Managing Camera

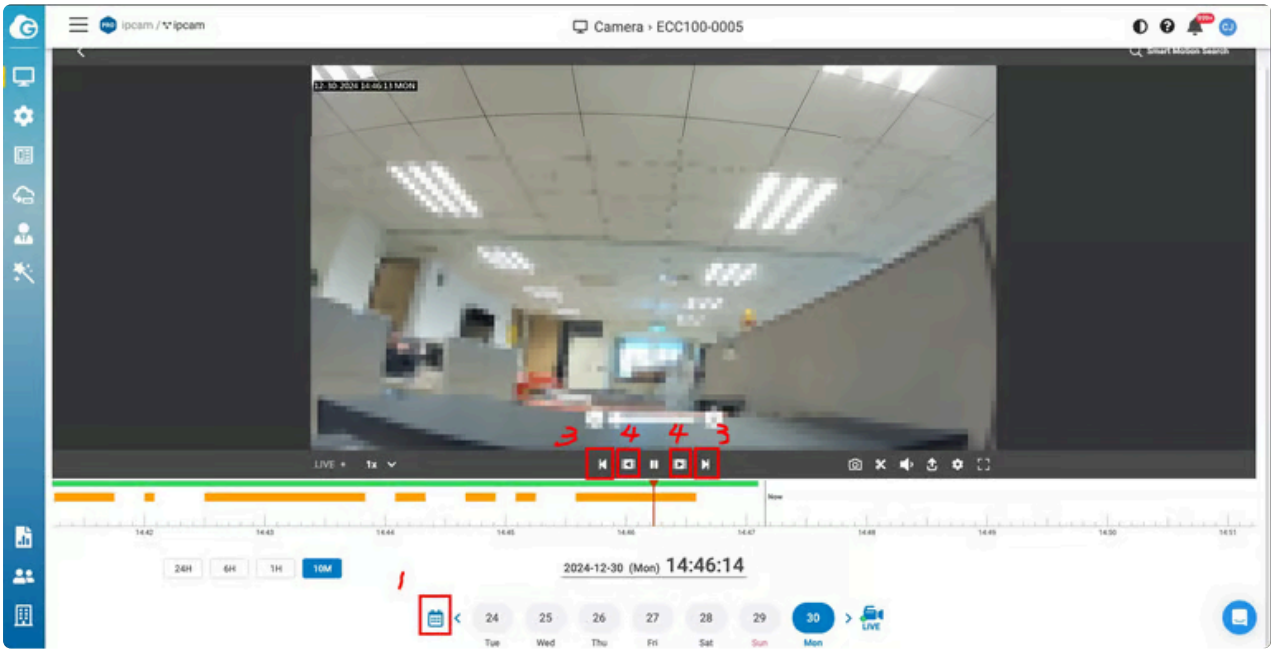
There are two ways for users to quickly pick up cameras for deeper inspection. Camera List can handle regular maintenance with plenty of information, while Camera Grid is the perfect way for video event investigation. Users can switch between the two modes for all cameras. Cameras can be shown here after being registered to the cloud and assigned to a network. To manage the cameras in a network, trigger the toolbar menu on the left-hand side: **Manage > Cameras**.

Recording Playback and Smart Motion Search

Live view, playback, and smart motion search are combined into one panel to reduce switching operations between each other. Normally, users spend time searching for videos on the timeline. Here smart Motion search makes it easy and reduces the number of times to play back and forward on record track

you can access Video Playback from **Monitor > Camera > Videos**

Timeline Search



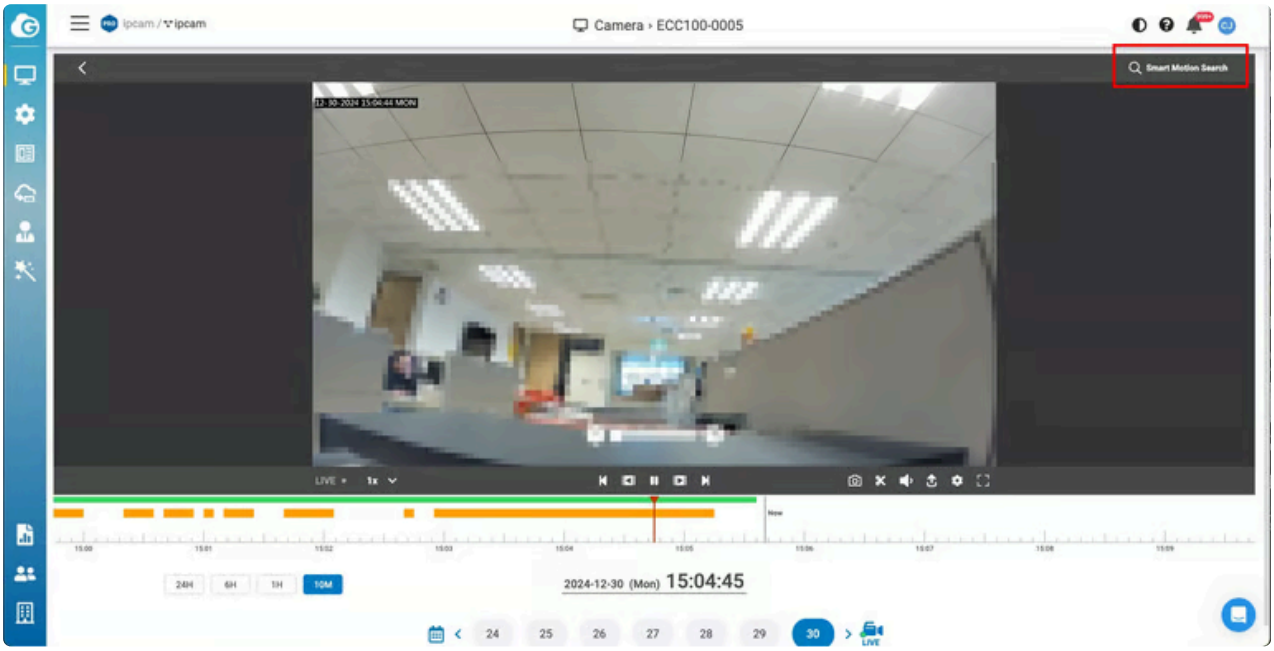
Steps

1. Pick a specific day and time on the calendar.
2. Scroll on record track and then mouse up and down to the appropriate duration scale where event stamps on the timeline are clear.
3. Click pre- or next-events on the timeline, or mouse over the timeline to pop up an event snapshot and click on the timestamp to the time point.
4. Once abnormality is found, click pre- or next frame to locate a clear moment and take a snapshot or export a video clip.

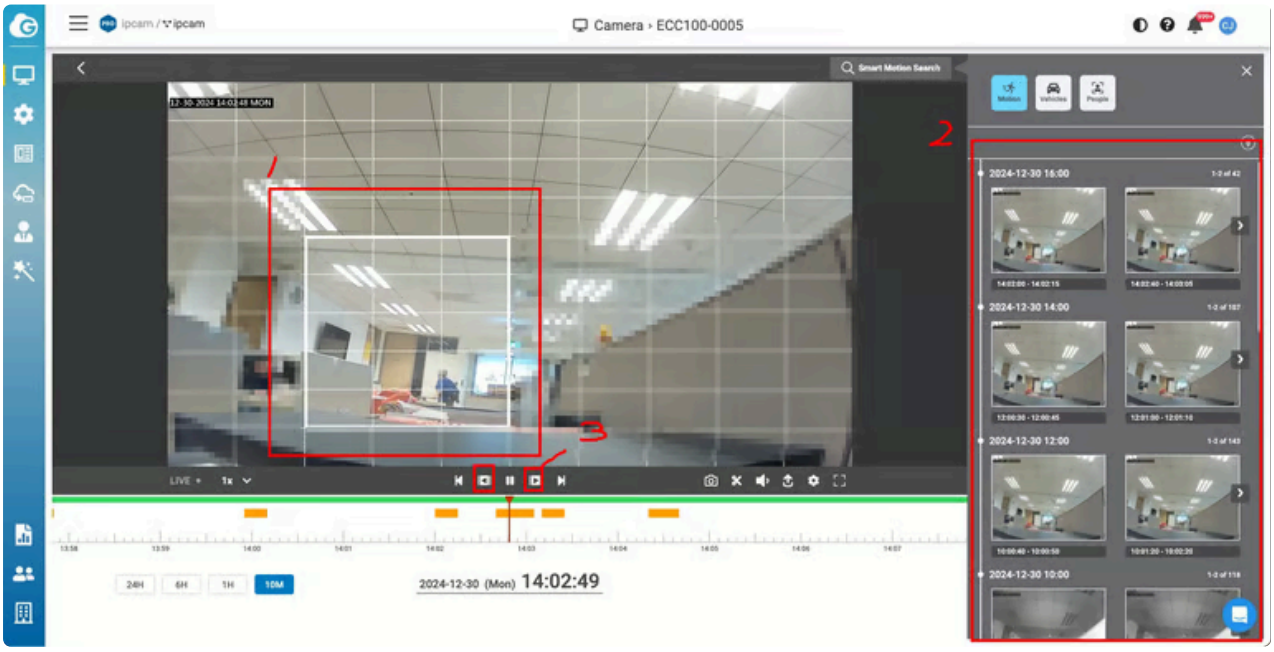
Smart Motion Search

This allows you to identify people and vehicles within the camera's field of view and quickly find relevant events.

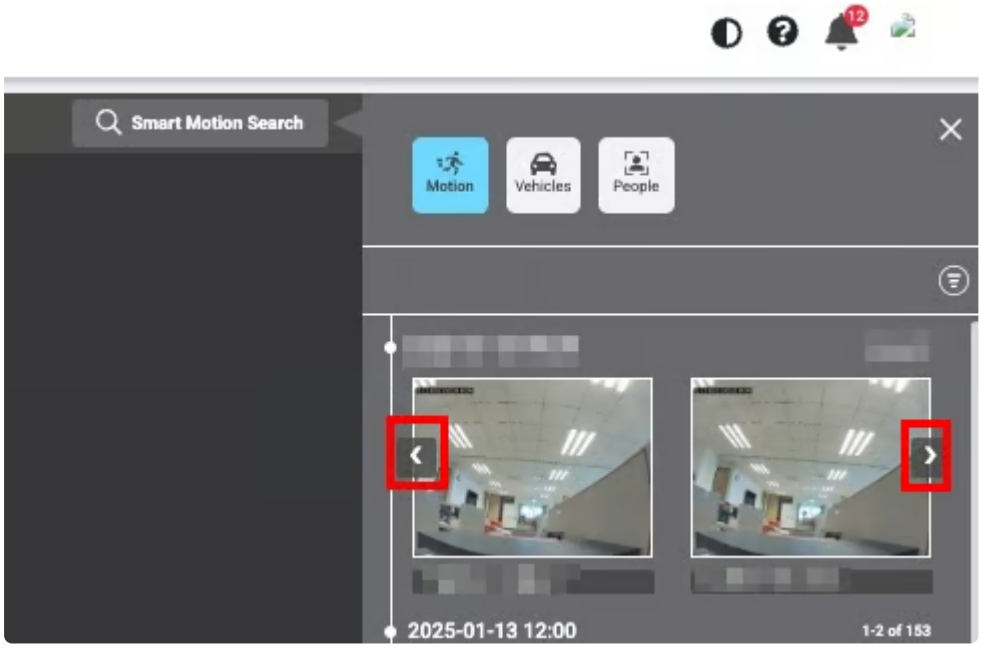
You can click the **smart motion search** on the top-right corner at the beginning.



