Hanwha Vision

Network Camera

Online help

AIA-C01RET

Exclude area

The **[Exclude area]** feature allows you to set an area to prevent objects from being detected in the set area. You can set an exclude area differently for each channel.

Exclude area

List

The **[List]** shows a list of exclude areas you set.

Setting exclude areas

- On the video, create a quadrilateral around the area you want to exclude from detection by clicking 4 times.
- Then the set exclude area is created on the video and added to the **[List]**.
- You can create up to 8 exclude areas.

Changing exclude areas

- To resize the exclude area, drag a vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete vertices, hover over a vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes a vertex.
- To relocate the exclude area, drag the area to your desired position.

Deleting exclude areas

1. Hover over the row of the exclude area you want to delete in the **[List]** or click the exclude area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of exclude areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or numbers only.

Exclude area

The metadata for the objects detected in the exclude area is not transmitted. To transmit metadata about the information and detailed properties of those objects, turn on the **[Enable object data from the excluded area]** toggle.

Object detection

The **[Object detection]** feature detects objects of the types you select.
To enable the **[Object detection]** feature, turn on the toggle at the top.
You can set an object type to be detected and minimum duration (observation time) differently for each channel.

Object detection

Object

Select the types of objects to be detected (multiple selections are possible).

Detection condition

Set the **[Minimum duration]** to set conditions to trigger an event when an object is detected. An object must stay in the camera's field of view for longer than the set minimum time to trigger an object detection event and to send the relevant data.

> **Note**
>
> When you specify privacy areas on the camera, objects within the areas are not detected.
> False detection may occur if:
> - The brightness or color of an object is similar to the background of the screen.
> - Multiple motions occur irregularly or continuously due to scene transitions, etc.
> - A stationary object is constantly moving in the same position.
> - Various objects are randomly blocking each other (50% or more).
> - Objects are moving too quickly.
> - Strong light sources, like direct light, lamps, or car headlights, generate reflections, smearing, or shadows.
> - There is heavy snow, rain, wind, etc., or there is a sunset or sunrise.
> - A moving object is in close proximity to the camera.

BestShot

The **[BestShot]** feature generates the most reliable thumbnail image (BestShot) for the selected object.
To enable the **[BestShot]** feature, turn on the toggle at the top.
You can select the object type for BestShot to be generated differently for each channel.

BestShot

Object

Under **[Object]**, select an object type per channel (multiple selections are possible).
The BestShot for the selected object is generated with the highest reliability. The BestShot then appears on the right side of the screen on the **[BestShot]** page.

> **Note**
>
> Even if an object is detected according to certain conditions, the BestShot may not be sent.
> The BestShot may not be generated, or the **[BestShot]** feature may deliver poor performance if:
> - Only part of the object is photographed.
> - There are many objects, causing them to overlap each other.
> - Objects are moving too quickly.
> - A poor image quality or out-of-focus image makes it difficult to see.

Line crossing

The **[Line crossing]** feature detects the objects that cross the virtual line in the direction you set. You can set which object to be detected by selecting the object type.
To enable the **[Line crossing]** feature, turn on the toggle at the top.
You can set a virtual line and the object type differently for each channel.

Line crossing

List

The **[List]** shows a list of virtual lines you set.

Setting virtual lines

- Click on the video screen, and then click on it again where you want. Then a virtual line with the start and end points appears.
- When the line to detect objects is created, the line is also added to the **[List]**.
- You can create up to 8 virtual lines.
- You can also set the direction of the arrow on the line. To change the direction of the virtual line, click the arrow in the center of the line. Objects are counted only when they cross in the direction of the arrow, in the opposite direction of the arrow, or in both directions based on the virtual line.

Changing virtual lines

- To resize the virtual line, drag the start or end point to your desired position.
- To add a vertex to the line, hover over the line.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex. Up to six vertices can be created.
  - To create virtual lines of different shapes, drag the vertices to your desired position.
  - To delete a start or end point, or a vertex, hover over the point you want to delete. Then the **[-]** button appears. Clicking the button deletes the point.
- To relocate the virtual line, drag the line to the desired position.

Deleting virtual lines

1. Hover over the row of the virtual line you want to delete in the **[List]** or click the line on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the line.

Changing the names of virtual lines

- Double-click the set-line name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or numbers only.

