number	



Parameter	Type	Description
message	string	Return Information
transmitTime	number	Processing time

## Search Log

### Request example:

```
{
  "dst": "all",
  "type": 0,
  "command": "/api/v1/system/searchLog",
  "msgId": 12345678,
  "requestData": {
    "startTime": "0",
    "endTime": "1800211081920",
    "logType": 0,
    "admin": true
  }
}
```

Parameter	Type	Description
dst	string	all: send to all recipients that subscribe the MQTT API topic SN: send to a certain recipient
type	number	0: request, 1: response
msgId	number	Identifier of this request
requestData	object	
startTime	string	Start Timestamp, Unit: ms
endTime	string	End Timestamp, Unit: ms
logType	number	0: Starting up log
admin	boolean	true: display response parameter "rebootCode",

Parameter	Type	Description
		false: hidden response parameter "rebootCode"

**Response example:**

```
{
  "code": 0,
  "data": {
    "log": [
      {
        "PowerOnTime": "2024-07-22T09:34:27+08:00",
        "ShutdownTime": "2024-07-22T09:41:59+08:00",
        "rebootCode": 1,
        "rebootMessage": "normal",
        "runningTime": 451
      },
      {
        "PowerOnTime": "2024-07-22T09:42:05+08:00",
        "ShutdownTime": "2024-07-22T09:54:47+08:00",
        "rebootCode": 3,
        "rebootMessage": "upgrade success",
        "runningTime": 761
      }
    ],
    "recordCount": 5
  },
  "message": "ok",
  "transmitTime": 3
}
```

Parameter	Type	Description
code	integer	
data	object	
log	object[]	Item type: object
PowerOnTime	string	Boot time

Parameter	Type	Description
ShutdownTime	string	Power outage time
rebootCode	string	-1: Running 0: Unknown reason reboot 1: Manual reboot 2: Network modification reboot 3: Web upgrade reboot 4: Software reset reboot 5: Hardware reset reboot 6: Configuration import reboot 7: Remote management configuration import 8: Remote management upgrade 9: Upgrade failure reboot 10: Multicast network configuration modification reboot 11: mssserver crash 12: avserver crash 13: lighttpd crash 14: Multi-device stitching mode change 15: Multiple 4G dial-up failures
runningTime	integer	
runningTime	string	
recordCount	integer	Number of restarts, maximum display 1000
message	string	

Parameter	Type	Description
transmitTime	number	Processing time

## Chapter 9. Services

Milesight provides customers with timely and comprehensive technical support services. End-users can contact your local dealer to obtain technical support. Distributors and resellers can contact directly with Milesight for technical support.

Technical Support Mailbox: [iot.support@milesight.com](mailto:iot.support@milesight.com)

Online Support Portal: <https://support.milesight-iot.com>

Resource Download Center: <https://www.milesight.com/iot/resources/download-center/>

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