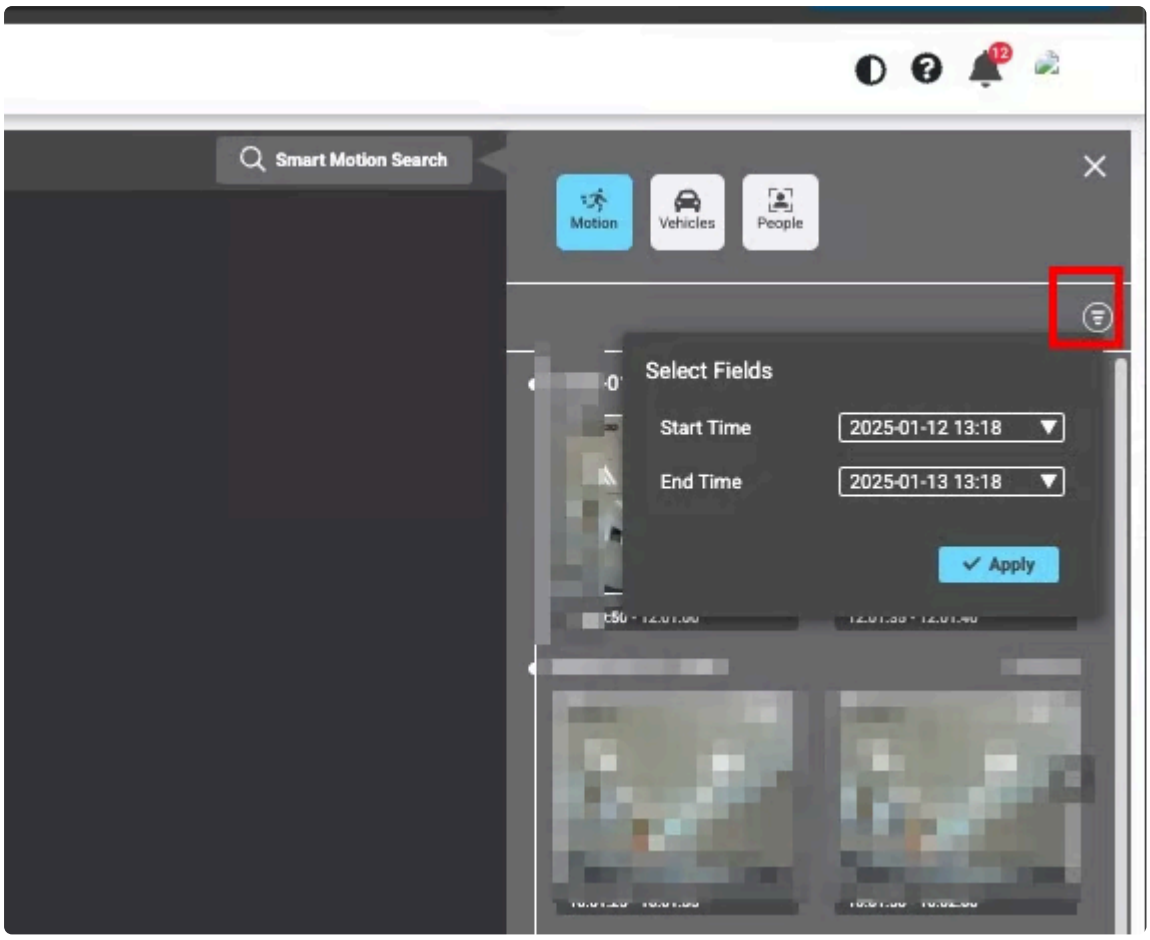
Steps



1. Set an interest region on video. Results are shown on paging, sorting from latest to past.
2. Check the snapshot or scroll down to the next page of results. Once an abnormality was found, click on the snapshot to playback the video clip on the timeline. Each time duration can have multiple search result , you can click right or left arrow icon to find it.



3. Once you can't find the results you want, you can click the filter icon to search based on the time duration.

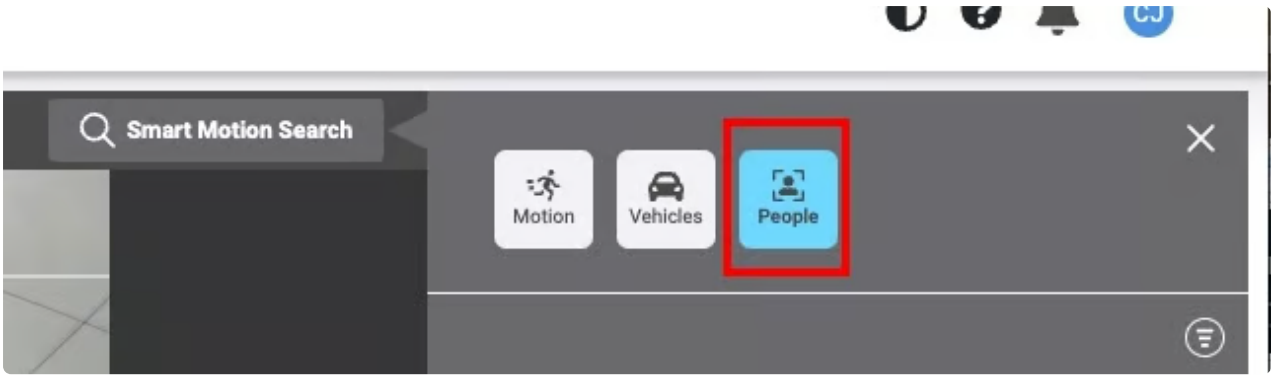


4. Click pre- or next frame to locate a clear moment and take a snapshot or export a video clip.

People Search

This allows you to identify people within the camera's field of view and quickly find relevant events.

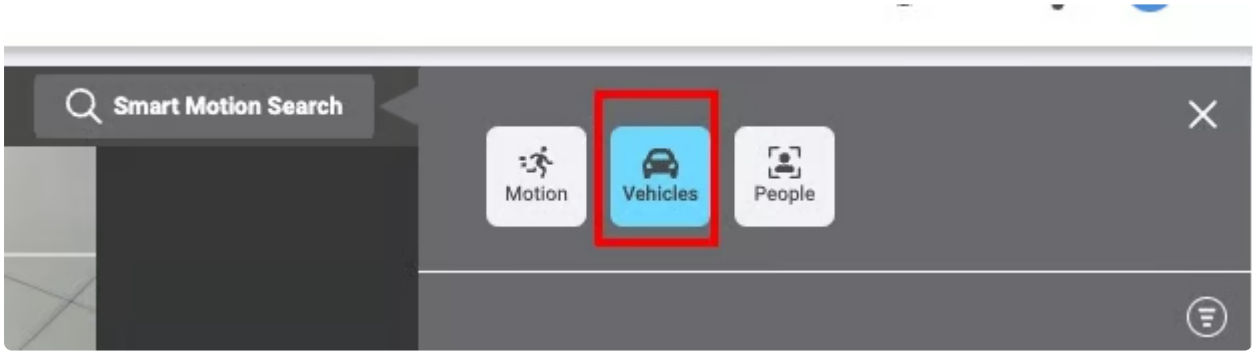
The details steps are the same when you do the motion search, but change to the People tab.



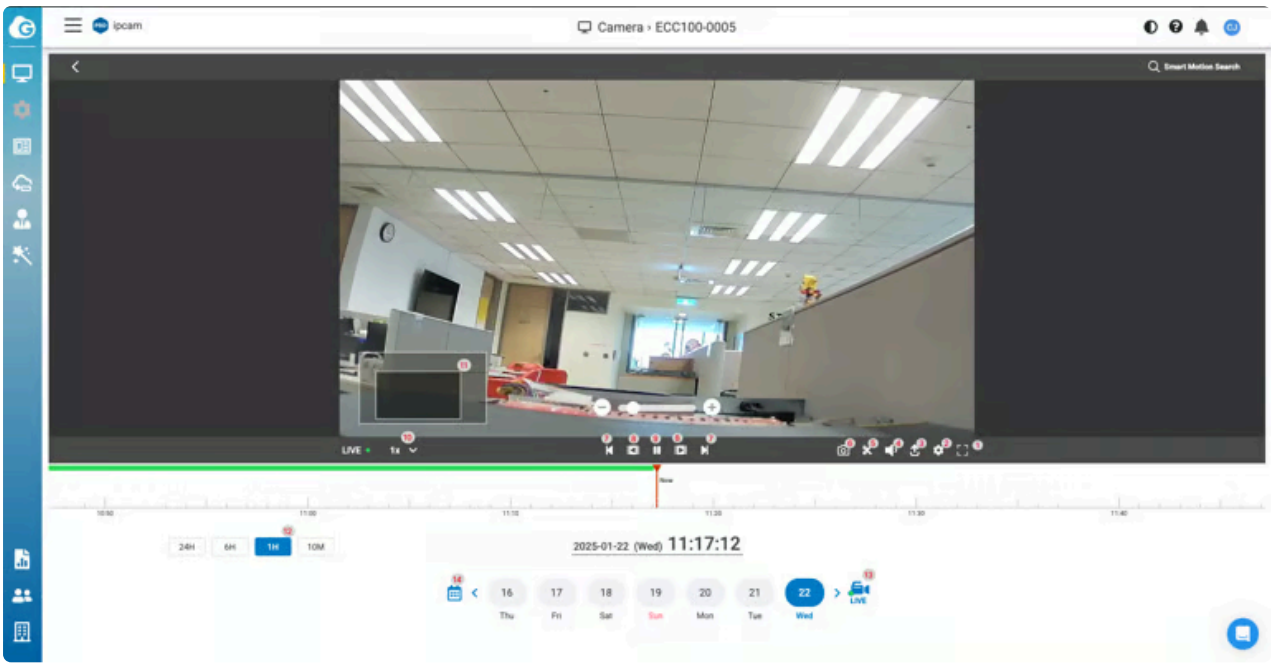
Vehicle Search

This allows you to identify vehicles within the camera's field of view and quickly find relevant events.

The details steps are the same when you do the motion search, but change to the Vehicle tab.