Object

Select the types of objects to be detected.

Specifying objects

Only selected objects that cross the virtual line are detected.

1. From the **[List]** or on the video screen, select a virtual line.
2. Under the **[Object]**, select the type of the object to be detected (multiple selections are possible).

Notes

An error may occur or the function may not work if:

- The brightness or color of an object is similar to the background of the screen.
- Multiple motions are being made irregularly or continuously due to scene transitions, etc.
- A stationary object is constantly moving in the same position.
- Various objects are randomly blocking each other.
- A single object is split into many objects, or two or more objects combine into one.
- Objects are moving too quickly.
- Strong light sources, like direct sunlight, lamps, or car headlights, generate reflections, smearing, or shadows.
- There is heavy snow, rain, wind, etc., or there is a sunset or sunrise.
- A moving object is in close proximity to the camera.
- The OSD menu of the camera is adjusted.
- An object is crossing the start and end of the virtual lines.
- The brightness of the moving object is similar to that of the point where it crosses the virtual line.

IVA area

The **[IVA area]** feature detects the entry, exit, intrusion, and loitering of objects based on detection areas you virtually set. In terms of appearance and disappearance, all objects, including the selected type of object, are detected.
To enable the **[IVA area]** feature, turn on the toggle at the top.
You can set an IVA area differently for each channel.

IVA area

List

The **[List]** shows a list of IVA areas you set.
The list under **[IVA area]** is automatically synchronized with that under **[Appear (Disappear)]**.

Setting detection areas

- On the video, create a quadrilateral around the area you want to detect the actions of objects by clicking 4 times.
- Then the set detection area is created on the video and added to the **[List]**.
- You can create up to 8 detection areas.

Changing detection areas

- To resize the detection area, drag a vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete vertices, hover over a vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes a vertex.
- To relocate the detection area, drag the area to your desired position.

Deleting detection areas

1. Hover over the row of the detection area you want to delete in the **[List]** or click the detection area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of detection areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or numbers only.

Object

Select the types of objects to be detected.

Specifying objects

From the **[List]** or on the video screen, select a virtual line, and then under **[Object]**, select an object to be detected. You can select multiple object types.

Detection condition

Select any of the following actions (multiple selections are possible) if you want an object to be detected: Only when the selected type of object performs the selected action is the object detected.

- **Enter**: Triggers an event when an object of the selected type enters the detection area from the outside.
- **Exit**: Triggers an event when an object of the selected type exits from the detection area.
- **Intrusion**: Triggers an event when an object of the selected type appears in the detection area and stays there for more than the time set in **[Minimum duration]** (up to 5 seconds).
- **Loitering**: Triggers an event when an object of the selected type loiters in the detection area for more than the time set in **[Minimum duration]** (up to 10 minutes).

Appear (Disappear)

List

The detection areas you set under **[IVA area]** are added to the **[List]**.
The list of the **[Appear (Disappear)]** is automatically synchronized with that of the **[IVA area]**.

Detection condition

To detect the appearance (disappearance) of objects, turn on the **[Appear (Disappear)]** toggle.
An event occurs either when an object that was not in the detection area appears and remains static for more than the time set in **[Minimum duration]** (up to 1 minute) or when an object that was static in the area disappears and does not appear until the set time has elapsed.
You can set the minimum observation time for each detection area either by clicking the detection-area row in the **[List]** or by clicking the detection area on the screen.

Note

False detection may occur if:

- The brightness or color of an object is similar to the background of the screen.
- Multiple motions are being made irregularly or continuously due to scene transitions, etc.
- A stationary object is constantly moving in the same position.
- Various objects are randomly blocking each other (50% or more).
- A single object is split into many objects, or two or more objects combine into one.
- Objects are moving too quickly.
- Strong light sources, like direct sunlight, lamps, or car headlights, generate reflections, smearing, or shadows.
- There is heavy snow, rain, wind, etc., or there is a sunset or sunrise.
- A moving object is in close proximity to the camera.
- The OSD menu of the camera is adjusted.

Slip & fall detection

The **[Slip & fall detection]** detects a person slipping or falling down while walking within a set area.
To enable the **[Slip & fall detection]** feature, turn on the toggle at the top.
You can set whether to detect a person slipping or falling down differently for each channel.

