User Manual

# OUTDOOR DOME NETWORK AI CAMERA PRO

# Contents

## Important Safety Precautions

1) Read these instructions carefully.

2) Keep these instructions separately.

3) Heed all warnings.

4) Follow all the instructions.

5) Do not use this apparatus near water or in damp places.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.

9) Be careful not to step on UTP cable or twist it. Pay particular attention if the UTP cable is located near an electrical outlet.

10) Only use the attachments/accessories specified by manufacturer.

11) Only use the genuine accessories such as cart, stand, tripod, bracket, or table specified by manufacturer or sold with the apparatus.
This apparatus may topple over when being carried in a handcart. Be careful not to be injured.

12) Unplug this apparatus during thunderstorms or when it is unused for long periods of time.

13) Contact the qualified service engineer if this apparatus needs to be repaired. Repair service is required when the apparatus has been damaged in any way or does not operate normally after damage to its power-supply cord or plug, liquid has been spilled on it, objects have fallen into the apparatus, or the apparatus has been exposed to rain or moisture.

# Overview

## Caution

| Risk Group1 |
|---|
| ⚠ **WARNING IR emitted from this product. Do not stare at operating lamp** |
| *Product tested against IEC62471* |

### Warning

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
To prevent any injury, this apparatus must be securely attached to the wall/ceiling in accordance with the installation instructions.

1)  Only use the standard PoE (Power over Ethernet) specified in the Specifications. If not using recommended PoE, the apparatus may be damaged by fire, electric shock, or other cause.

2)  Install the camera stably and securely. Otherwise, the camera may fall down and cause human injury.

3)  Do not put any electric conductor (such as screw driver, coin, metallic objects, etc.) or vessels containing water on the camera to prevent any human injury due to fire, electric shock or product falling over.

4)  Install the apparatus in a clean, dry place without moisture, dust, soot, etc. Otherwise, it may cause fire or electric shock.

5)  If any unusual smell or smoke comes out of the product, stop it. In this case, unplug the power cord immediately and contact your local service center to get appropriate technical support. If you go on using the apparatus without taking any action, fire or electric shock may arise.

6)  If the apparatus malfunctions, contact your local service center. Do not disassemble or interfere with the apparatus.

7)  Do not spray water directly onto the apparatus when cleaning. Otherwise, it may cause fire or electric shock.

8)  Do not install where it is directly exposed to the cool air from an air-conditioner louver. Otherwise, condensation may form on the inside of the camera due to the temperature difference between the inside and the outside of the dome camera.

When installing the apparatus in a place with low temperature such as frozen storage, seal up the plumbing pipes with silicon to prevent cold air from penetrating the housing.
Otherwise, humid air infiltrates into the inner housing and condensation may form due to the temperature difference between the inside and the outside of the apparatus.

1) Do not drop any object on the apparatus or apply force to it. Do not install where it is subject to vibration or influence by electromagnetic interference.

2) Do not install in a place with high temperature (above 50°C), low temperature (below -20°C), or humid air. Otherwise, it may cause fire or electric shock.

3) When moving the installed apparatus, unplug the apparatus before moving or reinstalling it.

4) Unplug the power (PoE) cable from the camera during thunderstorms. Otherwise, it may cause fire or damage to the apparatus.

5) Do not install it near a heat source such as a radiator, or in direct sunlight. It may cause fire.

6) Install this apparatus where it is well ventilated.

7) Do not install this apparatus in a place where it faces extremely strong light such as direct sunlight. It may damage the image sensor.

8) Do not install this apparatus in a place where water leaks or splashes. Do not any put object containing water such as a pot on this apparatus.

9) Avoid damage to the main power plug.

10) When operating the apparatus outside, condensation may form due to the temperature difference between the inside and the outside of the apparatus. Check if the internal fan works normally before operating it outside.

11) Make sure that the LAN Ethernet cable does not extend to the outside of the building.

## ▌ Before Installing

- The apparatus must be installed by a qualified engineer in accordance with relevant regulations.

- Appropriate protective devices must be fitted to prevent the network camera being damaged by a sudden voltage fluctuation when lightning flashes.

- Comply with every instruction for the safety of the network camera.

- Before cleaning, stop the network camera and unplug its power cable.
  Use only a soft and dry cloth. Do not use an abrasive.

- You must not repair the apparatus personally. Electric shock may be caused by high voltage electricity when opening/closing the cover.
  Contact the qualified service engineer if the apparatus needs to be repaired.

# Overview

## Product Features

This product is a network AI camera that supports the latest H.264, H.265 and MJPEG compression algorithms, and is suitable for high-performance video security systems.
This camera features IR LEDs for use in low light conditions (0 Lux) and filters that are interchangeable for day and night use, providing sharp and clear image quality at all times, regardless of day or night.

In addition, it supports AI functions that can analyze camera images with the latest deep learning technology. The camera can identify, count or track objects based on AI capabilities, and set and apply various action rules.

## What's Included
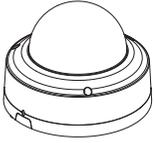
Camera

Template Paper
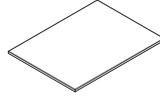
Quick Guide

L Wrench

Install Screw (3ea)

Anchor (3ea)
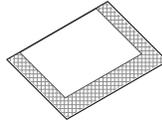
Silica Gel
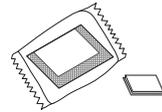
Extra Silica Gel / Tape

RJ45 Connector
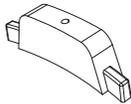
Rubber Case Bottom

**!** Extra Silica Gel can be attached to the inside of the camera body using the included tape when the camera is installed in a humid place.

