Honeywell

Honeywell 35 Series

IP Cameras Video Analytics

HC35W43R3	HC35W43R2	HC35WB3R3	HC35WB3R2
HC35WE3R3	HC35WE3R2	HC35W45R3	HC35W45R2
HC35WB5R3	HC35WB5R2	HC35WE5R3	HC35WE5R2
HC35W25R3	HC35W48R3	HC35W48R2	HC35WB8R3
HC35WB8R2	HC35WE8R3	HC35WE8R2	HC35WZ2R25
HC35WZ5R30	HC35WZ5R30W		

User Guide

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Revision

Issue	Date	Revisions
A	03/2022	New document.
B	05/2022	Update Configuration chapter.

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ABOUT THIS DOCUMENT

This document describes how to use Video Analytics.

Overview of Contents

This user guide includes:

- Chapter 1, About This Document, is a brief introduction of this user guide.

- Chapter 2, Configuration, is a brief introduction of video analytics features and configuration.

- Chapter 3, Precautions, describes the precautions when planning the camera installation.

How to Use This Document

- Pictures in the manual are for reference only, please see the actual items for details.

- When the products are updated, the information shall not be distributed.

- Please familiarize yourself with this manual before operation and retain it for future use.

- The information in this publication is believed to be accurate in all respects. However, Honeywell cannot assume responsibility for any consequences resulting from the use thereof. If there is any uncertainty or controversy, please refer to the final explanation of Honeywell. Honeywell does not take any responsibility for any consequences caused by the misunderstanding of the manual or incorrect operation by the user.

CONFIGURATION

Video Analytics provides the following features: Motion Detection, Smart Motion, Tampering, Intrusion, Multi Loitering, and People Counting.

- Recommended install height with 2.7m to 3.5m, install angle with 45° to 80° as shown in Figure 1 and Figure 2.

- Recommended target detection distance with 5~7m for fixed lens camera as shown in Figure 1, or 1~60m for MFZ lens camera as shown in Figure 2.

- Recommended installation for people counter and line drawing as shown in Figure 3.

**Figure 1 Installation Angle (for Fixed Lens 2.8 mm)**
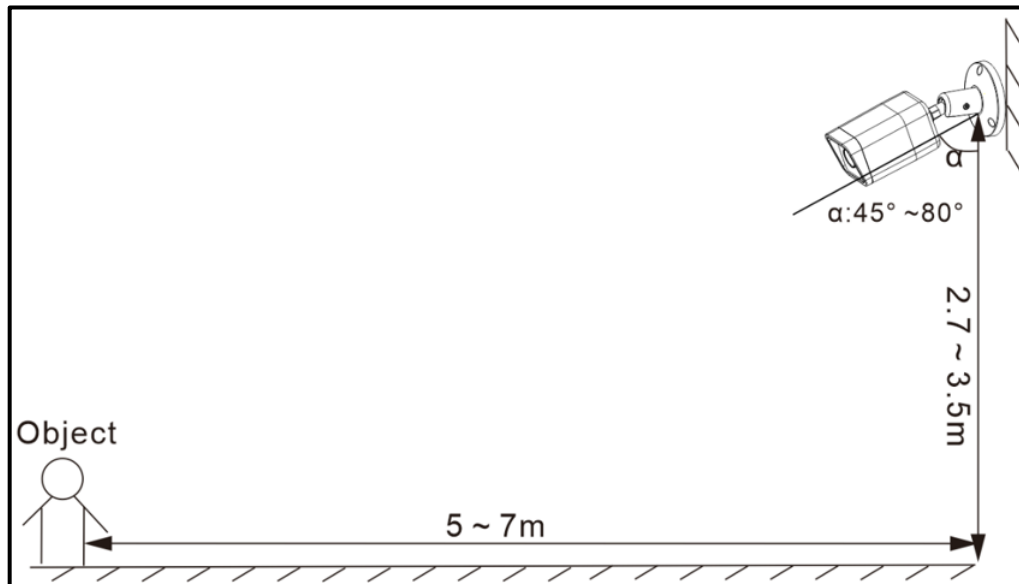
Note: *Models with lens 2.8mm: HC35W43R3/HC35WB3R3/HC35WE3R3/HC35W45R3/ HC35WB5R3/HC35WE5R3/HC35W25R3/HC35W48R3/HC35WB8R3/ HC35WE8R3.*