Slip & fall detection

To prevent false alarms occurring, a slip & fall detection event occurs at least 6 seconds after Slip & fall detection.
Recommended settings:

	4K cameras	2 MP cameras
Camera installation height	3.5–6 m	
Camera installation angle	Over 70°	
Distance between a camera and people	5–12 m	5–8 m
Maximum people in the detection area	Up to 3	

List

The [List] shows a list of detection areas you set.

Setting detection areas

- On the video, create a quadrilateral around the area you want to detect the motions of objects by clicking 4 times.
- Then the set detection area is created on the video and added to the **[List]**.
- You can create up to 8 detection areas.

Changing detection areas

- To resize the detection area, drag the vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete a vertex, hover over the vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes the vertex.
- To relocate the detection area, drag the area to your desired position.

Deleting detection areas

1. Hover over the row of the detection area you want to delete in the **[List]** or click the detecion area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of detection areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or number only.

Note

The detection function may not work, or the functional ability may be decreased, if:

- You camera installation environment does not match the recommended installation environment above.
- A person is falling down towards the optical axis (an imaginary straight line that passes through the geometrical center of the lens).
- A person is partially or completely obscured by an object.
- Part or all of a person is off-screen.
- A person is falling down after sitting or bending for a long time.
- A non-person object is detected as a person.
- The brightness or color of an object is similar to the background of the screen.
- Multiple motions are being made irregularly or continuously due to scene transitions, etc.
- A single object is split into many objects, or two or more objects combine into one.
- Objects are moving too quickly.
- Strong light sources, like direct sunlight, lamps, or car headlights, generate reflections, smearing, or shadows.
- There is heavy snow, rain, wind, etc., or there is a sunset or sunrise.
- Multiple people are overlapping or falling down in a crowd.
- A person is running at high speed and suddenly falling down.

Blocked exit detection

The **[Blocked exit detection]** feature detects whether exits are obscured by objects in the area you set. To enable the **[Blocked exit detection]** feature, turn on the toggle at the top.

Blocked exit detection

List

The **[List]** shows a list of detection areas you set.

Setting detection areas

- On the video, create a quadrilateral around the area you want to detect the motions of objects by clicking 4 times.
- Then the set detection area is created on the video and added to the **[List]**.
- You can create up to 3 detection areas.

Changing detection areas

- To resize the detection area, drag the vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete a vertex, hover over the vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes the vertex.
- To relocate the detection area, drag the area to your desired position.

Deleting detection areas

1. Hover over the row of the detection area you want to delete in the **[List]**or click the detection area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of detection areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or numbers only.

Minimum duration

Set the minimum duration that will be used as a condition for detecting an obstruction in front of the exit in the set area and triggering a blocked-exit-detection event. The event occurs only when obstruction persists in front of the exit for at least the set minimum duration.

Sensitivity

Set the sensitivity level of detection. Higher sensitivity values detect objects with lower confidence, resulting in higher detection rates and error rates. Conversely, lower sensitivity values may result in fewer false alarms

for blocked-exit-detection events, but they are more likely to fail to detect whether the exit is blocked.

Note

Execute the **[Blocked exit detection]** feature while the exit is unobstructed. After the function is executed, an event will occur if an object within the set area stays in the doorway longer than the set time.
Poor performance may occur if:

- You set detection areas outside of the camera's angle of view, or you set more than one adjacent area as one detection area.
- The color of the object is similar to that of the background, such as a floor or door.
- The object is obscured for a long time by a person, forklift, etc.
- There is heavy traffic of people, forklifts, etc.
- Objects are too small (less than 5% of the image's horizontal length).
- Images are shot in either too dark or too bright environments, resulting in a significant deviation from the recommended illumination.
- Strong light sources, like direct sunlight or lamps, generate reflections, smearing, or shadows.
- The shooting distance is greater than 15 meters.
- There are abrupt lighting changes.
- The camera is obstructed or the camera position is changed, etc.

People counting

The **[People counting]** feature counts the number of people crossing the virtual line in the direction you set. A person is counted crossing the set line only when the center of the person is the body length away from the line before and after the person crosses the line. Also, for a person to be counted, the person's head must cross the virtual line together.
To enable the **[People counting]** feature, turn on the toggle on the top.
You can set whether to count people and configure the detailed settings differently for each channel.