# Overview

## At a Glance



| Item | Name | Description |
|------|------|-------------|
| ❶ | Control Button | Used to change format, restart the camera, and reset to factory default depending on its operating method.<br>- To change analog format : Press and hold for less than 5 seconds.<br>- To restart the camera : Press and hold for more than 5 seconds.<br>- To reset to factory default : Press and hold for more than 10 seconds. |
| ❷ | Micro SD Card Slot | Allows a Micro SD card to be inserted. |
| ❸ | DC 12V / Audio / Alarm In/Out terminal | - Alarm In/Out terminal : Connect alarm in/out signal.<br>- Audio In terminal : Connect to mic.<br>- Audio Out terminal : Connect to speaker.<br>* Alarm / Audio function depends on the model. |
| ❹ | Network | Used to connect the PoE cable between power supply and network. |
| ❺ | AC 24 V | Used to connect to a power cable. |

# Installation

## Installing

### Opening the top cover

To install the camera, open and separate the cover first.

1. Loosen screws by using the L Wrench supplied to remove the top cover.

2. Keep the separated dome cover safely for reassembling after the installation.
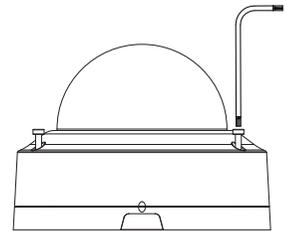
### Installing on the ceiling

You can install the camera on the ceiling, and then adjust and fix its angle.

1. Attach the supplied template to the place where the camera will be installed, and drill through the installation hole.

   ✔ It must be installed in a place where it can bear the camera's weight.

2. Fix the camera main body onto the ceiling using the screws provided.

   ✔ It is recommended to inject silicon into the gap between the camera and the ceiling for secure waterproofing.
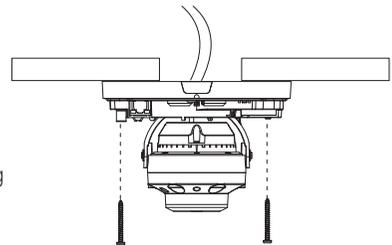
# Installation

## ▍ Installing on a surface

You can install the camera on a wall, and then adjust and fix its angle.

1.  Attach the supplied template to the place where the camera will be installed, and drill through the installation hole.

    ✔ It must be installed in a place where it can bear the camera's weight.

2.  Fix the camera main body onto the wall using the screws provided.

    ✔ It is recommended to inject silicon into the gap between the camera and the wall for secure waterproofing.

    ❗ If necessary, attach extra silica gel packets to the inside of the product.
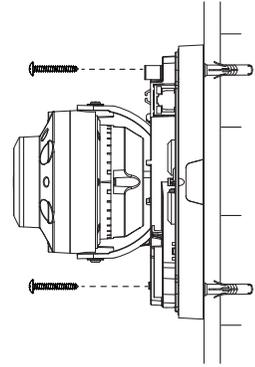
## ▍ Reassembling the Dome Cover

To protect the lens, the cover must be reassembled once installation is finished.

1.  Adjust direction of the camera lens to the desired monitoring framing after fixing the camera onto the ceiling or wall.

2.  Reassemble the Dome Cover and fasten the screws.
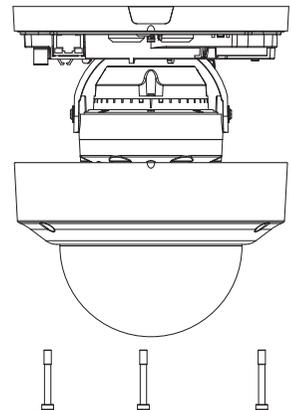
## Adjusting Angle

### Adjusting angle

After installing your camera on a ceiling or wall, you can adjust the camera angle to allow the camera lens to capture the target site.

1. Install the camera on a ceiling or wall wherever you want.

2. Adjust the camera angle by moving left, right, up or down to focus on your target site.
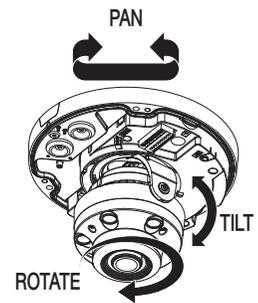


3. Reassemble the Dome Cover and fasten the screws.
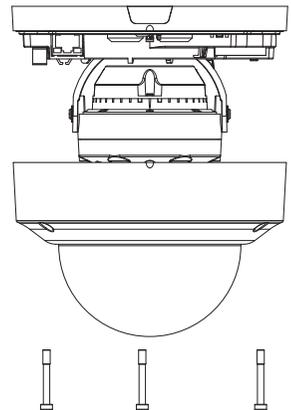
# Installation

## Connecting to External Device

### Connecting with power supply

Connect the PoE (Power Over Ethernet) cable between the power supply and the network port.

> If your network camera is installed as standalone setup, the power should be supplied by PoE Hub.



PoE Injector

PoE Hub
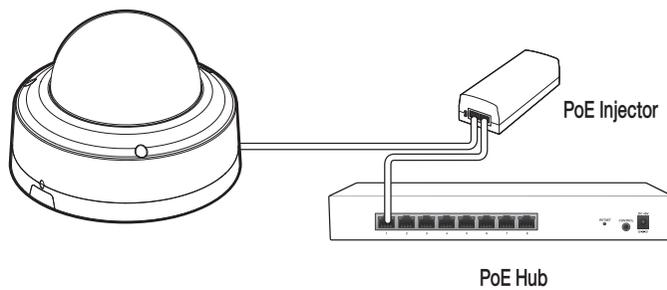
## Connecting to the network

### To connect with a PC in local network

If you connect the network camera with a PC in the same network, you can perform monitoring and setting process by using the PC's Web Viewer.
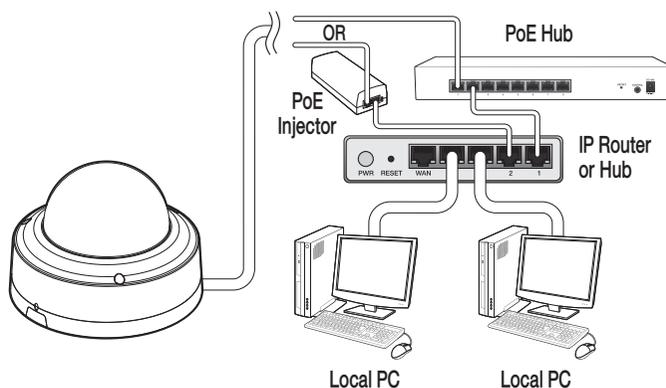


1. Connect the network port on the back panel with a router or hub.

2. Connect a local PC with a router or hub.

3. Enter the address in "**http://IP address:web service port**" format in address window of the web browser or dedicated software program at local PC.