Video Player User Interface

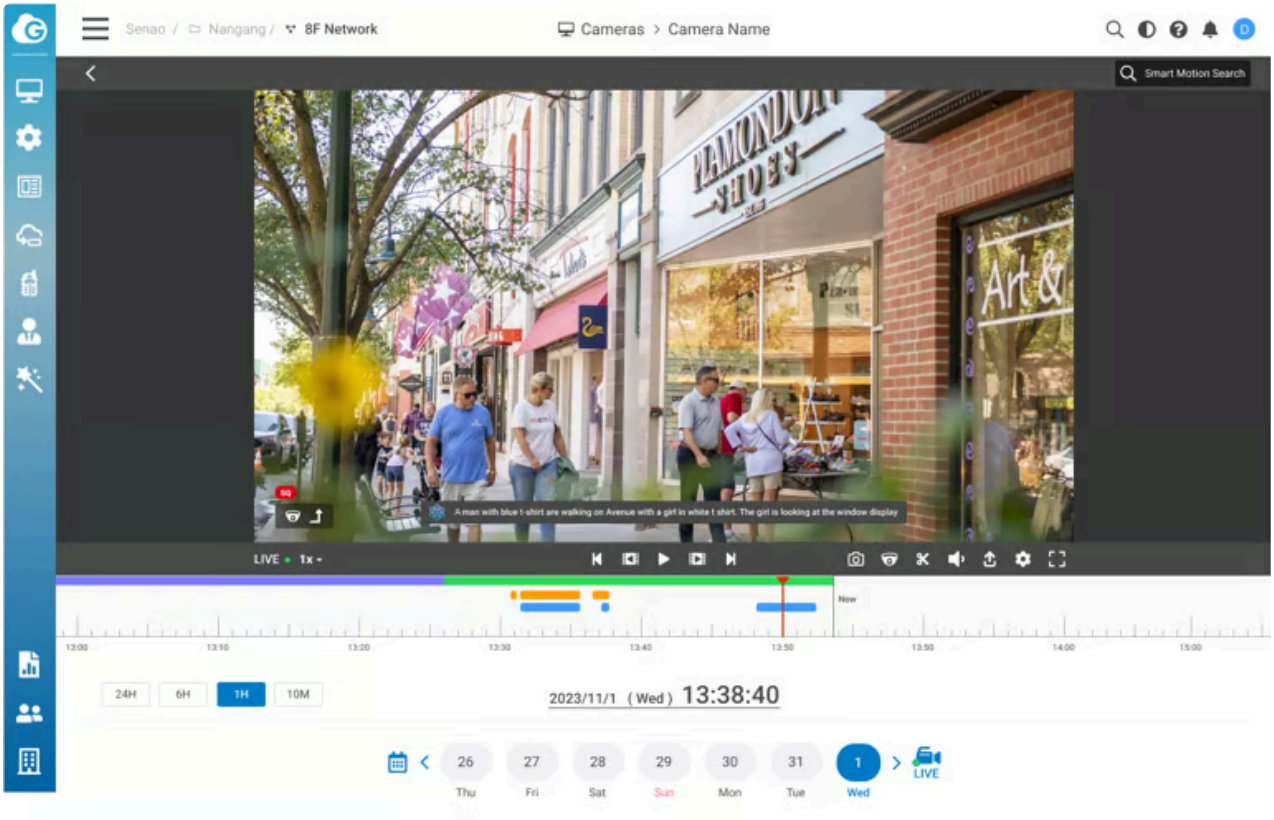


1. **FullScreen: click to have fullscreen of the videos.**
2. **Camera detail:** Go to the camera detail page to adjust camera settings.
3. **Share URL**: Anyone who has the URL can access it without authentication. The video is not autoplay to be able to have audio when playing. It is easy to share an abnormal event with a person who has no EeGenius account, like police.
4. **Audio On/Off:** Enable/Disable microphone of camera to pick up remote audio.
5. **Export Video:** Trim video from start time to end time on timeline
6. **Snapshot**: Directly have a snapshot at that moment when you click the button.
7. **Previous/Next Event**: Quickly navigate through recorded events in the camera's playback timeline.
8. **Stop at previous/next frame**: Precisely navigate through recorded footage frame by frame. This is especially useful for detailed analysis or capturing specific moments in the footage.
9. **Play/pause video**: click to switch to play or stop video and adjust the volume.
10. Play speed: This allows you to adjust the play speed. If you play at higher speed, you will get more footage frame from the cameras and double more throughputs.
11. Digital Zoom: Adjust the zoom level and focus on specific areas of the camera's view using the mouse.
    - **Scroll Up:** Zoom in to view details more closely.
    - **Scroll Down:** Zoom out to expand the field of view.

- **Click and Drag:** After zooming in, click on the screen and drag to adjust the visible area within the zoomed-in frame.

12. Adjust the timeline duration: Allows you to change the time line duration for the video time bar.
13. Live icon: click to go to live view instantly.
14. Calendar: Click to search the video footage at a specific day and time directly.

Video Timeline Indicator



Purple bar: Indicates backup footage stored on an NVS/NAS during this period.

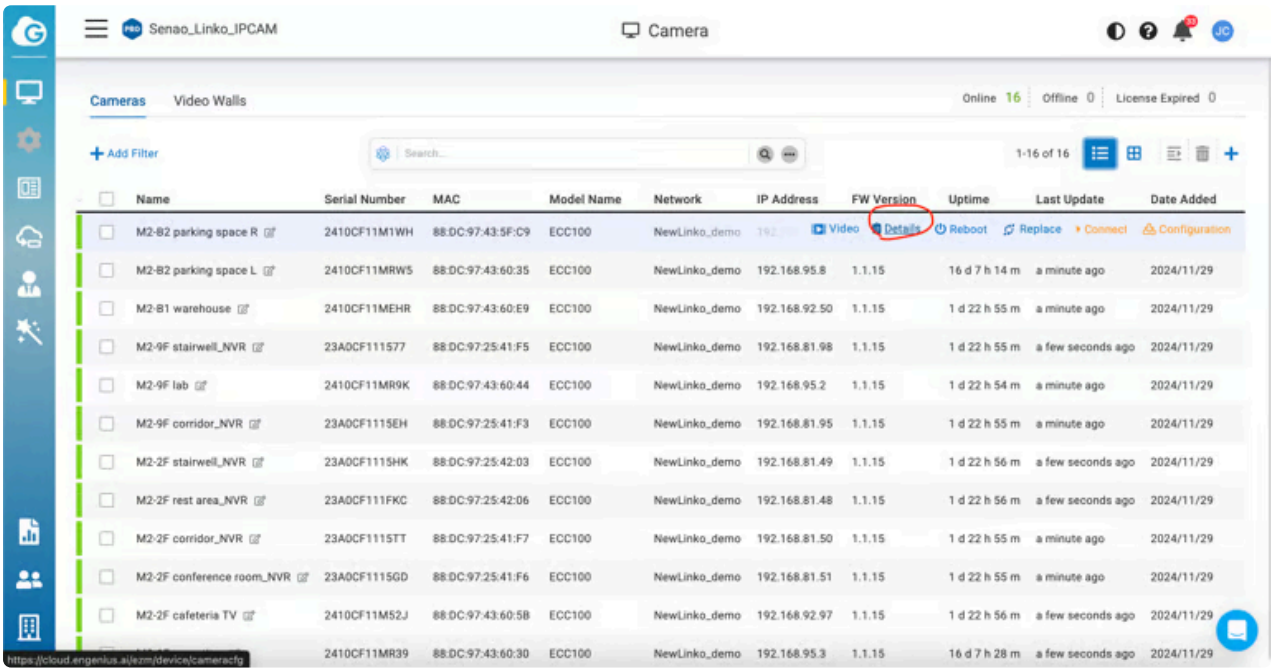
Green bar: Indicates recording stored directly on the camera's local storage.

Orange bar: Indicates that an object was detected during this period.

Blue bar: Indicates the cloud AI analysis was processed during the period.

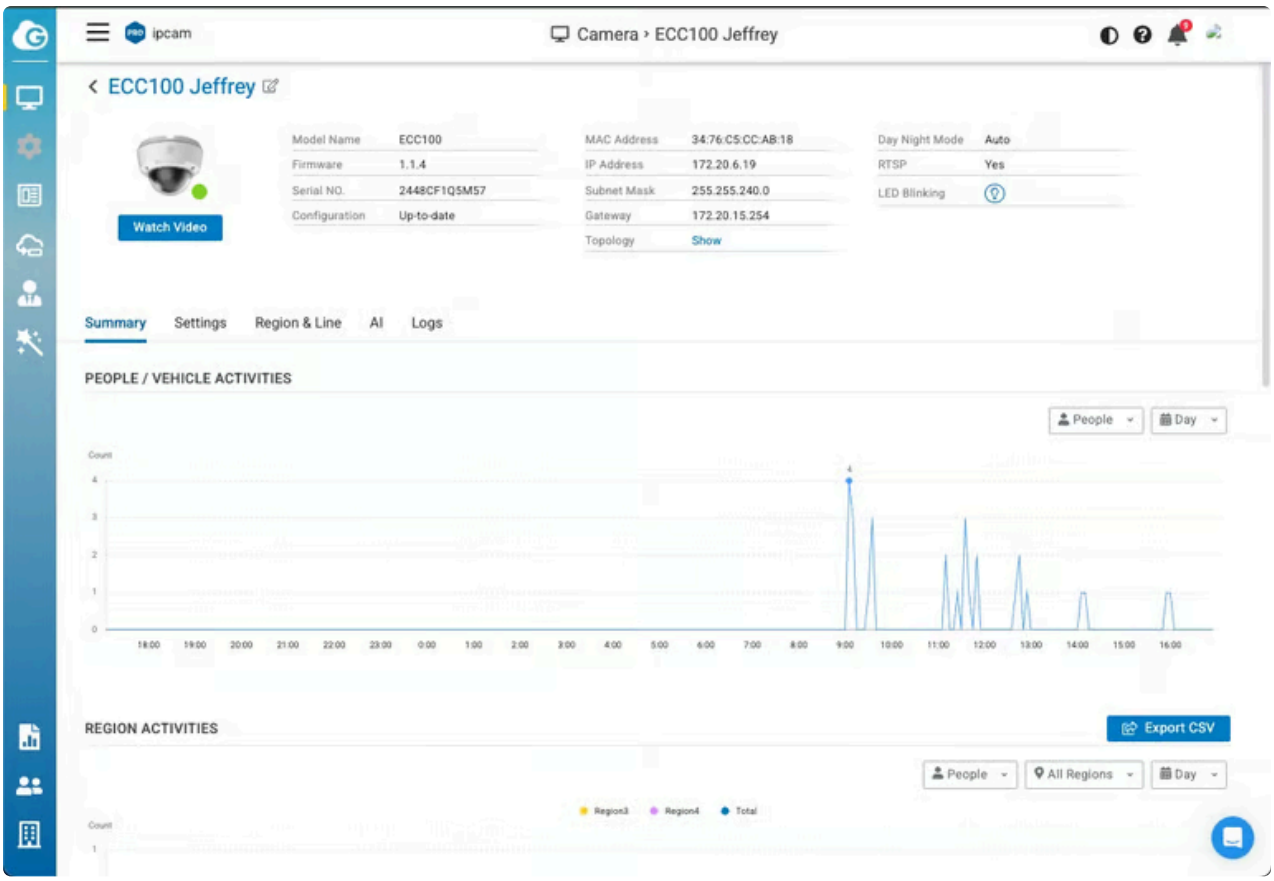
Configure and Check Camera Details

For each camera, there are more settings available to configure and fine-tune the system. In addition, EnGenius Cloud collects and aggregates lots of data reported by camera periodically. Sophisticated graphs and tables are available on the camera detail page to ease the monitoring and tracking of a camera. To get all the details, on **the cameras** page, hover your mouse cursor on the row of cameras you are interested in. A **Details** button is shown, and click on it to get into the camera detail page. To reboot cameras, you can still hover on the row of cameras. and click on the **Reboot** button.