Counting

You can view analytics data about the people crossing the virtual line from 00:00:00 on the day to the current time. You can also check the number and total of people who have crossed the virtual line by direction.
The counting data is refreshed every 3 seconds.

List

The **[List]** shows a list of virtual lines you set.

Setting virtual lines

- Click on the video screen, and then click on it again where you want. Then a virtual line with the start and end points appears.
- When the line to count the number of people is created, the line is also added to the **[List]**.
- You can create up to 2 virtual lines.
- You can also set the direction of the arrow on the line. To change the direction of the virtual line, click the arrow in the center of the line. People are counted only when they cross in the direction of the arrow or in the opposite direction of the arrow.

Changing virtual lines

- To resize the virtual line, drag the start or end point to your desired position.
- To relocate the virtual line, drag the line to the desired position.

Deleting virtual lines

1. Hover over the row of the virtual line you want to delete in the **[List]** or click the line on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the line.

Changing the names of virtual lines

- Double-click the set-line name you want to change in the **[List]**.
- You can type the name up to 45 characters long, including English letters or numbers only (you cannot have a name that only contains numbers).

Setting counting methods

When you hover over the row of the virtual line to set the counting method in the **[List]** or click the line on the video screen, then the virtual line becomes thicker. To change the direction, click the arrow. There are two ways to count the

number of people: IN counting and OUT counting.

- IN: Counts how many people moved in the direction of the arrow.
- OUT: Counts how many people moved in the opposite direction of the arrow.

Exclude area

You can set the area you want to exclude from people counting.

List

The **[List]** shows a list of exclude areas you set.

Setting exclude areas

- On the video, create a quadrilateral around the area you want to exclude from detection by clicking 4 times.
- Then the set exclude area is created on the video and added to the **[List]**.
- You can create up to 4 exclude areas.

Changing exclude areas

- To resize an exclude area, drag a vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete vertices, hover over a vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes a vertex.
- To relocate the exclude area, drag the area to your desired position.

Deleting exclude areas

1. Hover over the row of the exclude area you want to delete in the **[List]** or click the exclude area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of exclude areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or numbers only.

Report

Report

You can receive reports of people-counting statistics.
To receive people-counting data through e-mail or FTP, turn on the **[Report]** toggle.

Schedule

Select **[Daily]** and time to receive people-counting data at the same time every day.
Select **[Weekly]** and time and days to receive people-counting data on the same day and time every week.

File name

Type a name and select the format of the file to send it via FTP and e-mail. The file name can contain up to 45 characters, including English alphabet letters, numbers, and hyphens (-). You can choose the file format between .xlsx and .txt.

Export

Click **[FTP/E-mail]** to type the details for FTP and e-mail.

Delete all data

Click **[Delete all data]** to reset all the people-counting data.
Data is not deleted after a factory reset but deleted only when you click **[Delete all data]**.

Note

An error may occur or the function may not work if:

- A person is loitering near the virtual line.
- A person is repeatedly entering or exiting the line from the edge of the line.
- A person in motion is obscured by the background or other objects near the line.
- People or the heads are not detected according to the settings for minimum size, maximum size, or sensitivity that you configure in **[Setup]**>**[Common setup]**.
- There are five or more people around the line at the same time.
- Two or more people passing closer together, such as arm-in-arm or shoulder-to-shoulder.
- A huge crowd is gathering.
- A person is moving at a speed greater than 1.5 m/s.

Queue management

The **[Queue management]** feature allows you to check the number of the people staying in the detection area you set and their occupancy.

To enable the **[Queue management]** feature, turn on the toggle at the top.

You can set whether to manage queues and detailed conditions differently for each channel.

Queue

List

the **[List]** shows the number of people staying in the detection area you set and their occupancy.

The database is refreshed every 15 minutes

Setting detection areas

- On the video, create a quadrangle around the area you want to manage the queue by clicking 4 times.
- Then the detection area is created on the video and added to the **[List]**.
- You can create up to 3 detection areas.

Changing detection areas

- To resize the detection area, drag the vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrangle.
  - The [+] button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete a vertex, hover over the vertex you want to delete. Then the [-] button appears on the point. Clicking the button deletes the vertex.
- To relocate the detection area, drag the area to your desired position.