    ✔ Ex : http://192.168.0.23:80 web service port is set as 80 by factory default. You can modify the port number in Network Setup screen.

4. Enter your ID and password to log in. You can watch the monitoring screen after login.

    ⚠ You must register your login password when accessing for the first time.
    To change your password, refer to "**How to connect to the camera**". (page 15)

# Installation

### To connect with a PC in remote network

You can access the network camera from your PC through the internet.
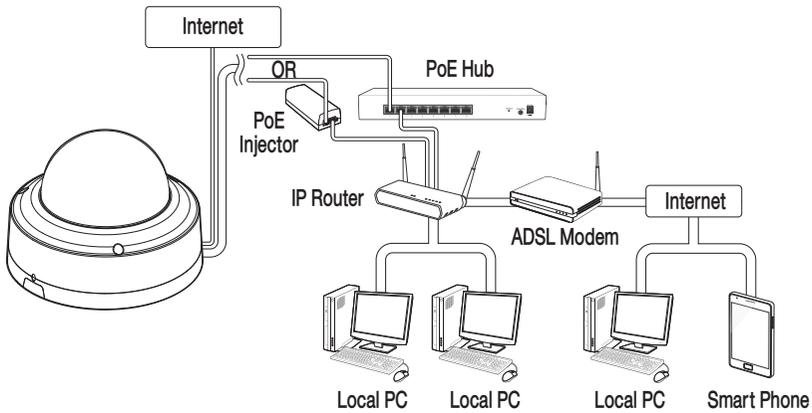


1. Connect router's network port directly with static IP LAN cable or with the ADSL modem.

2. If using a router, you should configure the port forwarding settings.

   ✔ You can get relevant support from your router manufacturer or qualified installation company for how to configure the port forwarding of your router.

   ✔ When connecting to a network camera from a PC through the Internet, enter a URL in the format of: "http://IP address:web service port".
   For more information, refer to "**Setup 〉 Network**". (Page 31)

# What is Web Viewer?

## Before connecting

When using internet access, set the port number as 554 and 80 in your router port forwarding settings.
For more information about port forwarding settings, refer to the user manual of your router.

### Minimum PC Specifications for Web Viewer

| | |
|---|---|
| CPU | P4 3.0 or higher |
| RAM | 512MB or higher |
| VGA | Geforce MX 400, Radeon 7500 or higher |
| VGA memory | 64MB |
| Monitor | 1280X1024 |
| Browser | Internet Explorer, Firefox, Chrome, Smart Phone(iOS, Android) |
| IE version | IE8.0 or higher |
| Network | 100Mbps |
| DIRECT X | V 7.0 or higher |

## How to connect to the camera

Since the network settings of your network camera are not configured by factory default, you cannot access to WebRA.
To configure your network, run the "**iDevice Manager**" to check the IP and access to your camera.

*1.* Press <**Search**> button to search for the network
camera linked to your network.
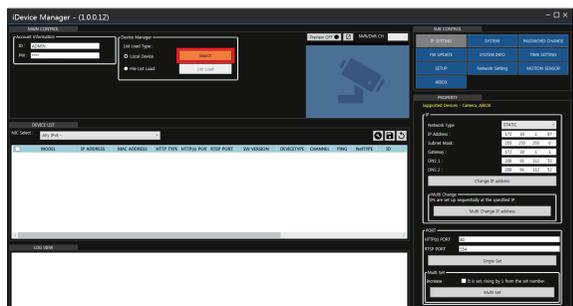
# Web Viewer

2. The search results are displayed if finished. You can distinguish your network camera(s) by checking its model information. Click your desired apparatus whose network settings you want to configure in the list.
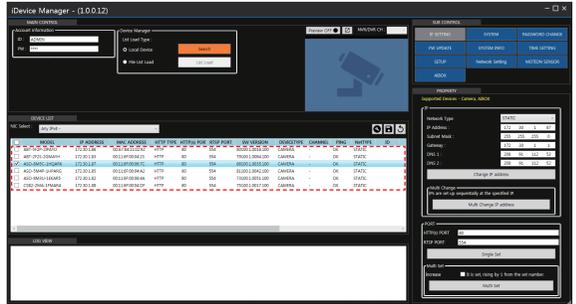


3. Select "**DHCP**" or "**STATIC**" from the IP section's <**Network Type**> that is on the right side of the screen. If selecting "**STATIC**", enter the values for IP Address, Subnet Mask, Gateway, and DNS information, and then press <**Change IP address**>.

   ✔ To use DHCP (Dynamic Host Configuration Protocol), your network camera must be connected to the corresponding device such as DHCP server (router). When connecting your PC with a network camera directly on a one-to-one basis, you cannot use DHCP and watch the video from the network camera which has been remotely connected via internet.
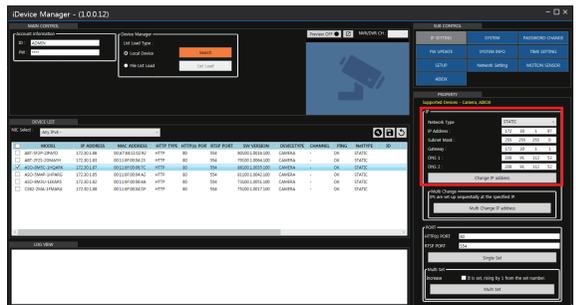


   ✔ Select the camera you want, then press <**Multi Change IP address**> button to change the camera's IP address. The IP address will be changed automatically in a row, with the existing IP address as a standard.