Summary

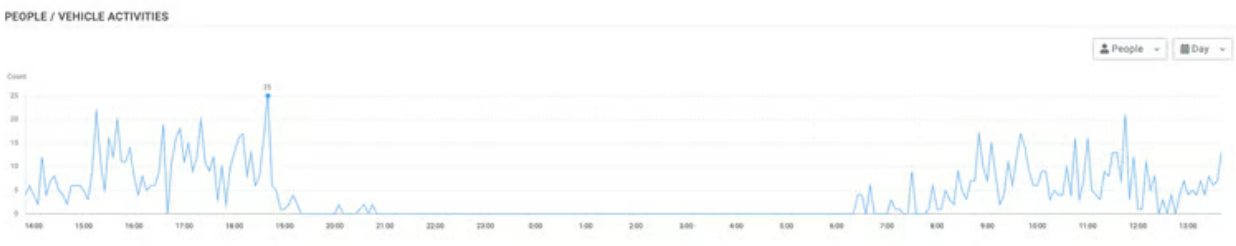
The first TAB page summarizes the camera's current settings and states. All details of configurations and statistics are shown on this page. On the top of the page, you can find the LED blinking button; this is used when you want to find where the camera is.



People / Vehicle Activities

People and Vehicle Counting help you to gain valuable insights into the number of people or vehicles that appear in a particular location.

This data can then be used to gain a better understanding of the traffic flow and density of persons or vehicles in the area, allowing for informed decision-making and better security planning



Record Overview

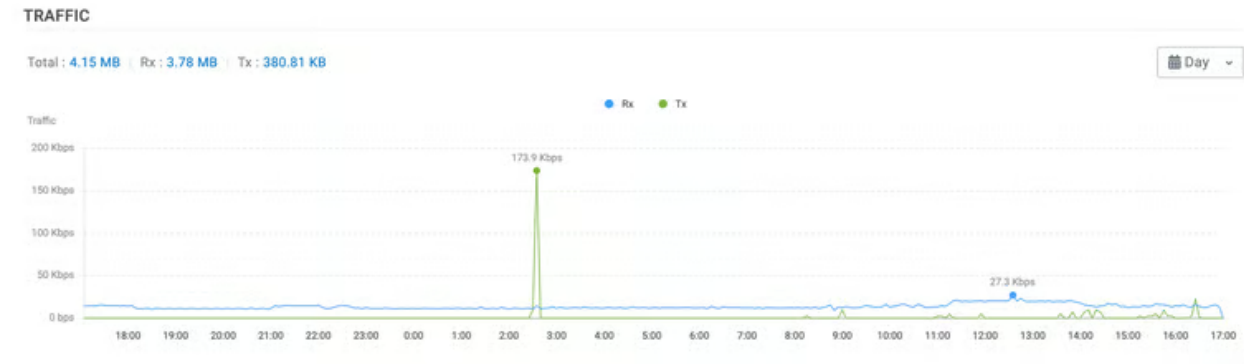
The will display whether the camera was recording video or not over a period of time. Green bars indicate the camera was recording on that period of time , The gray bar means the camera is not recording on that period of time

Place your cursor over each bar to see date, time, and recording status.



Traffic

Traffic shows the camera Tx and Rx over a period of time



Camera settings

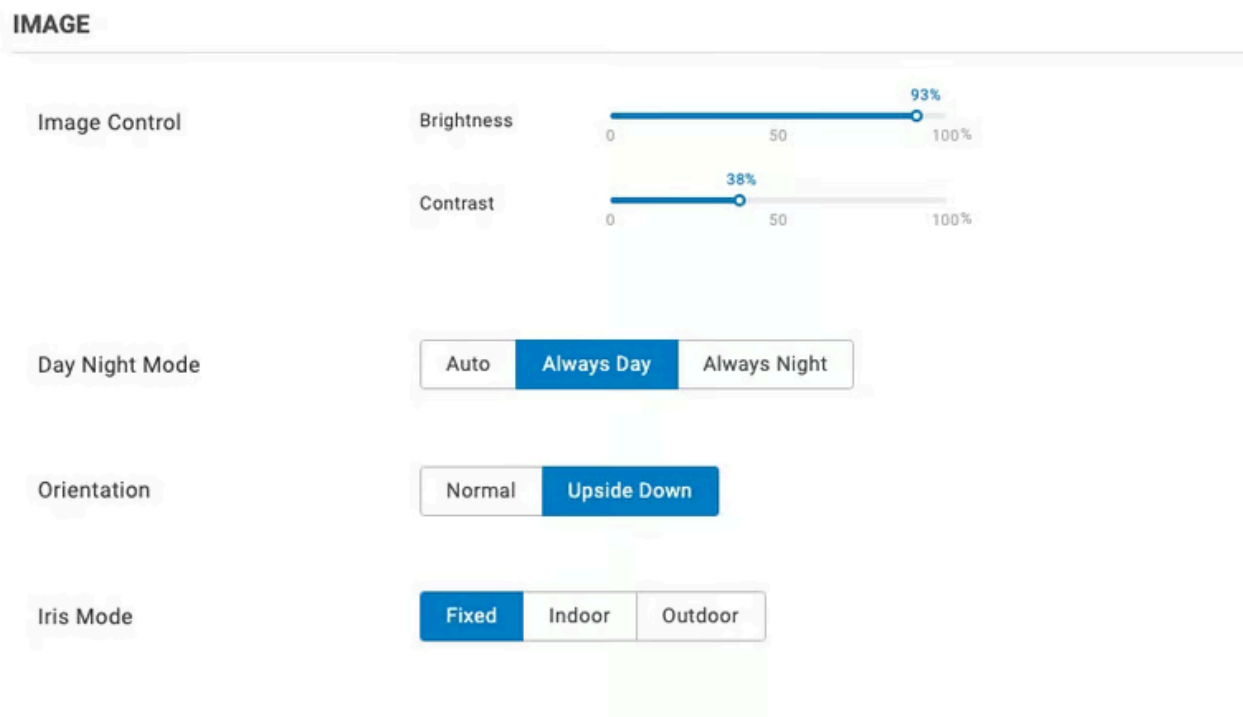


Image Control

- **Brightness**: Adjust the brightness level of the camera feed using the slider. The range is from 0% (minimum brightness) to 100% (maximum brightness). Increase the percentage to brighten the image, useful for low-light environments.
- **Contrast**: Modify the contrast level to enhance differences between light and dark areas in the image. Use the slider to set a value between 0% (lowest contrast) and 100% (highest contrast).

Day night Mode

Select the operating mode for the camera based on lighting conditions:

- **Auto**: Automatically switches between day and night mode based on ambient light levels.
- **Always Day**: Keeps the camera in day mode regardless of lighting conditions, ideal for well-lit environments.
- **Always Night**: forces the camera into night mode, useful for consistently dark areas or nighttime surveillance.

Orientation

Adjust the orientation of the camera image:

- **Normal**: Standard orientation, suitable for most setups.
- **Upside Down**: Flips the image vertically and mirror it too. Use this setting when the camera is mounted upside down.

Iris Mode

Iris refers to the adjustable aperture of the camera lens that regulates the amount of light entering the camera sensor. Proper adjustment of the Iris ensures optimal image quality in varying lighting conditions.

Iris settings are critical to avoid issues like **flickering**, **rolling effects**, or over/underexposed images, depending on the environment where the camera is installed.

- Fixed Mode: The Iris is set to its **maximum opening**, allowing the maximum amount of light to enter the sensor. Suitable for low-light environments where capturing as much light as possible is essential.
- Indoor: Prioritizes eliminating **flickering** and **rolling effects** caused by indoor artificial lighting.
- Outdoor: Auto-setting Iris to get best quality, but easy to meet rolling or flicker effect in indoor environment.

High Dynamic Range

High dynamic range are camera techniques for capturing the same image at different exposures and then merging those images together to form a single image. This is particularly useful where the image consists of very light and very dark areas (e.g., an indoor camera that faces a window to outside).

Privacy Mask

Privacy Mask allows you to block sensitive areas from a camera's feed. After you apply a privacy window to an area of the camera feed, subsequent video in the specified area is covered by dark.

Real-Time Steaming Protocol

RTSP streaming is for 3rd party applications, NVR, VMS, or NAS. Both live video and audio are streamed out at the same time.

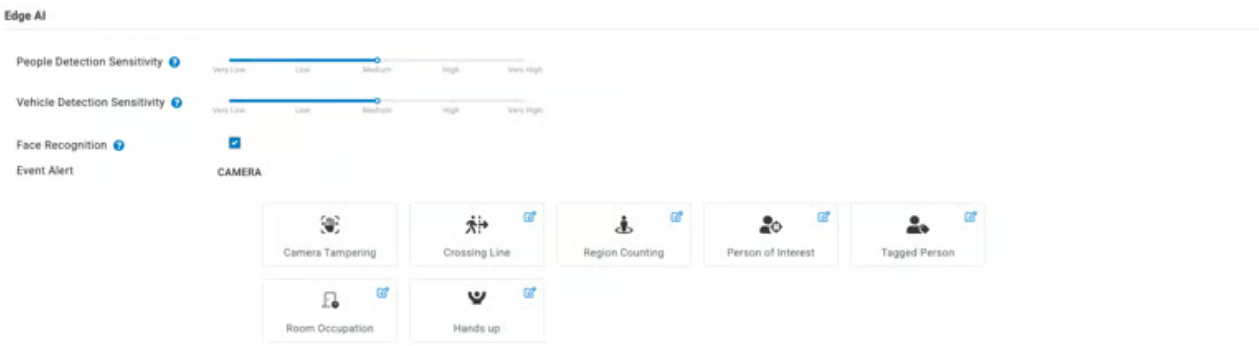


1. Username/password : 3rd party application client needs them for Digest authentication during connection.
2. High Resolution URL: This is created automatically for copying to clipboard and being pasted in 3rd party applications.

Camera AI settings

Edge AI

Users can set for in-camera AI. There are 5 sensitivity levels for people and vehicles, respectively. By default, it is Medium. Lower sensitivity will have fewer video events.



Camera Tampering: Identifies attempts to obstruct, cover, or alter the position of the camera, indicating a potential security manipulation.

Crossing Line: Tracks the movement of individuals or vehicles crossing a virtual line in a specified direction, commonly used for monitoring restricted zones or traffic flows.

Region Counting: Monitors the number of individuals or vehicles entering, exiting, or remaining within a defined area, supporting crowd management and security tracking.

Room Occupation: Detects when a person or vehicle stays in a defined area longer than a set time, triggering an alert for safety monitoring

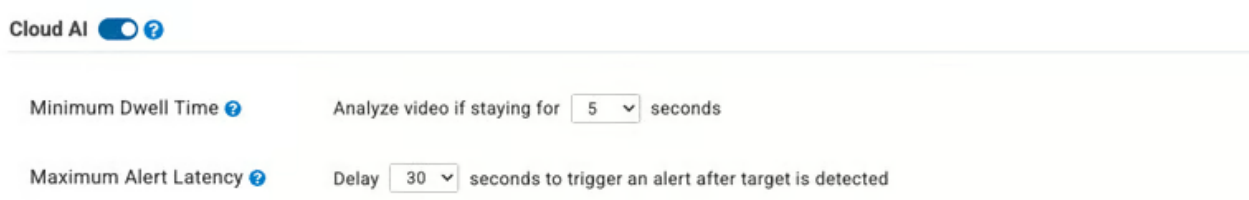
Hands Up: Detects when a person raises their hands and triggers an alert for potential emergencies or abnormal behavior.