Figure 2 Installation Angle (For lens 2.7~13.5 mm)
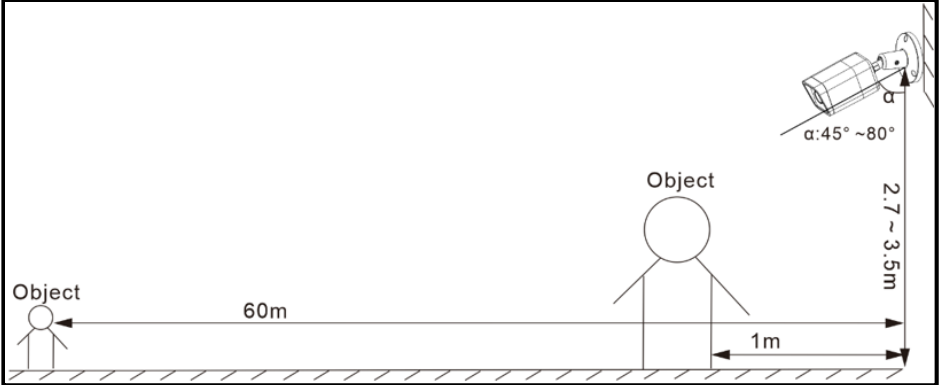
Note: Models with lens 2.7~13.5 mm: HC35W43R2/HC35WB3R2/HC35WE3R2/
HC35W45R2/ HC35WB5R2/HC35WE5R2/HC35W48R2/HC35WB8R2/HC35WE8R2.
For MFZ cameras as shown in Figure 2:
  • When the camera is at wide end (2.7mm, zoom=1), the detection distance ranges
    from 1m to 16m.
  • When the camera is at tele end (13.5mm, zoom=5), the detection distance ranges
    from 4m to 60m.
  • The detection distance range varies between 1~60m when zoom ratio changed.

Figure 3 Installation Angle (For people counter)

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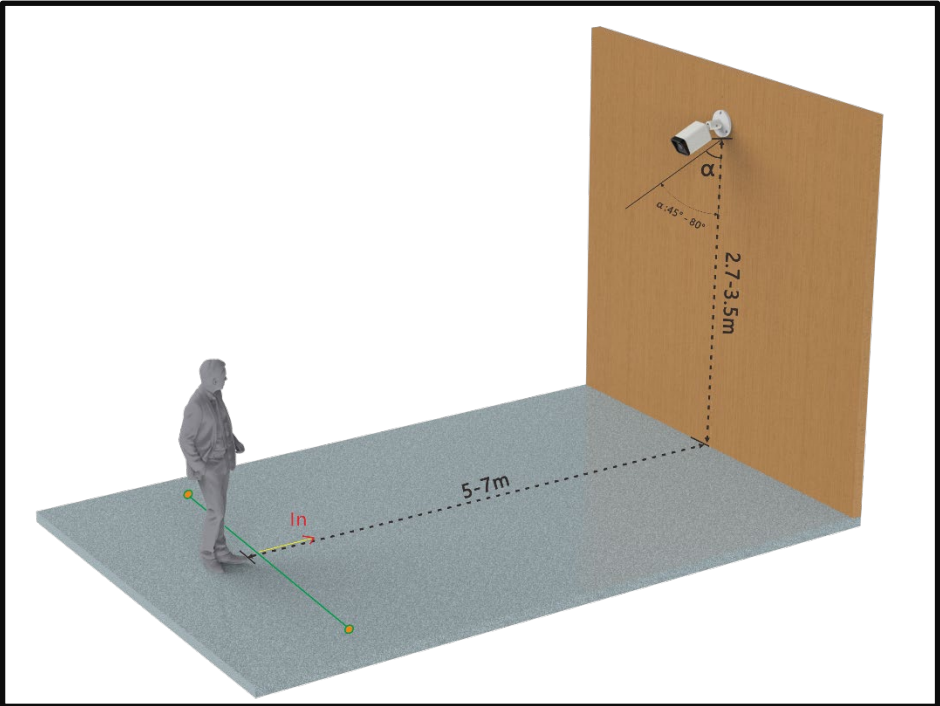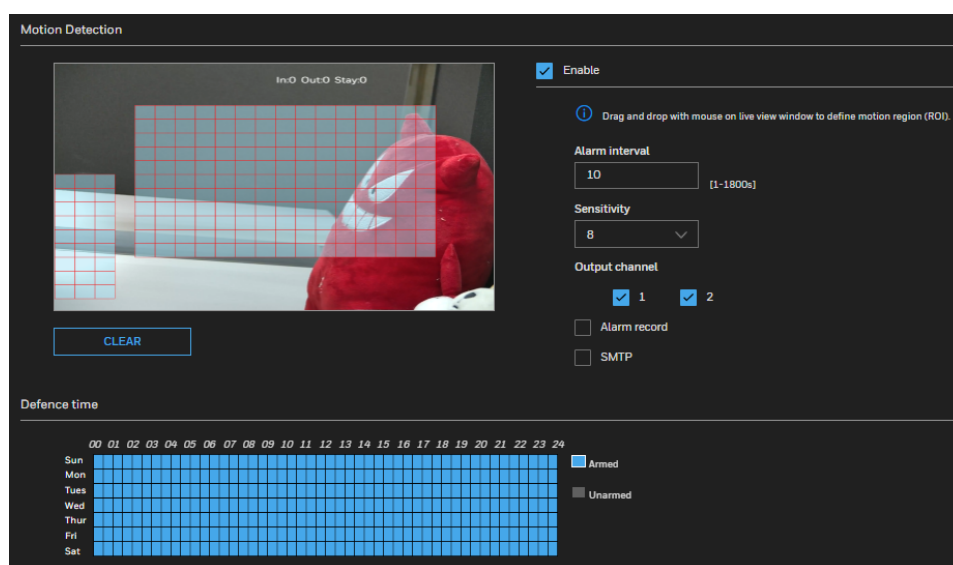
Motion Detection