Deleting detection areas

1. Hover over the row of the detection area you want to delete in the [List] or click the detection area on the video screen
2. Then the Delete button appears in the [List]. Clicking the button deletes the area.

Changing the names of detection areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long,including English letters or numbers only.

Queue events

Set the conditions for triggering a queue event for each detection area.
The **[Queue management]** feature analyzes how many people there are and how long they stay in queue in the set area and triggers a [High queue] or [Medium queue] event.
For example, if you set the [Maximum] value to 20 and the [High] value to 18 in **[Level of detection]** (then the [Medium] value is automatically set to 9) and set [High] and [Medium] to 10 each in **[Minimum duration]**, a [High queue] event occurs when 18 to 20 people or less stay in queue in the area for 10 seconds or more, and a [Medium queue] event occurs when 9 to 17 people stay in queue for 10 seconds or more.

Level of detection

Set the threshold that determines when to trigger a [High queue] or [Medium queue] event. If you set the [Maximum] value and the [High] value, the [Medium] value is automatically set. An alarm occurs when the number of people in the area is equal to or higher than the level of detection you set.

Minimum duration

Set the minimum duration that will be used as a condition for triggering a [High queue] or [Medium queue] event. If you turn on the **[High]** or **[Medium]** toggle and set the minimum duration each, an event occurs when the number of people you set stays in queue longer than the minimum duration you set

Report

Report

You can receive reports of queue statistics.
To receive people-queue data through e-mail or FTP, turn on the **[Report]** toggle.

Schedule

Select **[Daily]** and time to receive queue data at the same time every day.
Select **[Weekly]** and time and days to receive queue data on the same day and time every week.

File name

Type a name and select the format of the file to send it via FTP and e-mail. The file name can contain up to 45 characters, including English alphabet letters, numbers, and hyphens (-). You can choose the file format between .xlsx and .txt.

Export

Click **[FTP/E-mail]** to type the details for FTP and e-mail.

Delete all data

Click **[Delete all data]** to reset all the queue data.
Data is not deleted after a factory reset but deleted only when you click **[Delete all data]**.

Note

If you use the **[Queue management]** feature in case of short wait times, an excessive number of events may occur. An error may occur or the function may not work if:

- Human heads are not included in the detection area.
- The head of the person in the detection area is obscured by the background of other objects.
- People or the heads are not detected according to the settings for minimum size, maximum size, or sensitivity that you configure in **[Setup]〉[Common setup]**.
- A person is loitering near the virtual line.
- A person is repeatedly entering or exiting the line from the edge of the line.
- The maximum value you set under **[Level of detection]>[Maximum]** is greater or less than the actual value.

Shopping cart queue management

The **[Shopping cart queue management]** feature allows you to check the number of the shopping carts staying in the detection area you set and their occupancy.
To enable the **[Shopping cart queue management]** feature, turn on the toggle at the top.

Queue

List

The **[List]** shows the number of shopping carts staying in the detection area you set and their occupancy. The database is refreshed every 15 minutes.

Setting detection areas

- On the video, create a quadrilateral around the area you want to manage the queue by clicking 4 times.
- Then the detection area is created on the video and added to the **[List]**.
- You can create up to 3 detection areas.

Changing detection areas

- To resize the detection area, drag the vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete a vertex, hover over the vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes the vertex.
- To relocate the detection area, drag the area to your desired position.

Deleting detection areas

1. Hover over the row of the detection area you want to delete in the **[List]** or click the detection area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of detection areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or numbers only.

Queue events

Set the conditions for triggering a queue event for each detection area.
The **[Shopping cart queue management]** feature analyzes how many shopping carts there are and how long they stay in queue in the set area and triggers a [High queue] or [Medium queue] event.
For example, if you set the [Maximum] value to 20 and the [High] value to 18 in **[Level of detection]** (then the [Medium] value is automatically set to 9) and set [High] and [Medium] to 10 each in **[Minimum duration]**, a [High queue] event will occur when 18 to 20 shopping carts stay in queue in the area for 10

seconds or more, and a [Medium queue] event will occur when 9 to 17 shopping carts stay in queue for 10 seconds or more.

Level of detection

Set the threshold that determines when to trigger a [High queue] or [Medium queue] event. If you set the [Maximum] value and the [High] value, the [Medium] value will be automatically set.
An alarm occurs when the number of shopping carts in the area is equal to or higher than the level of detection you set.