POI Alert: Enroll face(s) into a person profile and set it to the list. Alert is triggered by face recognition.

Tagged person alert: Enroll face(s) into a person profile and tag it for the alert. Alert is triggered by face recognition.

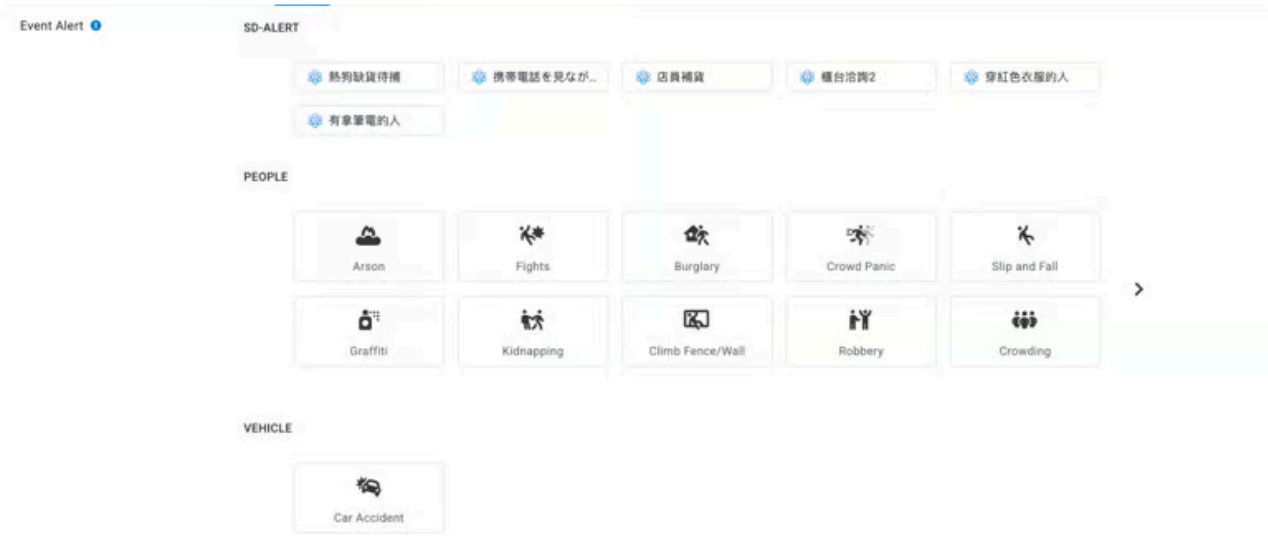
Cloud AI

By default, it is disabled. If enabled, people or vehicles could consume tokens to analyze their activities during the video frame. Note: Cloud AI can be enabled/disabled only if camera AI was enabled manually or by default. Cloud AI needs AI tokens to work. If AI tokens run out, video activity analysis will stop until AI tokens are recharged. Cloud AI events could depend on camera AI sensitivity since objects will be detected by camera AI and sent to cloud AI for advanced activity analysis.

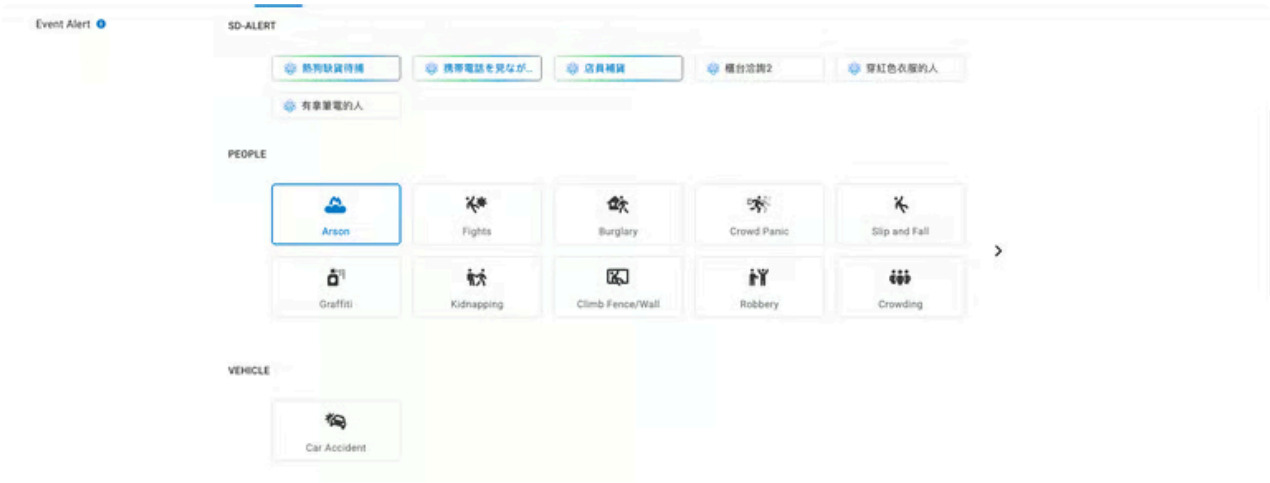


Event Alert

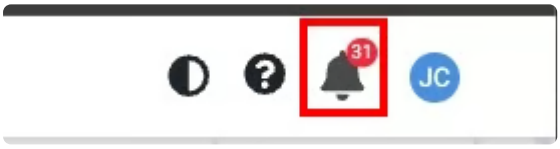
These event alerts will send email/App notifications after you enable alerts on each event.



You can enable **multiple SD Alerts directly on each alert card** by clicking the card to toggle **Enable**.



Event alert will also appear in the bell icon

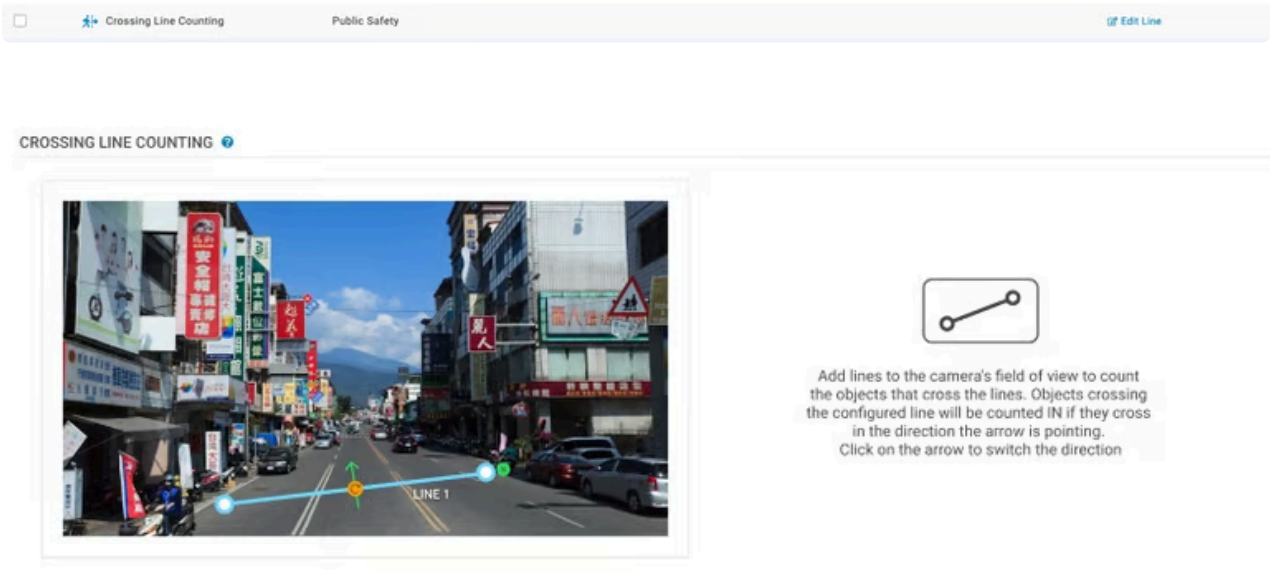


Email notification needs to be enabled; otherwise, alerts won't take effect.



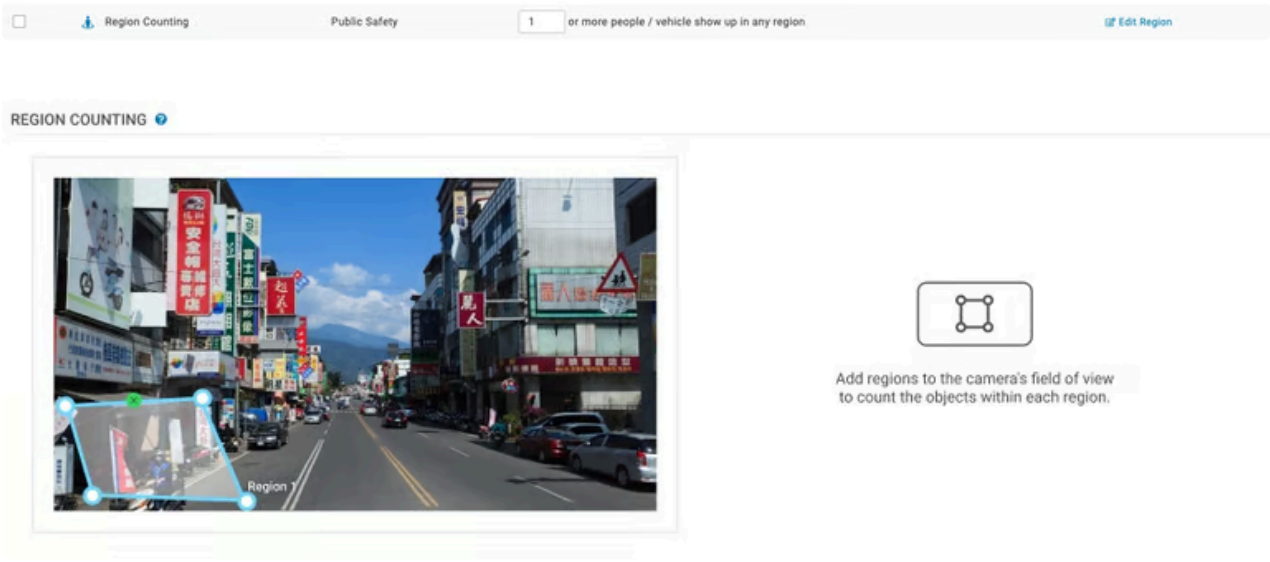
Notification settings page

Cross-line counting Alerts need to be added to the cross-line by clicking **Edit line** action