4. The list is automatically updated in a moment. Check if all the values look correct and finish the network environment settings.

   ✔ Press <**Preview ON**> button at the upper side of the screen to preview the live screen of the selected camera.
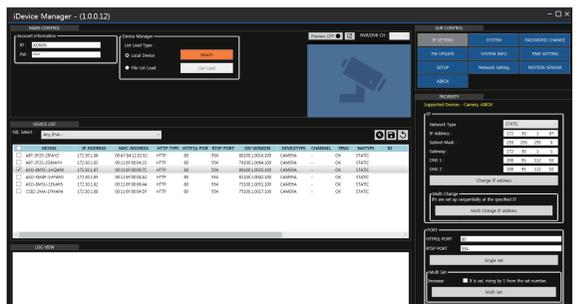
5. The Chrome browser page opens.

✔ We recommend using the Chrome browser. Please set your default browser to Chrome.

✔ Ex) The http://192.168.0.4:80 changes into http://192.168.0.4:80.

6. Enter your ID and password in the ID input window.

✓ Default User ID : ADMIN
   Password : 1234

| USER ID | USER ID |
|---|---|
| PASSWORD | PASSWORD |
| | Login |

## ▌How to view a live camera video feed

After connecting the camera to your PC, set the security items required to view a live camera video feed.

1. Security page (Internet Explorer) is displayed.

✔ Ex) The http://192.168.0.4:80 changes into http://192.168.0.4:80.

2. Enter your ID and password in the ID input window.

✓ Default User ID : ADMIN
   Password : 1234

| USER ID | USER ID |
|---|---|
| PASSWORD | PASSWORD |
| | Login |

3. You should run the activities after installing corresponding Active-X.

Control' from 'AHOPE Co., LTD.'. What's the risk?    Install

4. If Active-X failed to install, check the ActiveX option in IE Security menu.
If the Active-X installation window does not appear in the top right area for a long time (longer than 1 minute), change the "**Internet Options**" settings. (page 18)

Internet Explorer - Security Warning

**Do you want to install this software?**

Name: WebViewer Control
Publisher: ahope ltd.

More options          Install    Don't Install

While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

# Web Viewer

5. "Control Panel > Internet Options > Security" menu, press [**Custom level...**] button.

6. Select all the ActiveX-related options as available.

   ✔ Ex : Download signed ActiveX controls, Download unsigned ActiveX controls⋯.
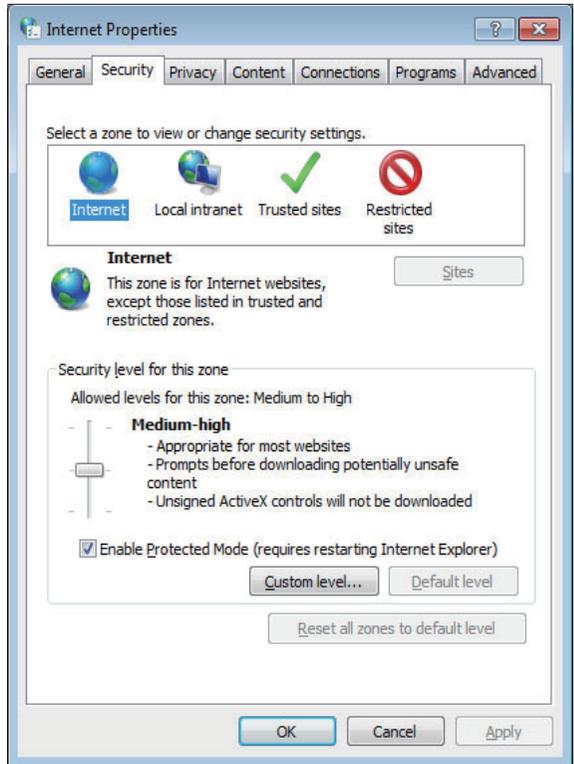
7. Finish the Security settings, and then press [**OK**] button.

   ✔ Check "Do not include local path when uploading files to the server".
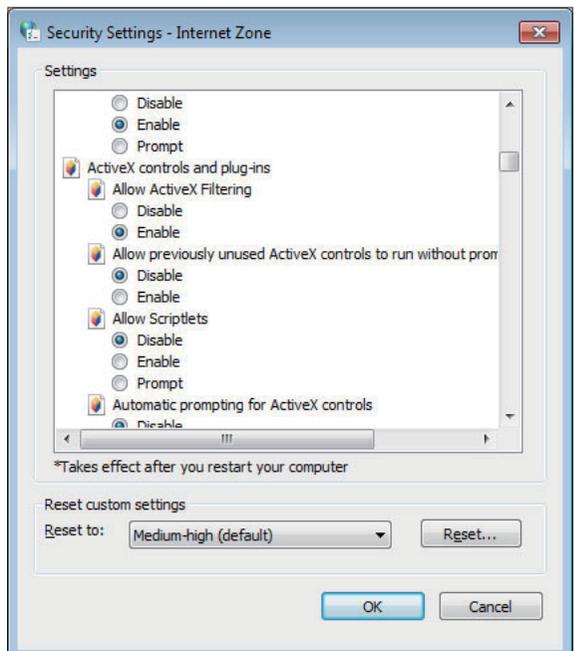
8. Click [**OK**] button to restart the IE.
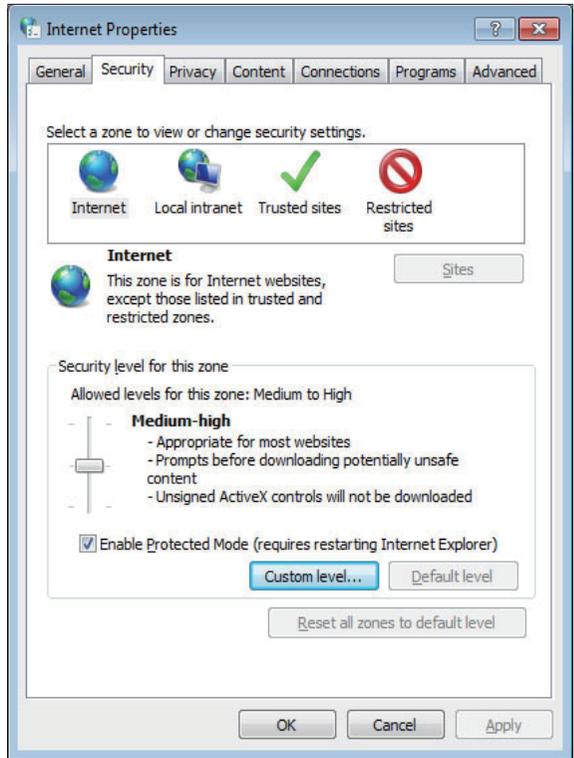
# Web Viewer