Minimum duration

Set the minimum duration that will be used as a condition for triggering a [High queue] or [Medium queue] event.
If you turn on the **[High]** or **[Medium]** toggle and set the minimum duration for each, an event will occur when the number of shopping carts you set stays in queue longer than the minimum duration you set.

Report

Report

You can receive reports of queue statistics.
To receive shopping-cart-queue data through e-mail or FTP, turn on the **[Report]** toggle.

Schedule

Select **[Daily]** and time to receive queue data at the same time every day.
Select **[Weekly]** and time and days to receive queue data on the same day and time every week.

File name

Type a name and select the format of the file to send it via FTP and e-mail. The file name can contain up to 45 characters, including English alphabet letters, numbers, and hyphens (-). You can choose the file format between .xlsx and .txt.

Export

Click **[FTP/E-mail]** to type the details for FTP and e-mail.

Delete all data

Click **[Delete all data]** to reset all the queue data.
Data is not deleted after a factory reset but deleted only when you click **[Delete all data]**.

> **Note**
>
> If you use the **[Shopping cart queue management]** feature in case of short wait times, an excessive number of events may occur.
> An error may occur or the function may not work if:
> - Shopping carts are not detected according to the settings for minimum size, maximum size, or sensitivity that you configure in **[Setup]**>**[Common setup]**.

- A shopping cart is being moved near the virtual line.
- A shopping cart is being repeatedly entered into or exited from the edge of the line.
- The maximum value you set under **[Level of detection]**>**[Maximum]** is greater or less than the actual value.

Heatmap

The **[Heatmap]** feature allows you to view the frequency of people's movements and stays in color.
To enable the **[Heatmap]** feature, turn on the toggle on the top.
You can set whether to use the heatmap feature and configure the detailed settings differently for each channel.

Heatmap

Background color

You can select the color of the background image that shows the heatmap data. Select **[Color]** to view the background image in color; select **[B/W]** to view the image in black and white.

Exclude area

You can set the area you want to disable the heatmap feature.

List

The **[List]** shows a list of exclude areas you set.

Setting exclude areas

- On the video, create a quadrilateral around the area you want to disable the heatmap feature by clicking 4 times.
- Then the set exclude area is created on the video and added to the **[List]**.
- You can create up to 4 exclude areas.

Changing exclude areas

- To resize the exclude area, drag a vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete vertices, hover over a vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes a vertex.
- To relocate the exclude area, drag the area to your desired position.

Deleting exclude areas

1. Hover over the row of the exclude area you want to delete in the **[List]** or click the exclude area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of exclude areas

- Double-click the set-area name you want to change in the **[List]**.

- You can type the name up to 63 characters long, including English letters or numbers only.

Report

Report

You can receive reports of heatmap data.
To receive heatmap data through e-mail or FTP, turn on the **[Report]** toggle.

Schedule

Select **[Daily]** and time to receive heatmap data at the same time every day.
Select **[Weekly]** and time and days to receive heatmap data on the same day and time every week.

File name

Type a name and select the format of the file to send it via FTP and e-mail. The file name can contain up to 45 characters, including English alphabet letters, numbers, and hyphens (-). The file type is automatically selected as .png.

Export

Click **[FTP/E-mail]** to type the details for FTP and e-mail.

Delete all data

Click **[Delete all data]** to reset all the heatmap data.
Data is not deleted after a factory reset but deleted only when you click **[Delete all data]**.

Shopping cart counting

The **[Shopping cart counting]** feature counts the number of shopping carts crossing the virtual line in the direction you set. A shopping cart is counted crossing the set line only when the center of the cart is the body length away from the line before and after the cart crosses the line.
To enable the **[Shopping cart counting]** feature, turn on the toggle on the top.

Counting

You can view analytics data about the shopping carts crossing the virtual line from 00:00:00 on the day to the current time. You can also check the number and total of shopping carts that have crossed the virtual line by direction.
The counting data is refreshed every 3 seconds.

List

The **[List]** shows a list of virtual lines you set.

Setting virtual lines

- Click on the video screen, and then click on it again where you want. Then a virtual line with the start and end points appears.
- When the line to count the number of shopping carts is created, the line is also added to the **[List]**.
- You can create up to 2 virtual lines.
- You can also set the direction of the arrow on the line. To change the direction of the virtual line, click the arrow in the center of the line. Shopping carts are counted only when they cross in the direction of the arrow or in the opposite direction of the arrow.