Cross-Line editing page

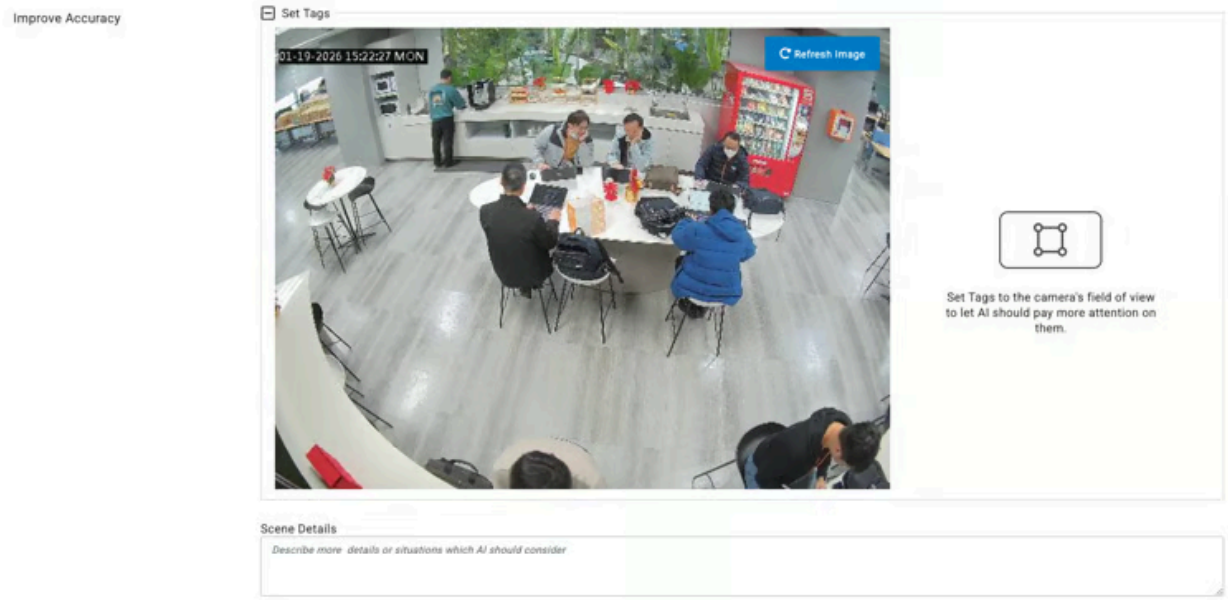
Region Counting Alert needs to be added to the cross-region by clicking the **Edit Region** action and assigning the people/vehicles that show up in any region.



Region Editing page

Improve Accuracy

The **Improve Accuracy** feature helps enhance AI event detection by allowing users to provide additional context about the camera's field of view.
By configuring **Set Tags** and **Scene Details**, the AI can better understand which areas or situations are important, reducing false alarms and missed detections.



Set Tags allows you to mark specific areas or objects within the camera's field of view.
Tagged areas receive higher attention during AI analysis, helping the system focus on relevant regions in the scene.

When to Use

It is recommended to use Set Tags in the following scenarios:

- Objects that may cause **mis-detection**
- Critical zones that require **higher detection accuracy**

How to Configure

1. Drag to draw a box around the area you want to tag and name it. If the area image is not the latest, you can click **refresh image** to capture the latest image.
2. Add multiple tags if necessary.
3. Click **Apply** in the top-right corner to save the settings.

Scene Details allows you to describe the environment and typical behavior in the camera view.
This information helps the AI better interpret the scene context.

Schedule

This is the schedule that controls when to send the AI notification to the user, which will consume the AI Point as well. Camera AI handles detection, while other features like Camera AI Alerts, Cloud AI analysis, and Cloud AI Alerts follow the schedule. This allows for managing alert schedules and Cloud AI costs.



Region & Cross Lines

Regions and lines are a useful tool to identify specific areas of interest in your camera’s field of view. These both can be configured in the **Monitor** > **Camera > Detail > Region & Line**

Drawing a Region for Region Counting

Steps

1. Mouse to click and draw a polygon by placing points on the camera’s screenshot.
2. Click each point sequentially to form the region.
3. Complete the region by connecting the last point back to the first point
4. You can adjust each point. If finished click apply.

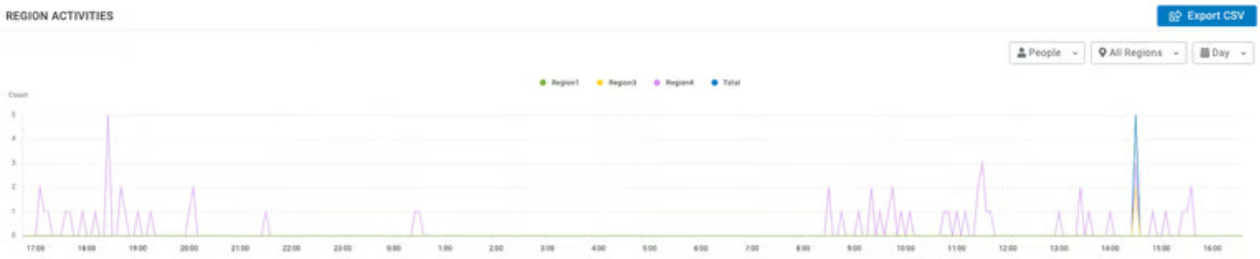
Drawing a Line for Crossing Line Counting

Steps

1. Click on the starting point of the line within the camera's field of view.
2. Drag the line to the endpoint and click to place it. you can click the arrow icon to change the in/out direction.
3. Adjust the point location after you complete the drawing.
4. Click Apply

Region Activity

This will show on **camera detail > Summary**. Users can switch between “All Regions” and each region available. The numbers displayed on the charts represent the total people within the drawn region.



Line Activity

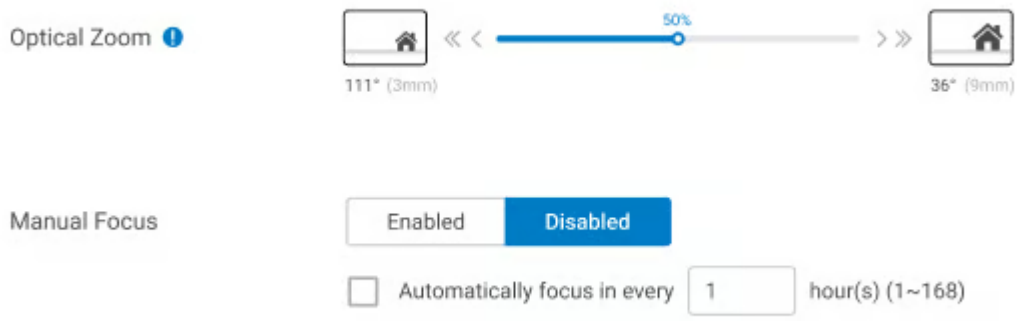
This will show on **camera detail > summary**. The user can switch between “All Lines” and each line available. The numbers displayed on the charts represent the total people In/Out traffic cross the drawn line.



Optical Zoom and Focus

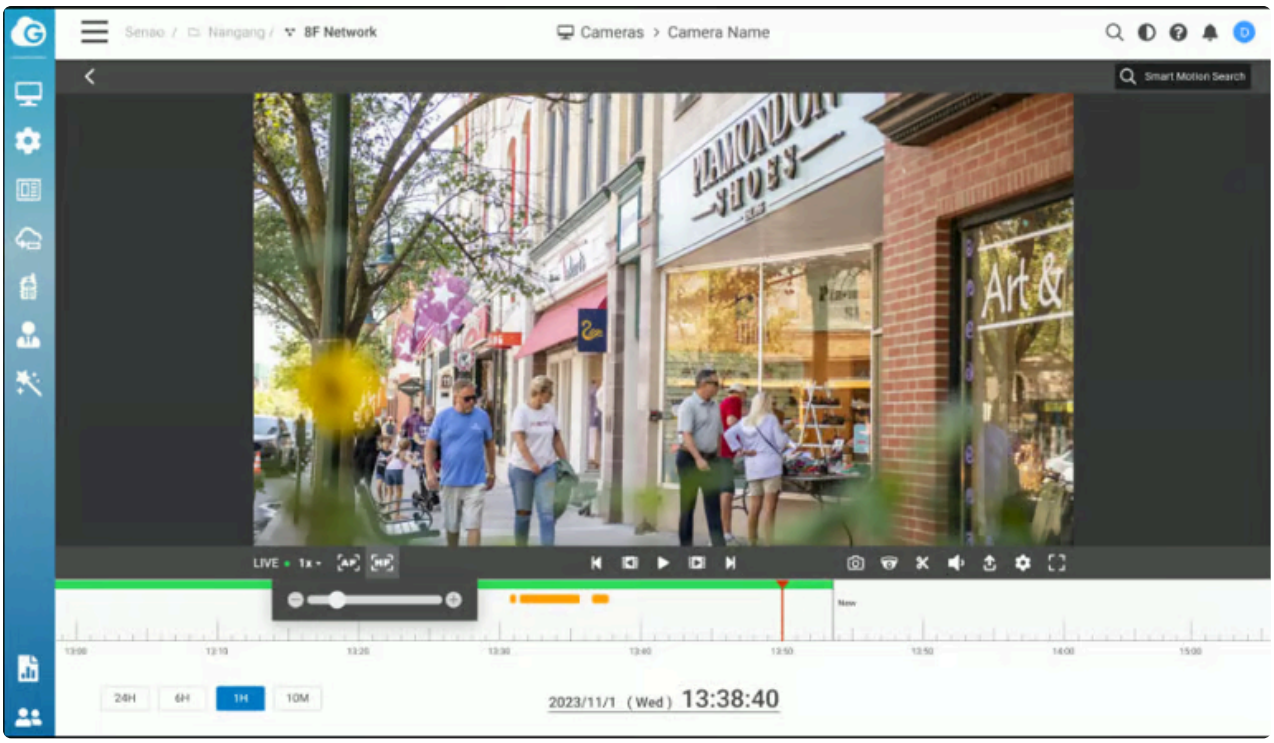
ECC500 or higher cameras with motorized lens can change view angles on remote. You can change the field of view and focus on remote. It saves efforts to adjust the view angle on site. The changes are by optical lens, not digital zoom-in without losing image quality.

You can find the optical zoom and focus mode from **Camera detail page > Settings**



Optical Zoom: Dragging the slider to the left switches to a wider view, covering a larger area and making it suitable for wide-area monitoring. Dragging it to the right zooms in to a narrower view, enlarging distant objects for detailed observation. All adjustments are performed through optical zoom, ensuring that image quality is preserved.

Manual Focus: Manual Focus allows you to control how the camera adjusts image clarity. When Manual Focus is enabled, you can manually adjust focus between near and far objects on the video player.