## Live

### Learning the Live screen



| Item | Name | Description |
|------|------|-------------|
| ❶ | MFZ setup | Move to the MFZ screen. Manually sets the zoom/focus of the lens. |
| ❷ | Stream Change | If selecting Dual Stream, the streams are shifted in the order of the 1st (the first stream) ◄► 2nd (the second stream). |
| ❸ | Full Screen | Displays the image in full screen. |
| ❹ | Multi Window | Plays the video in two screens. |
| ❺ | OSD | Display or hide the OSD menu on the screen. |
| ❻ | Freeze | Stops transmitting the image manually. |
| ❼ | Mute | Used to mute the sound. |
| ❽ | Duplex Audio | Delivers the sound to the camera by using a microphone connected to a PC. |
| ❾ | Snapshot | Saves current image as .jpg image file. |

| Item | Name | Description |
|------|------|-------------|
| ❿ | Print | Prints current screen. |
| ⓫ | Panic Record | Start the panic recording. |
| ⓬ | Alarm | Turns on if an event occurs. It does not turn on if no reaction to the event is yet defined. Click this to check the information of the event that occurred. |
| ⓭ | Stream Status | Click to display the network information. |
| ⓮ | Storage Information | Displays the storage information of the Micro SD Card. |
| ⓯ | Date/Time | Display the current time and date. |
| ⓰ | Event Status/ Information | Click to see the event status, network information, streaming session, storage status, and system status. |
| ⓱ | 🏃 | A motion is detected by the connected camera. |

## MFZ setup

Click the menu button at the left bottom of your live screen to go to the MFZ setting screen.
Move the Bar < ▬▬▬▬ > with your mouse to adjust the zoom/focus of your lens.

## Stream Change

Since this camera supports the 'dual streaming' transmission, you can shift between the 1st stream and the 2nd stream by clicking the < ▲ 20fps 3840x2160 (6000kbps) >.

✔ You can shift between the streams only if the 2nd stream is set in "**Setup** > **Camera** > **Codec setup**". (page 23)

## Full Screen

1. Click < ▦ >.

2. Locate your mouse pointer over an image and then double-click to display in full screen.

3. If you want to go back, double-click your mouse button over the image.
You can go back by pressing the [**Esc**] key on your keyboard or right-clicking.

# Web Viewer

## Multi Window

Click the <  > to display video in a small popup window instead of the default screen.

> ✔ In the small popup window, menu selection is not available.



## Snapshot

Click <  > to save current image as .jpg file.

## Event Status/Information

You can set Alarm In, Alarm Out, Motion, etc. in Event Status. The Information displays general information about your camera such as Network Information, Streaming Session, Storage Status, System Status, etc.

## CAMERA

### Codec Setup

#### 1. Codec Setup

You can set various video functions for the camera depending on the field situation.
When finishing the setup process, click <**APPLY**> to apply.



- • Codec Setup
- › Codec : This network camera can transmit videos in different resolutions and qualities simultaneously using different CODECs.
  - - H264 : Video compression standard to transmit high quality video stream efficiently. H.264 is available in various networks and systems and allows the bit rate to be controlled according to adjusted bandwidth usage.
  - - H265 : It can alternatively be used to provide substantially improved video quality at the same bit rate of H.264.
  - - MJPEG : You can edit each frame freely even if it is already compressed and get high quality images when restoring. Though Motion JPEG uses a considerable amount of bandwidth, it provides excellent quality for each image.
- › Size : You can change each network transmission resolution for your camera.
- › Frame Rate(FPS) : You can set the frame (rate) for camera video.
- ✔ If network speed is fast enough, you can set Frame Rate as 30 fps to have more natural video.
- › GOP Size : The faster the subject in video moves, the smaller the GOP Size should be. However, the slower the subject in video moves, the bigger the GOP Size should be.
- › Bit-rate Control : You can select <**CBR**> or <**VBR**> or <**VBR+**>.
  - - CBR (Constant Bit Rate): Used for encoding H.264/H265 video into a fixed Bit Rate.
  - - VBR (Variable Bit Rate): Encoding Bit Rate will be varied from video to video. Normally, when the video is more dynamic, the Bit Rate will also go up.
  - - VBR+: Has a higher compression rate than VBR. The effectiveness will be maximized if the video is less dynamic.
- › Dynamic GOP : Using <**VBR+**>, you can set whether to use a dynamic GOP.
- › Image Quality : Using <**VBR**> or <**VBR+**>, you can set the image quality.
- › Bit-rate : You can set up the average size of the encoding video.
- ✔ Enter a value within a range of 512 Kbps ~ 15000 Kbps.
- › Boost Quality : Works if Motion (Motion Detection) area has been set in network camera event and <**ON**> has been selected. When an event is triggered, camera's instant FPS/Bitrate/GOP value is changed into the specified Boost FPS/Bitrate/GOP value.
- › Analog Format : Select <**NTSC**> or <**PAL**> and press <**APPLY**> button.
- › Output Bandwidth Limit : You can select whether to limit bandwidth or not.
- › MAX Bandwidth : Specifies the peak bandwidth.
  You can enter your desired value if selecting <**ON**> for Bandwidth Limit.
- ✔ Enter a value within a range of 1000 kbps~30000 kbps.
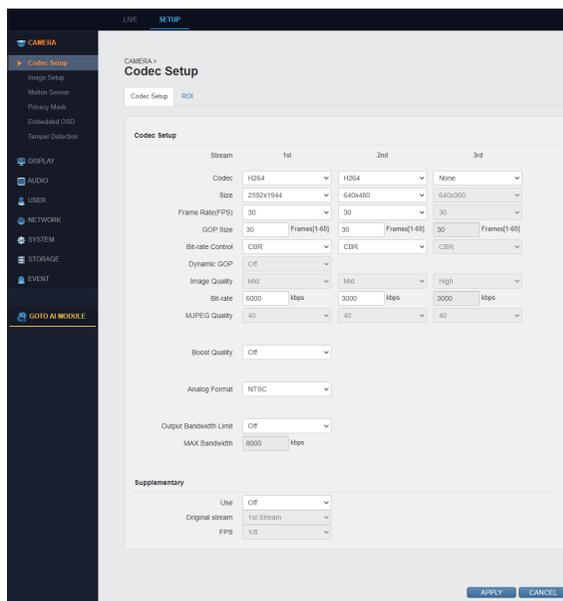
# Web Viewer