Changing virtual lines

- To resize a virtual line, drag the start or end point to your desired position.
- To relocate the virtual line, drag the line to the desired position.

Deleting virtual lines

1. Hover over the row of the virtual line you want to delete in the **[List]** or click the line on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the line.

Changing the names of virtual lines

- Double-click the set-line name you want to change in the **[List]**.
- You can type the name up to 45 characters long, including English letters or numbers only (you cannot have a name that only contains numbers).

Setting counting methods

When you hover over the row of the virtual line to set the counting method in the **[List]** or click the line on the video screen, then the virtual line becomes thicker. To change the direction, click the arrow. There are two ways to count the number of shopping carts: IN counting and OUT counting.

- IN: Counts how many shopping carts moved in the direction of the arrow.
- OUT: Counts how many shopping carts moved in the opposite direction of the arrow.

Exclude area

You can set the area you want to exclude from shopping-cart counting.

List

The **[List]** shows a list of exclude areas you set.

Setting exclude areas

- On the video, create a quadrilateral around the area you want to exclude from detection by clicking 4 times.
- Then the set exclude area is created on the video and added to the **[List]**.
- You can create up to 4 exclude areas.

Changing exclude areas

- To resize an exclude area, drag a vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete vertices, hover over a vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes a vertex.
- To relocate the exclude area, drag the area to your desired position.

Deleting exclude areas

1. Hover over the row of the exclude area you want to delete in the **[List]** or click the exclude area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of exclude areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or numbers only.

Report

Report

You can receive reports of shopping-cart-counting statistics.
To receive shopping-cart-counting data through e-mail or FTP, turn on the **[Report]** toggle.

Schedule

Select **[Daily]** and time to receive shopping-cart-counting data at the same time every day.

Select **[Weekly]** and time and days to receive shopping-cart-counting data on the same day and time every week.

File name

Type a name and select the format of the file to send it via FTP and e-mail. The file name can contain up to 45 characters, including English alphabet letters, numbers, and hyphens (-). You can choose the file format between .xlsx and .txt.

Export

Click **[FTP/E-mail]** to type the details for FTP and e-mail.

Delete all data

Click **[Delete all data]** to reset all the shopping-cart-counting data.
Data is not deleted after a factory reset but deleted only when you click **[Delete all data]**.

> **Note**
>
> An error may occur or the function may not work if:
> - A shopping cart is being moved near the virtual line.
> - A shopping cart is being repeatedly entered into or exited from the edge of the line.
> - A moving shopping cart is obscured by the background or other objects near the line.
> - Shopping carts are not detected according to the settings for minimum size, maximum size, or sensitivity that you configure in **[Setup]**>**[Common setup]**.
> - There are five or more shopping carts around the line at the same time.
> - Two or more shopping carts passing closer together.
> - There are too many shopping carts gathered.

Shopping cart heatmap

The **[Shopping cart heatmap]** feature allows you to view the frequency of movements and stays of the shopping carts in color.
To enable the [Shopping cart heatmap] feature, turn on the toggle on the top.

Heatmap

Background color

You can select the color of the background image that shows the heatmap data. Select **[Color]** to view the background image in color; select **[B/W]** to view the image in black and white.

Exclude area

You can set the area you want to disable the heatmap feature.

List

The **[List]** shows a list of exclude areas you set.

Setting exclude areas

- On the video, create a quadrilateral around the area you want to disable the heatmap feature by clicking 4 times.
- Then the set exclude area is created on the video and added to the **[List]**.
- You can create up to 4 exclude areas.

Changing exclude areas

- To resize an exclude area, drag a vertex to your desired position.
- To create a polygon with 5 or more sides, hover over any lines of the created quadrilateral.
  - The **[+]** button then appears on the line. Clicking the button adds a vertex.
  - You can create polygons with up to 8 sides.
  - To delete vertices, hover over a vertex you want to delete. Then the **[-]** button appears on the point. Clicking the button deletes a vertex.
- To relocate the exclude area, drag the area to your desired position.