Motion Detection can be used to detect the motions of persons, objects in the defence time at the drawing areas.

The applicable scenarios of this feature can be:

- Detects when a person enters the warehouse after the office hours.
- Detects when an object is moved in the specified area.

Log in a camera and go to **Setup > Video Analytics > Motion Detection**, as shown in Figure 4.

Figure 4 Motion Detection

Enable: Check the checkbox to enable the Motion Detection.

Alarm interval: It will only send one alarm during the configured interval time.

Sensitivity: Choose the value from the drop-down list to set the sensitivity of detecting the target. When the value is high, the target can be detected easily, but the accuracy will be lower.

Output channel: Check the checkbox to enable Output channel.

Alarm record: Check the checkbox to enable the linkage action for sending alarm record to SD card so that the user can check alarm through recording video.

SMTP: Check the checkbox to enable the linkage action for sending snapshot and alarm notice information to email address which can be set in **Network Setup > SMTP**, so the user can receive the alarm timely.

CLEAR: Clear the area of setting. Use the mouse on the screen to draw rectangle to set the motion detection areas. You can set several areas to detect.

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Defence Time: Use the mouse to drag the time or click the time grid to choose time hour by hour. The blue means armed and the gray means unarmed, as shown in Figure 4.

The defence area is consisted by grids. You can draw the mouse to choose, or clicks to choose. It is better to choose the center area on the picture. The far distance should set the higher value sensitivity and more area to cover.

The area can cover all picture, it also can be set the small area such as cabinet.

Smart Motion

The smart detection is used to detect car, person, car or person. When the user has set the area to defence and someone or something intrudes the area, it will generate the alarm information.

Go to **Setup > Video Analytics > Smart Motion**. Set the parameters of smart detection.