- **Supplementary Use**
  ✔ You can set up the Frame Per Second reception rate differently for the 1st/2nd video streaming.
  › Use : Sets whether to use Supplementary.
  › Original stream : Sets the default video stream.
  › FPS : You can set the frame rate of the camera image.

### 2. ROI Setup

You can encode the image such that the image quality of the ROI region (detected object) is improved and the image quality of the non-ROI region is decreased.
When finishing the setup process, click <**APPLY**> to apply.

  › ROI Mode : Sets ROI operation mode.
   - Auto : Sets the ROI region automatically.
   - Manual : Sets the ROI region manually.
  › Background Image Quality : Sets the quality of the background image.
  › ROI : Sets ROI and non-ROI regions by clicking and dragging to define an area on the screen.
   - Area All : Sets the whole area shown on the screen as ROI/non-ROI.
   - Area 1 ~ Area 8 : Up to 8 areas can be set.
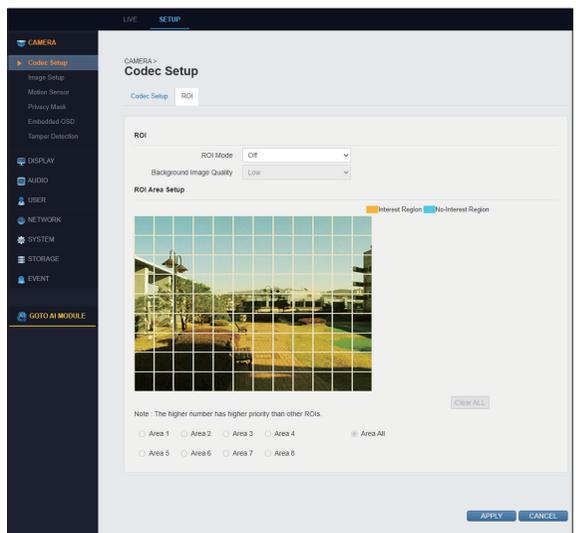


## Image Setup

### 1. Image Setup

You can set the following items to make the installed camera have the best image optimized for its environment. When finishing the setup process, click <**APPLY**> to apply.

- White Balance Control
  › WB Mode : Automatically correct the color balance of your camera to make a natural-looking screen.
   - Manual : User adjusts 'White Balance' manually.
   - Auto : Camera adjusts 'White Balance' automatically.
   - Auto Wide : Camera adjusts 'Wide White Balance' automatically.
  ✔ Except for some special cases, <**Auto**> is generally recommended.
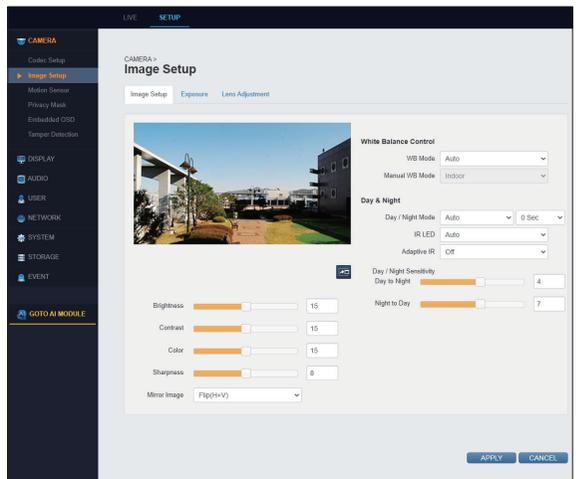
- Day & Night
  - › Day / Night Mode : Measures the illumination of camera to shift into color or black/white video and change its day/night filter depending on illumination condition.
    - - Day : Displays video in color mode regardless of illumination and fixes its filter to day.
    - - Night : Displays video in black/white mode regardless of illumination and fixes its filter to night.
    - - Auto : Your camera measures the illumination and changes its settings automatically.
    - - Schedule : Automatically switches between day and night mode according to the schedule.
  - ✔ <**Auto**>, <**0 sec**> is recommended in usual environment.
  - › IR LED : When it is set to <**AUTO**>, the IR LED will be turned on during the nighttime. If in the daytime, the LED will be turned off automatically.
  - › Adaptive IR : When it is set to <**On**>, the brightness of the IR will be altered due to the brightness of the environment.
  - › Day / Night Sensitivity : Adjust the sensitivity depending on the illuminance of day and night.
    - - Day to Night : Sets the Sensitivity for Day to Night switching within the range of 0 through 7.
    - - Night to Day : Sets the Sensitivity for Night to Day switching within the range of 3 through 10.
  - ✔ The value of Day to Night switching must be smaller than that of Night to Day by 3 or more steps.