Deleting exclude areas

1. Hover over the row of the exclude area you want to delete in the **[List]** or click the exclude area on the video screen.
2. Then the Delete button appears in the **[List]**. Clicking the button deletes the area.

Changing the names of exclude areas

- Double-click the set-area name you want to change in the **[List]**.
- You can type the name up to 63 characters long, including English letters or numbers only.

Report

Report

You can receive reports of heatmap data.
To receive heatmap data through e-mail or FTP, turn on the **[Report]** toggle.

Schedule

Select **[Daily]** and time to receive heatmap data at the same time every day.
Select **[Weekly]** and time and days to receive heatmap data on the same day and time every week.

File name

Type a name and select the format of the file to send it via FTP and e-mail. The file name can contain up to 45 characters, including English alphabet letters, numbers, and hyphens (-). The file type is automatically selected as .png.

Export

Click **[FTP/E-mail]** to type the details for FTP and e-mail.

Delete all data

Click **[Delete all data]** to reset all the heatmap data.
Data is not deleted after a factory reset but deleted only when you click **[Delete all data]**.

Backup & Restore

You can save the current settings of the system as a file on your PC and restore the system to the state when the backup file was stored.

Backup & Restore

Backup & Restore

You can back up the settings of the WiseAI application or restore it to the state when the settings were saved.
Click **[Backup]** to create a backup file of the current settings of the WiseAI application.
Click **[Restore]** and select a backup file to restore the application to the settings to the state when the file was saved.

Factory default

Click **[Reset]** to return the application to its factory settings.

Version information

The version information shows you the information on WiseAI application and AI information. Depending on the camera model, the AI learning models may or may not be displayed.

Open source license

We provide open source licenses used by this product.**Click the [View]**button to see the information of the open source licenses used by this product and full license texts.

Common setup

You can set conditions of object detection that are applied globally. You can set the sensitivity as well as the minimum and maximum size of an object to be detected.

Common setup

When you set conditions of object detection on the **[Common setup]** page, the conditions are applied to video statistics globally.

Minimum

Set the minimum size of an object to be detected. Objects smaller than the set minimum size are not detected.

Maximum

Set the maximum size of an object to be detected. Objects larger than the set maximum size are not detected.

Sensitivity

Set the detection sensitivity. When you set the sensitivity value higher, even objects with low reliability are detected.

> **Note**
> Detecting objects with low reliability in detection may result in a high false-detection rate.

License

You can activate an application online and offline. You can use all of the application's features only when the application is activated.

Online activation

Activate the application online. If you have an internet connection, type your license key.

Activating online

Type the license key under **[License key]** and click **[Activate]**. When the application is activated, a message [Activated] appears.

Offline activation

Activate the application offline. If you type the license key, you can check the activation code in the web browser. Typing the activation code activates the application.

Activating offline

1. In the application, type the license key in **[License key]** and click **[Get activation code]**. The request code then is automatically entered in **[Request code]**.
2. When the **[Get activation code]** dialog box pops up, scan the QR code using the camera on your mobile device.
3. Check the activation code in the web browser on the QR code-scanned device. Type the activation code in **[Activation code]** in the application and then click **[Activate]**.
4. To receive the activation-code file by e-mail, type your e-mail in your device's web browser. In the application, click **[Import]** and select the activation code file. Then the activation code is automatically entered in **[Activation code]**. Click **[Activate]** to activate the application.

Log

The important event logs are recorded while the camera is in operation. You can view the accumulated log history.

System log

You can view the dates, times, and details about changes to system settings and to the operation of the features of the system.

Log type

You can view the dates, times, and details of system changes. Select **[All]** to view the date, time, and details of all the events that occurred on the selected system.

Backup

You can back up the selected log and export the backup log to a text file. To back up the system logs, click **[Backup]**.

Event log

You can view the dates, times, and details about events that occurred on the camera.

Log type

You can view the date and time of the event's occurrence and the details. Select **[All]** to view the dates, times, and details of all the events that occurred on the selected camera (channel).

Backup

You can back up the selected log and export the backup log to a text file. Click **[Backup]** to back up the event logs.

> **Note**
>
> All the log messages are provided in English, regardless of the language you set in the WebViewer.
> Up to five minutes of event log history may be lost when the camera is powered off.
> A maximum of 1,000 logs are stored per log. After the 1,001st log, the oldest log is deleted.


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