Figure 5 Smart Motion
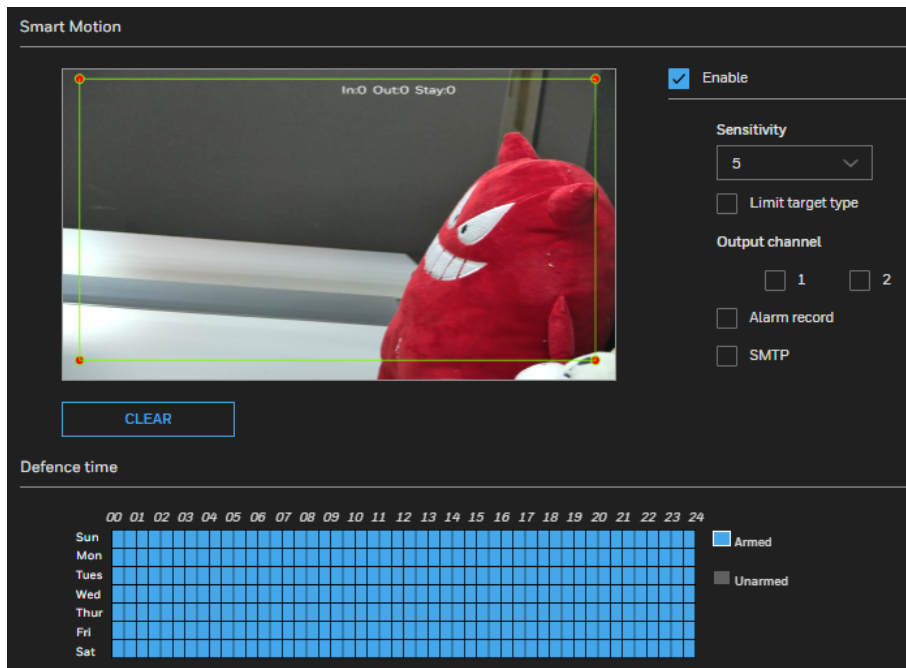
Enable: Check the checkbox to enable the **Smart Motion**.

Sensitivity: Choose the value from the drop-down list to set the sensitivity of detecting the target. When the value is high, the target can be detected easily, but the accuracy will be lower.

Limit target type: Check the checkbox to enable Limit target type and choose the type from the pull-down list: Person or car/ Person/ Car. The smart detection only used for chosen type.

Output channel: If the alarm out cable is connected to the external device such as alarm light or speaker, when smart motion is triggered, the output channel will send alarm to remind user.

Alarm record: Check the checkbox to enable the linkage action for sending alarm record to SD card so that the user can check alarm through recording video.

SMTP: Check the checkbox to enable the linkage action for sending snapshot and alarm notice information to email address which can be set in **Network Setup > SMTP**, so the user can receive the alarm timely.

CLEAR: Clear the area of setting. Use the mouse left-click on the screen to start drawing polygon and right-click to end setting the smart detection areas, you can set several areas to detect.

Defence time: Use the mouse to drag the time or click the time grid to choose time one hour by hour. The blue means armed and the gray means unarmed.

Tampering Detection

Tampering detection identifies the camera tampering based on a set tampering sensitivity value.

Go to **Setup > Video Analytics > Tampering**. Set the parameters of **Tampering**.

Figure 6 Tampering Detection

Enable: Check the checkbox to enable the tampering detection.

Sensitivity: Choose the value from the drop-down list to set the sensitivity of detecting the target. When the value is high, the target can be detected easily, but the accuracy will be lower.

Output channel: If the alarm out cable is connected to the external device such as alarm light or speaker, when tampering detection is triggered, the output channel will send alarm to remind user.

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Alarm record: Check the checkbox to enable the linkage action for sending alarm record to SD card so that the user can check alarm through recording video.

SMTP: Check the checkbox to enable the linkage action for sending snapshot and alarm notice information to email address which can be set in **Network Setup > SMTP**, so the user can receive the alarm timely.

CLEAR: Clear the area of setting. Use the mouse left-click on the screen to start drawing polygon and right-click to end setting the smart detection areas, you can set several areas to detect.

Defence time: Use the mouse to drag the time or click the time grid to choose time one hour by hour. The blue means armed and the gray means unarmed.

Intrusion Detection

Intrusion Detection can be used to detect people entering or leaving a virtual area in the camera field of view.

The applicable scenarios of this feature can be:

- Detects when a person enters a bank vault or school after the office hours.
- Detects when a person leaves an emergency exit or fire escape, or any place that is normally forbidden from access.

Go to **Setup > Video Analytics > Intrusion**. Set the parameters of Intrusion.