- Image Property Control

  You can set the Sharpness, Brightness, Contrast, and Color for image.

  - ✔ The bigger the number is, the bigger the camera setting value is. Except for some special cases, default values are recommended.

  - › Mirror Image : You can flip captured image horizontally, vertically, or in all directions if required.
    - - Horizontal : Flips the captured image horizontally (◀▶).
    - - Vertical : Flips the captured image vertically (▲▼).
    - - Filp(H+V) : Flips the captured image horizontally (◀▶) + vertically (▲▼).

### 2. EXPOSURE

- Exposure
  - › Exposure Mode : Select the exposure mode. After setting it up, click <**Calibration**> to apply the changes.
    - - Manual : Controls camera's exposure manually. To compensate for small amount of light, adjust the "**AGC Gain, E-Shutter Speed**" to the values entered by user.
    - - Auto : The camera controls every exposure. If selecting <**Auto**>, you cannot use some secondary menus (AGC Gain, E-Shutter Speed).
  - ✔ For your convenience, <**Auto**> is recommended for Exposure Mode.

  - ✔ When in Auto (Motion Priority) mode, camera has less motion blur than in Auto mode at normal brightness.
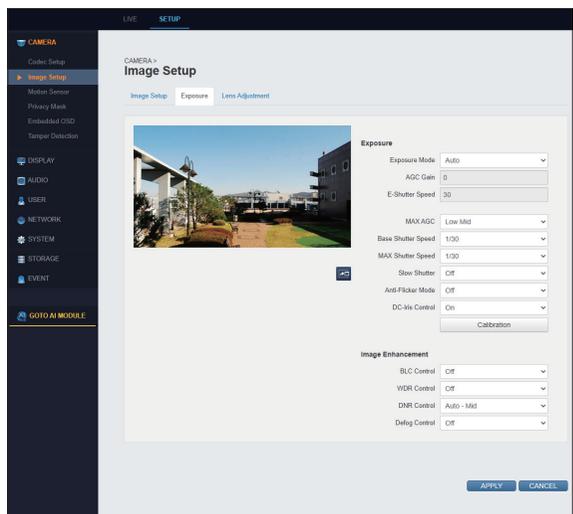
# Web Viewer

- ❯ MAX AGC : AGC is the abbreviation for Automatic Gain Control. When too strong level of signal is input, the AGC adjusts the Gain (film sensitivity) to prevent the signal from being saturated. When too weak level of signal is input, the AGC adjusts the Gain to keep a certain level of signal.
  - Maximum AGC sets the peak Gain which is applied to low light level environment. It is classified into LOW/LOW MID/HIGH MID/HIGH/MAX. Higher the value the screen looks brighter, but may increase noise.
  - Base Shutter Speed : Sets the default shutter speed that is applied when the exposure mode is set to <**Auto**> or <**Auto (Motion Priority)**>.
    If you set the default shutter speed to a faster value, you can capture moving objects without a blur.
- ❯ MAX Shutter Speed : Set the maximum shutter speed.
- ❯ Slow Shutter : Specifies whether to use digital sense-up mode or not.
  - Off : Disables DSS (Slow Shutter). You can use DSS in X2, X4, or X8 mode.

✔ If you use the sense-up mode in a dark place with very low light level, you can watch a much brighter video since the brightness still remains at the specified level. However, the video FPS becomes slower in this case.

- ❯ Anti-Flicker Mode : Adjusts the exposure settings when using the camera in a place where fluorescent light is turned on.
  You can use this mode when screen flickers. '60 Hz' is generally specified as its value in Korea.
- ❯ DC-Iris Control : Sets whether to use the camera's aperture control function. Adjust the camera aperture according to the ambient light to maintain the proper brightness.

- Image Enhancement
  - ❯ BLC Control : Use this function to compensate scenes which are too bright under a backlight condition such as framing a bright window or open door from the inside. In such a case, using the function allows the camera to produce better images of the dark objects displayed on a monitor. BLC (Backlight Compensation) is classified into Off/Adaptive/Zone.
    - Off : Disables the BLC (Backlight Compensation) function.
    - Adaptive : Applies BLC without considering the location of bright area.
    - Zone : If you specify a bright area as Zone, the BLC is applied to the Zone. If you don't specify properly, the screen may look darker.

  ✔ BLC function is useful in most cases when framing a window or door with backlight. For outdoor camera installation, it is recommended to set BLC (Backlight Compensation) function to <**Off**>.

  - ❯ WDR Control : Wide Dynamic Range (WDR) is a feature that allows for different objects at different exposures to be viewed in the same scene (ex; one object in a bright area and one in a dark area).
  - ❯ DNR Control : use temporal and spatial noise reduction to improve image quality and reduce video noise. This can be set to Off, Auto(LOW/MID/HIGH), or to Manual(LOW/MID/HIGH) levels.
  - ❯ Defog Control : Adjusts the image of foggy or very cloudy weather. Set this if the image is foggy.

  ✔ Note that resulting image can look dark if applied to an image taken in light mist while the manual fog level is set too high.

### 3. Lens Adjustment

You can select where to set the zoom or focus of your lens by dragging on the image with your mouse.

> Zoom : Click the (-) or (+) button to adjust the zoom.

> Focus : Click the (-) or (+) button to adjust the focus.

> IRIS : Click the (-) or (+) button to adjust the iris.

> Go to : Enter your desired number to set the zoom/focus as designated.

> ONE PUSH : Drag your mouse on the video to set the location for auto focus. Click [**ONE PUSH**] button to fit the focus automatically.

> HOME : Click [**HOME**] button to move to the default flange back position.

> Default Area : Reset the focus area to the default area (the entire image area).