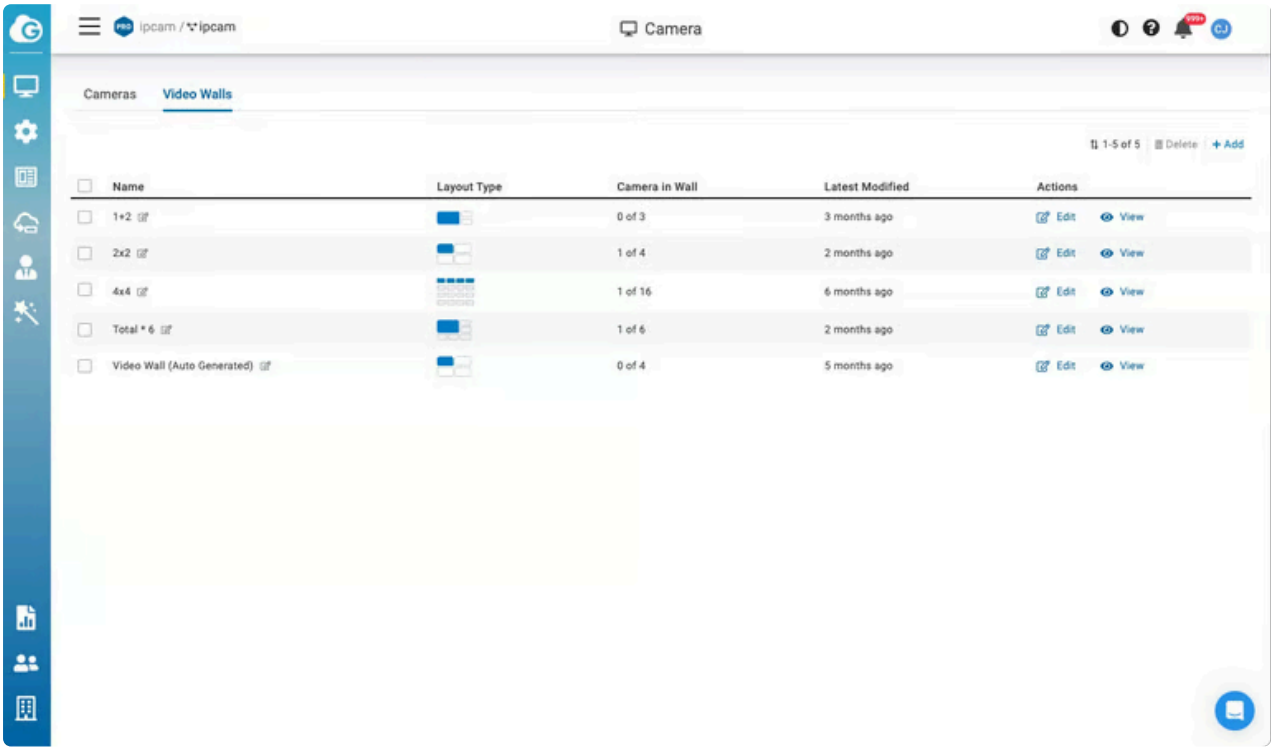


When manual focus is disabled, the camera switches to automatic focus with the condition. You can trigger camera to focus automatically for one time. In addition, Auto Focus Interval can be enabled to allow the camera to automatically perform an autofocus operation at a specified interval ranging from 1 to 168 hours, which is useful for long-term deployments where environmental conditions may change.

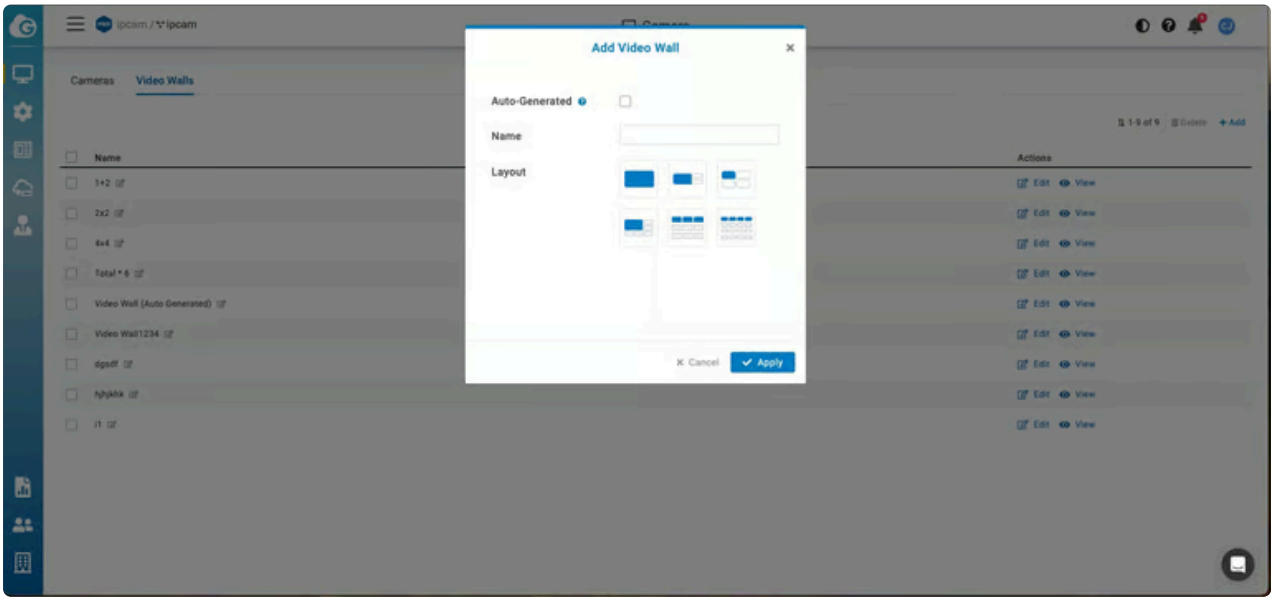
Video Walls

Video walls are for security to do daily monitoring of the cameras' live video. It can be used on multiple displays through all cameras.

you can access this screen **Manage** > **Camera** > **Video walls**



Add Video Walls



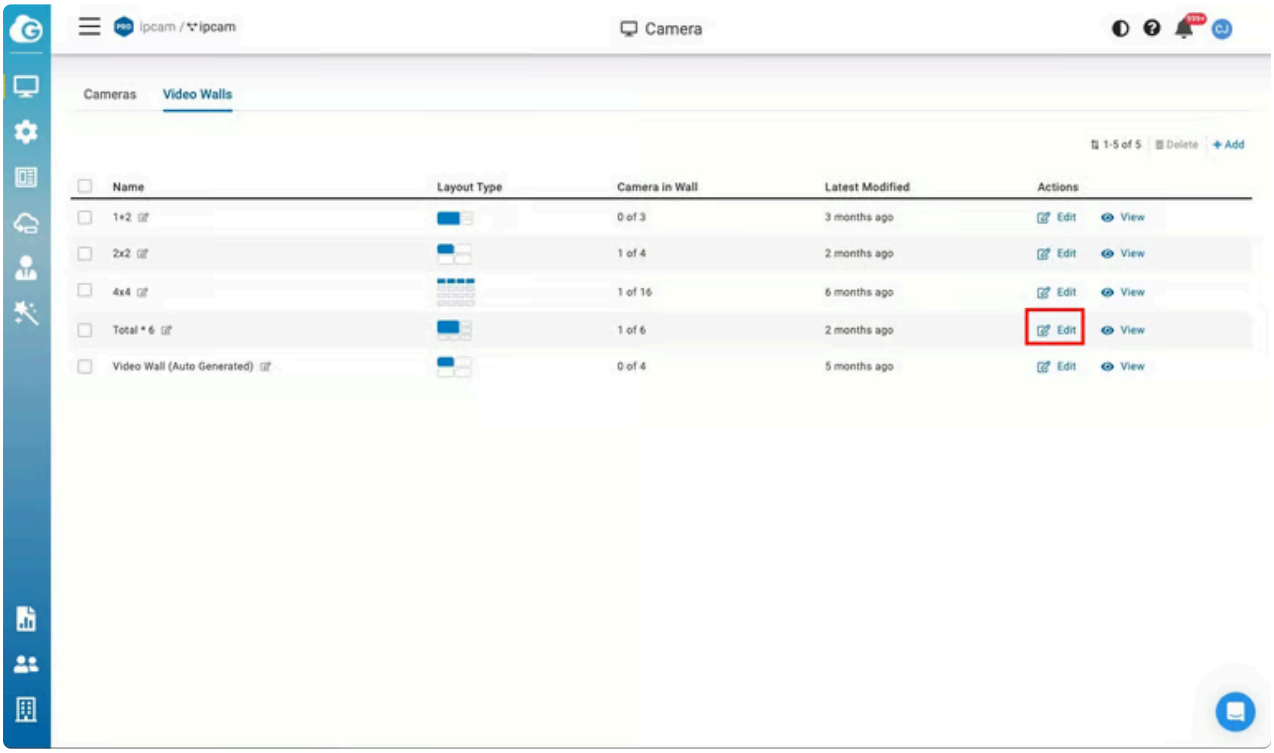
Auto-create TV wall: Cameras remaining that are not on the existing TV wall will be added in order of camera name. They are put into the selected layout from top to bottom and left to right. TV walls and their names are generated automatically until all remaining cameras are added. The 4×4 layout is used in most situations, and this way saves a lot of setting time. Other layouts (3×3) and more tiles are optional for users to select.

Name : the video walls name

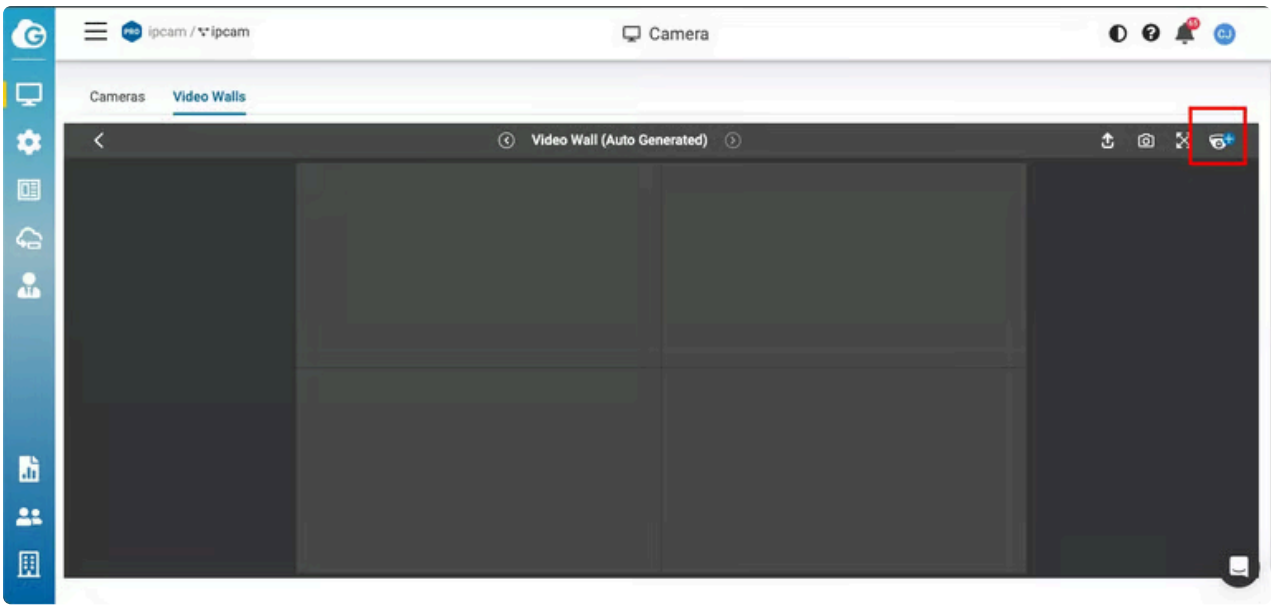
Layout: the video wall layout allows you to put the camera inside it.