Figure 7 Intrusion Detection
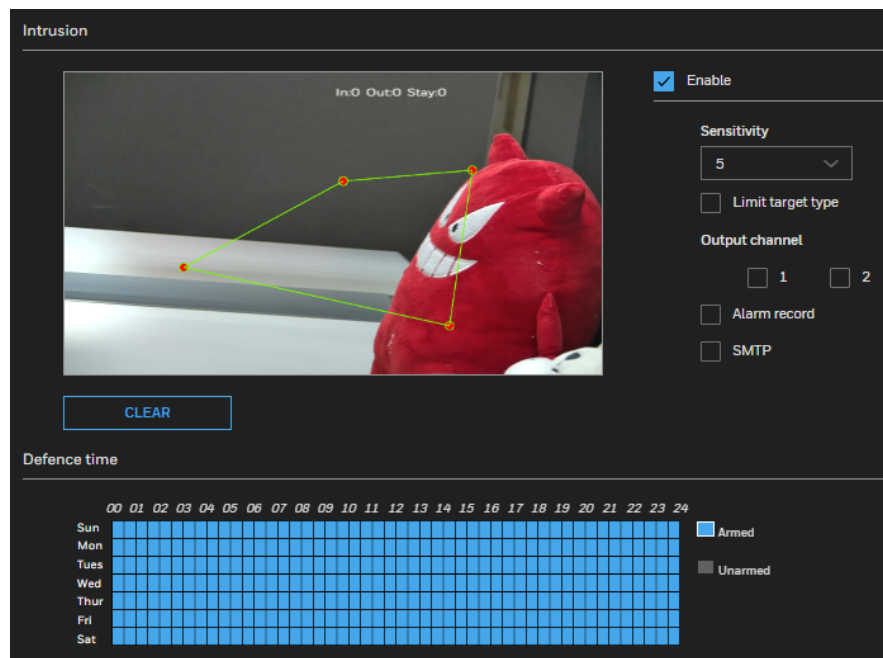
Enable: Check the checkbox to enable the Intrusion detection.

Sensitivity: Choose the value from the drop-down list to set the sensitivity of detecting the target. When the value is high, the target can be detected easily, but the accuracy will be lower.

Limit target type: Check the checkbox to enable Limit target type and choose the type from the pull-down list: Person or car/ Person/ Car. The smart detection only used for chosen type.

Output channel: If the alarm out cable is connected to the external device such as alarm light or speaker, when detection is triggered, the output channel will send alarm to remind user.

Alarm record: Check the checkbox to enable the linkage action for sending alarm record to SD card so that the user can check alarm through recording video.

SMTP: Check the checkbox to enable the linkage action for sending snapshot and alarm notice information to email address which can be set in **Network Setup > SMTP**, so the user can receive the alarm timely.

CLEAR: Clear the area of setting. Use the mouse left-click on the screen to start drawing polygon and right-click to end setting the smart detection areas, you can set several areas to detect.

Defence time: Use the mouse to drag the time or click the time grid to choose time one hour by hour. The blue means armed and the gray means unarmed.

Multi Loitering Detection

The Loitering detection can be used to detect a person or a group of people lingering in an area for longer than a preset time threshold.

The applicable scenarios of this feature can be:

* Detects when a person is loitering at a walk-up of ATM lane.
* Detects when a person is loitering in a high-theft area of a store, or to prevent vandalism and break-ins.
* Detects when a person is loitering in an area that is normally not an access for visitors.

Go to **Setup > Video Analytics > Multi Loitering**. Set the parameters of multi loitering.

Figure 8 Multi Loitering
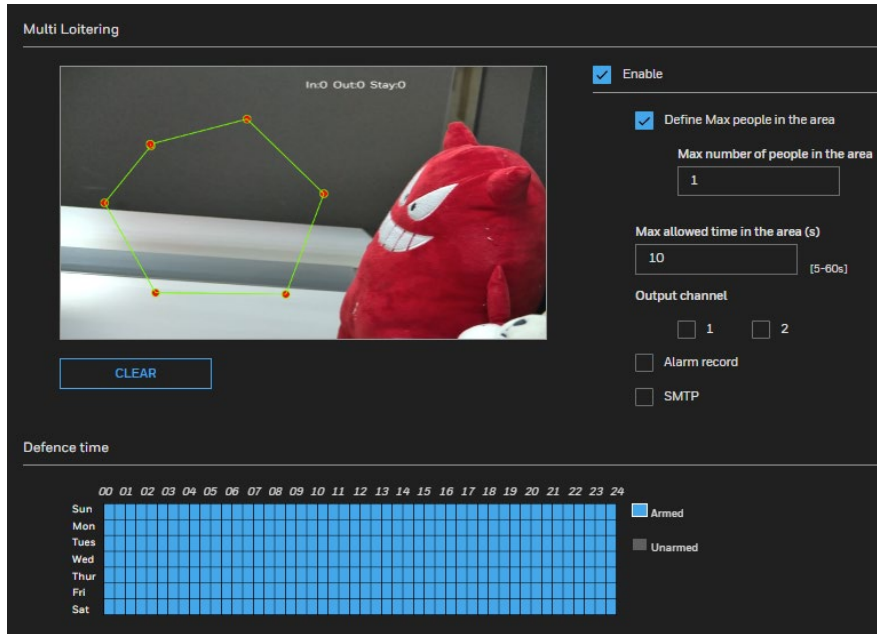
Enable: Check the checkbox to enable the multi loitering detection.

Define Max people in the area: Check the checkbox and input the max number of people in the area.

Max allowed time in the area (s): Set the max allowed time that people can loiter in area. When the number of people is more than the number and the time is more than the preset shortest time, it will send alarm.

Output channel: If the alarm out cable is connected to the external device such as alarm light or speaker, when detection is triggered, the output channel will send alarm to remind user.

Alarm record: Check the checkbox to enable the linkage action for sending alarm record to SD card so that the user can check alarm through recording video.

SMTP: Check the checkbox to enable the linkage action for sending snapshot and alarm notice information to email address which can be set in **Network Setup > SMTP**, so the user can receive the alarm timely.

CLEAR: Clear the area of setting. Use the mouse left-click on the screen to start drawing polygon and right-click to end setting the smart detection areas, you can set several areas to detect.

Defence time: Use the mouse to drag the time or click the time grid to choose time one hour by hour. The blue means armed and the gray means unarmed.

People Counter

People counter is used to count the persons in the field of view. It is often used to collect the number of people entering and leaving a certain area to implement statistical
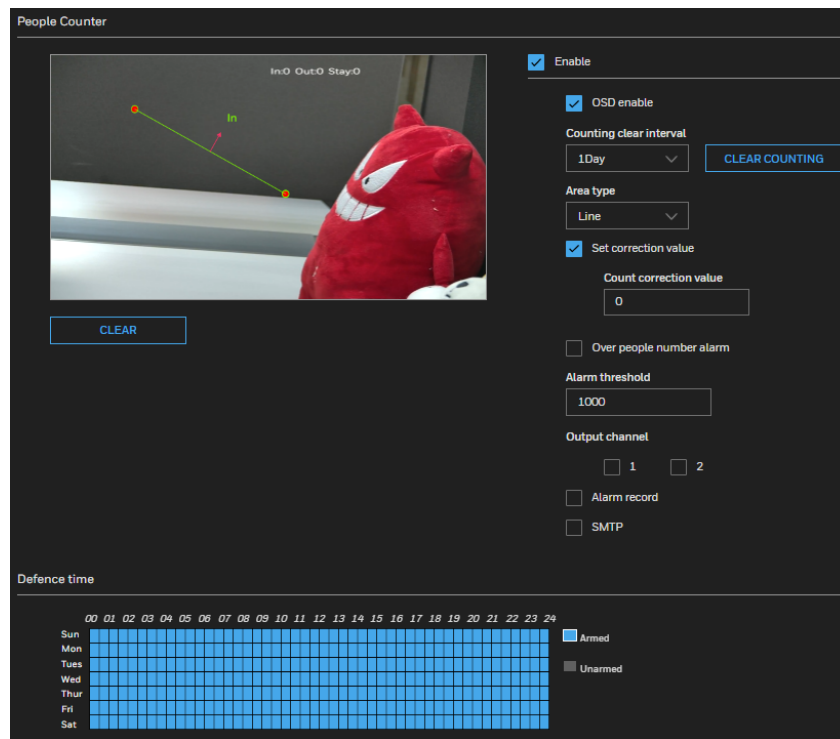
requirements for the number of people in the area, and trigger alarms by setting thresholds.

The applicable scenarios of this feature can be:

- Use to count the personnel of entering store.
- Use to the place which limits the number of people.

Go to **Setup > Video Analytics > People Counter**. Set the parameters of People Counter.

Figure 9 People Counter

Enable: Check the checkbox to enable the people counter.

OSD: Check the OSD enable checkbox to enable OSD display of people countering. The data of out and in will be showing on the live video screen.

Counting clear Interval: Select interval time to configure the **Countering clear interval**, the camera will clear counting numbers within every setting time interval. Click **CLEAR COUNTING** to clear current counting number.