Edit Video Walls

After you create the video layouts, you can click **Edit** button to edit video walls details



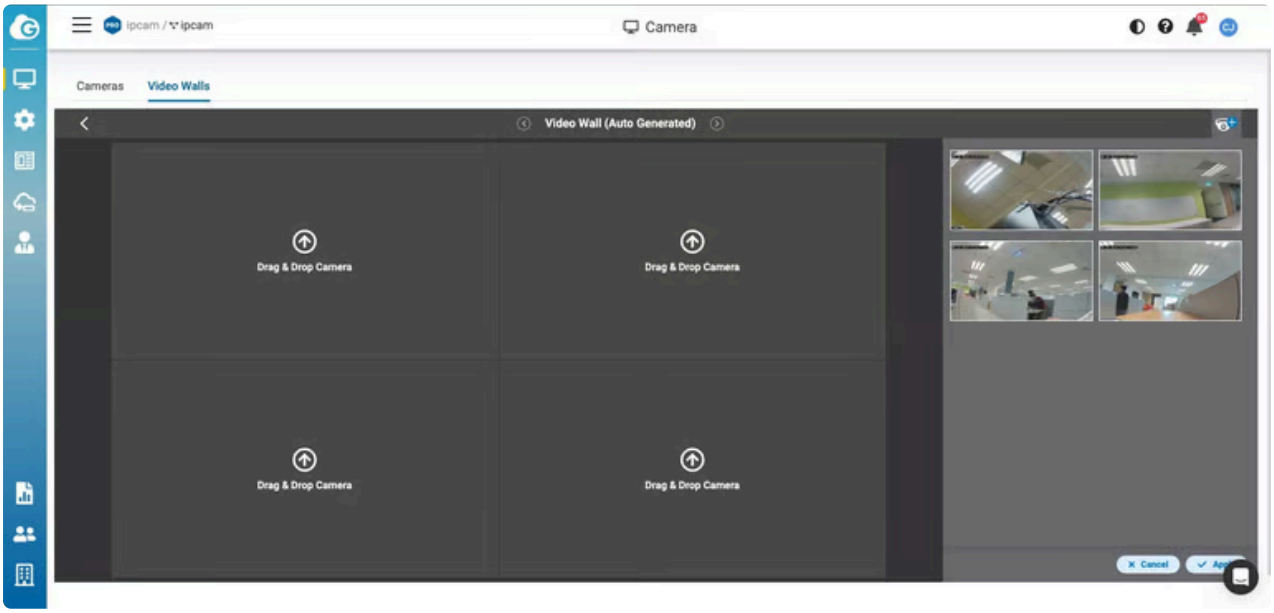
Then click Add cameras button



Better to know

- Video wall must be composed of cameras within the same network. cameras on different networks should be set up in separate video walls.
- Same camera could be added to multiple video walls, but same camera can only appear once on the same video wall.

Then drag the cameras inside the Video walls , then click **Apply**

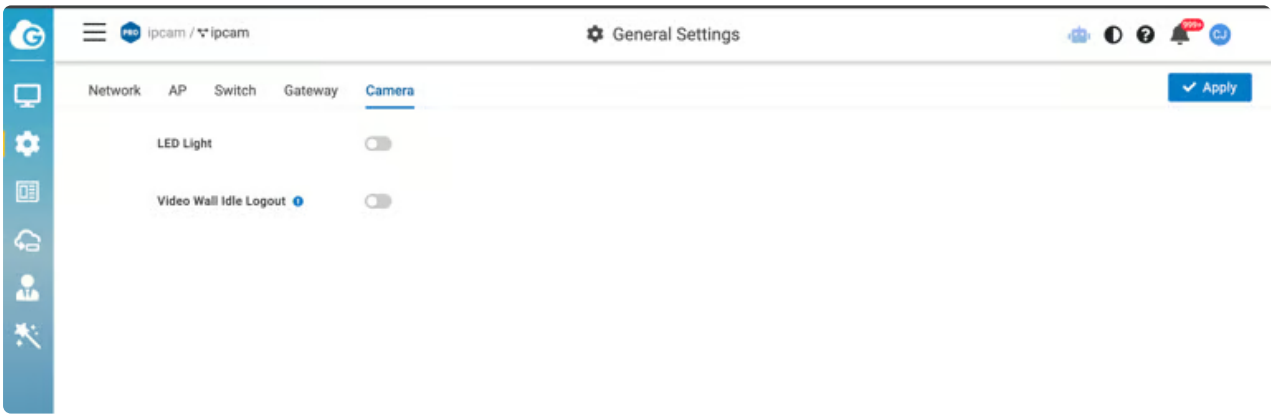


Minimum System Requirement

CPU (Recommended)	Intel i5-13500 / Ryzen 7 5700X
GPU (Minimum)	GTX 1650 / RTX 3050
RAM	32 GB
Network	1GbE wired
Display Output	HDMI 2.0 / DisplayPort

Video Wall Idle Logout

When this feature is enabled, the network's video wall will automatically log out after a period of inactivity while you are viewing or editing Video wall. You can access this setting from **Configure > General Settings > Video wall Idle timeout.**



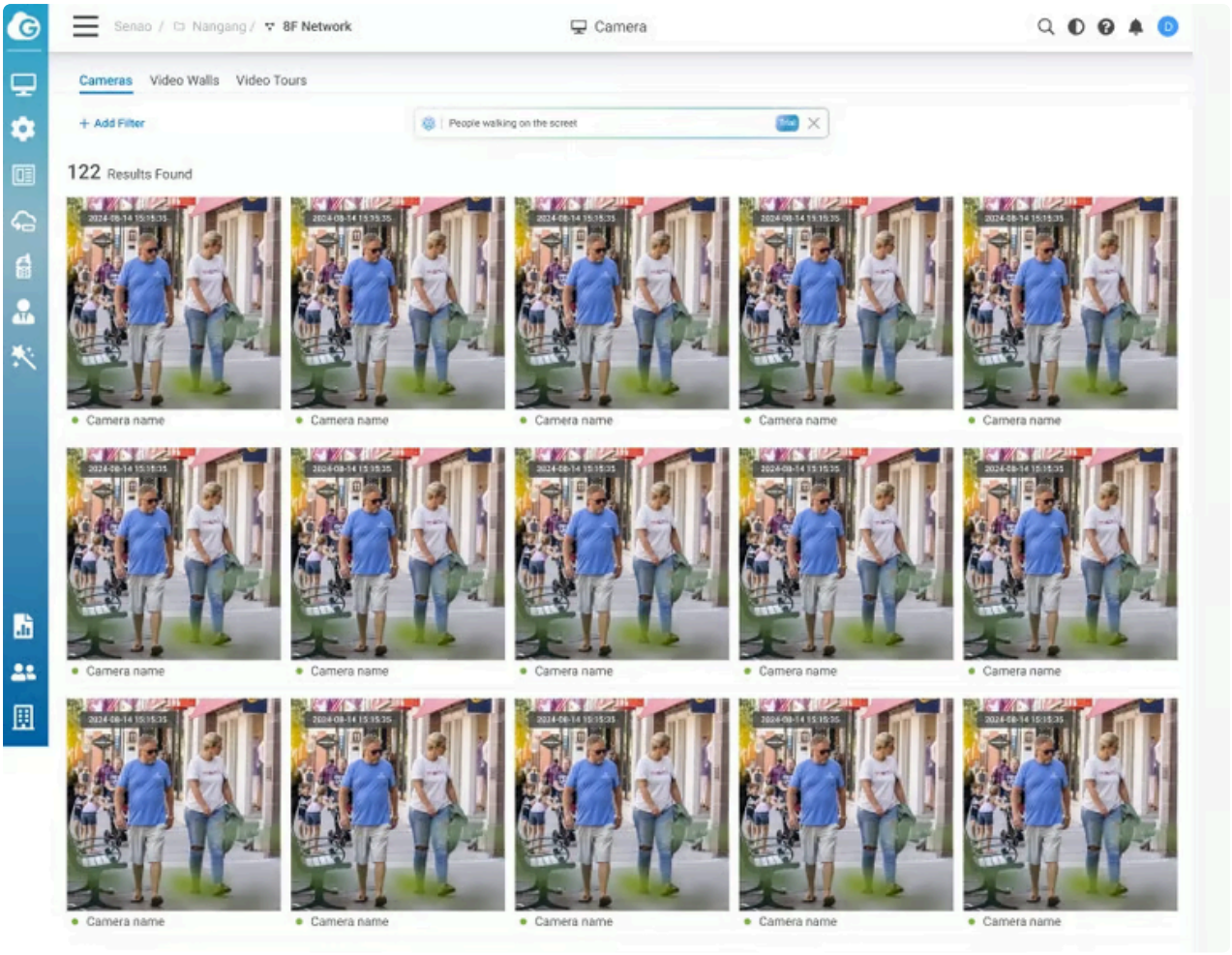
AI-Powered Search

AI-Powered Search allows users to search by inputting natural and multiple languages in the free description form of a search bar, like they do on Google Search. Query is compared with camera metadata in the database across multiple cameras in an organization and ranking results in order. The user can explore result snapshots and play video clips of them

You can find the search bar from **Manage > Cameras**



Search results could be ranked in an order from top to bottom and left to right based on most relevant. Most relevant is the highest comparison score between the user query and camera metadata. Click on one of the result thumbnails to play a video clip of 15 seconds since the start time of the event. Clear search input to go back to camera list.

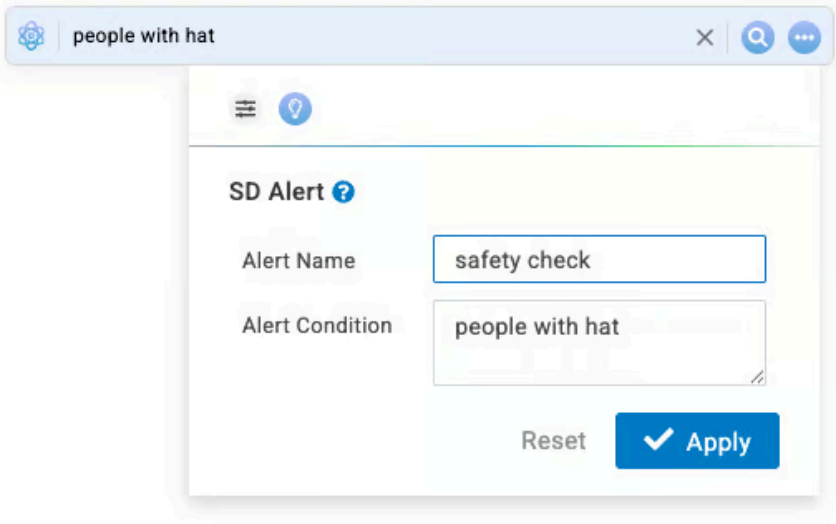


Must know

- Enable Cloud AI settings of a camera to generate metadata of video activity analysis for AI search. Camera enabled camera ai cannot generate meta data for AI search.

Add SD Alert

After users see the search result and want to get the alerts from the condition, you can add the condition to the SD Alert.


people with hat
SD Alert
Alert Name
safety check
Alert Condition
people with hat
Reset
Apply