Area Type: Draw a line on the live video screen, following the arrow direction is **In** area, reversing the arrow direction is **Out** area.

Figure 10 Number for In / Out / Stay
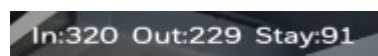
the **In** means people cross line into the area. Go out from the **In** area means **Out**. **Stay** means the number of **In** minus the number of **Out**.

Note: *When a correction value is set, the number for Stay will be the number of In minus the number of Out and plus the correction value.*

Set correction value: Check the enable checkbox of **Set correction value** to enable counting correction which already stay on the **In** area. Input people number which is already stay in the **In** area.

Over people number alarm: Check the enable checkbox of **Over people number alarm** to enable alarm function when stay people number over the number setting in **Alarm threshold** box.

Output Channel: If the alarm out cable is connected to the external device such as alarm light or speaker, when over people number alarm is triggered, the output channel will send alarm to remind user.

Alarm record: Check the checkbox to enable the linkage action for sending alarm record to SD card so that the user can check alarm through recording video.

SMTP: Check the checkbox to enable the linkage action for sending snapshot and alarm notice information to email address which can be set in **Network Setup > SMTP**, so the user can receive the alarm timely.

CLEAR: Clear the line of setting. Use the mouse left-click and hold, end the draw to release the left mouse button. It is set on the corridor, or doorway.

Defence Time: Use the mouse to drag the time, or click the time grid to choose time one hour by hour. The blue means armed and the gray means unarmed.

Note the following items when planning the camera installation:

- The installation site must be adequately lighted for optimal accuracy with video detection.

- In the night mode, configure a schedule profile for the different lighting condition. In the night mode, the video analytic can works if additional lighting is provided, e.g., using the on-board or external IR light. Avoid obstructions that can reflect IR lights back to the camera.

- All VA functions (**Motion Detection** / **Smart Motion** / **Tampering Detection** / **Intrusion** / **Multi Loitering** / **People Counter**) are applicable for HC35W45R3 / HC35W45R2 / HC35WB5R3 / HC35WB5R2 / HC35WE5R3 / HC35WE5R2 / HC35W25R2 / HC35W48R3 / C35W48R2 / HC35WB8R3 / HC35WB8R2/ HC35WE8R3 / HC35WE8R2 / HC35WZ2R25 / HC35WZ2R30.

Note: *HC35WZ2R25/ HC35WZ2R30 cameras can be activated only on home position.*

- HC35W43R3/ HC35W43R2/ HC35WB3R3/ HC35WB3R2/ HC35WE3R3/ HC35WE3R2 only support **Motion Detection** and **Tampering Detection**.

IMPORTANT: It is recommended to avoid the following scenarios which can trigger false alarms:

- Shadows on the wall

- Not enough illuminance at around

- Mirrored object image on the reflective surface (The scene in Figure 11 is not recommended)

- Unnecessary objects should be avoided. A door, a floating curtain, and moving objects such as an escalator can cause mistakes with the detection.

Figure 11 Scenarios Not Recommended

Motion Detection

- The motion detection should avoid installing at following scene: the illuminate changes frequently; Branches or leaves are shaking; Shadows are shaking; Smaller objects (fallen leaves/ floating plastic bags, etc.) is appearing frequently; the device is interference by infrared light at night.

- The proportion of the area of moving objects should be larger than 5 grids as much as possible.

- The background color and the detected object color should not be too close because the higher the contrast, the higher the detection rate.

Smart Motion / Intrusion / Multi Loitering

- The installation angle should be faced to the target as much as possible to prevent the leakage of detection at a large angle.

- The target people/car should appear as complete as possible within the detection area, and avoid to appear at the edge.

- For **Multi Loitering**, the target people should completely move inside the configured area.

- It is necessary to install camera at stable and sufficient illuminance environment, if at insufficient light conditions, please ensure the target outline is clearly visible.

People Counter

- Install camera at standard personnel passages or entrances, so that the target has a unique direction of passage.

- Make sure the human figure can completely appear in the camera field of view before and after people pass through the set line. The people's

movement direction should be as perpendicular to the drawn line as possible.

- The installation of the camera should have a certain viewing angle to avoid people overlap because it will cause inaccurate counting in scenarios when there's too little distance between people.

- Please don't install camera on the top of the drawing line because the camera recognizes body figure instead of counting human head.

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