> Focus Compensation : Select <**On**> to switch between Day and Night mode and adjust the focus automatically.
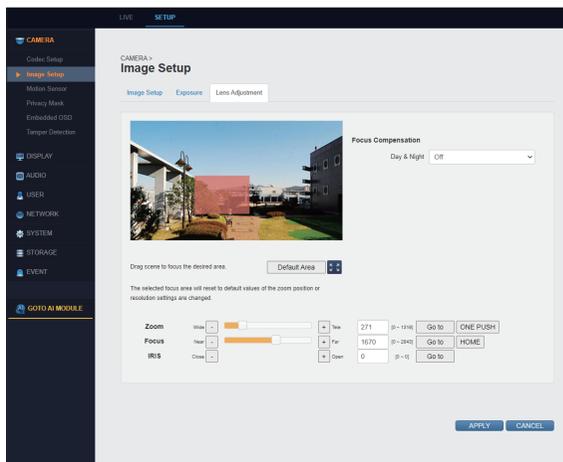
## Motion Sensor

When motion is detected in specified area, you can get E-mail notification or the image transferred via FTP or e-mail.
When completed, click <**APPLY**> to apply.

> Select Area : You can select up to 4 different motion areas.

> Sensitivity(Day) : You can set the daytime sensitivity for the selected area within the range of 1 through 30.

> Sensitivity(Night) : You can set the nighttime sensitivity for the selected area within the range of 1 through 30.

> Select All : Selects all the areas.

> Deselect All : Deselects all the areas.

✔ If you specified multiple "Motion" areas, some of camera functions may be slow down.
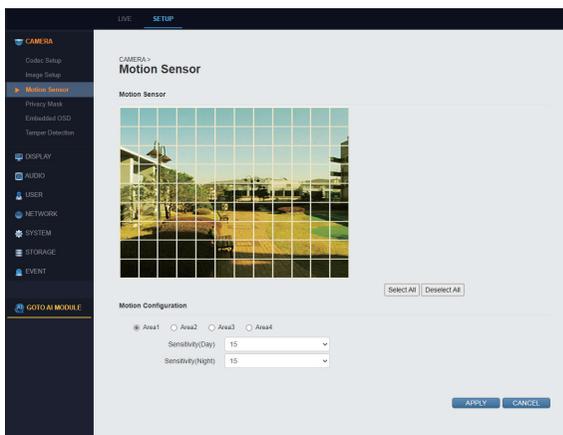
# Web Viewer

## Privacy Mask

You can directly specify a certain area of the camera video to be blocked to protect privacy.
When completed, click <**APPLY**> to apply.

> Select Area : Allows to select up to 4 different areas to be blocked to protect privacy.

> COLOR : Allows to specify blocking color for each area.

> Clear : Allows to deselect specified blocking area(s).

> Clear All : Deselects all the areas.



## Embedded OSD

You can choose to display the resolution, date/time, and device name on the live screen. When you select a function, information is displayed on the recorded video.

✔ The Embedded OSD is to display text in the window of the live screen. It is different from the OSD displayed on the recorded video.

When completed, click <**APPLY**> to apply.

> Resolution : Specifies whether to display camera resolution on screen or not.

> Date / Time : Specifies whether to display date/time on screen or not.

> DEVICE NAME: Specify whether to display the device name on the screen. You can set the device name in "SYSTEM > System Management". (page 35)
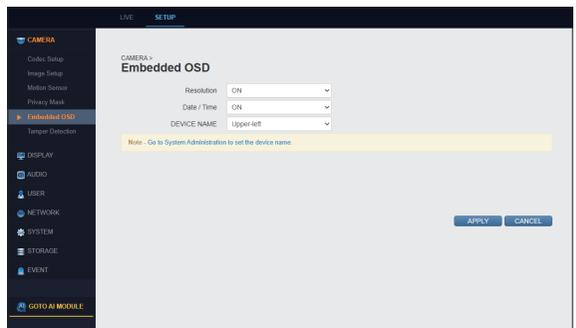


## Tamper Detection

You can set the camera to detect the external factors that will prevent the user from seeing the video that they want, such as change of the installed camera's direction, blocking of the camera's lenses, or blocking/distortion of the video due to paint or spray.

When completed, click <**APPLY**> to apply.

> Tamper Detection : Sets the level of neutralization of the camera that can be detected.
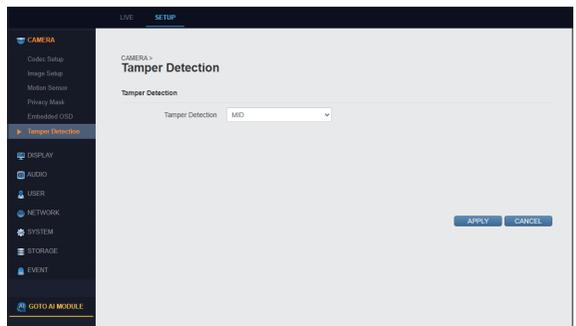
# DISPLAY

## OSD

Language to be displayed by the product. The interface will be marked in a selected default language. Users can choose the language they want.
Changing this language setting will also change the setting in "Session Configuration > Language" in the same way.

> › LANGUAGE : Select the language to be displayed on the screen.
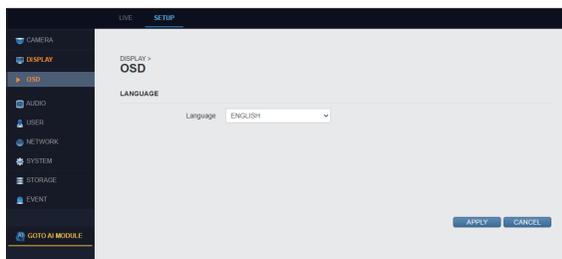
# Audio

You can set whether to use audio or not and specify the volumes for microphone and speaker.
When completed, click <**APPLY**> to apply.

> › Enable Audio : Selects whether to use audio or not.

> › Audio Codec : Transmits audio sounds with different qualities.

> › Mic Volume : Sets the microphone volume.

> › Speaker Volume : Sets the speaker volume.
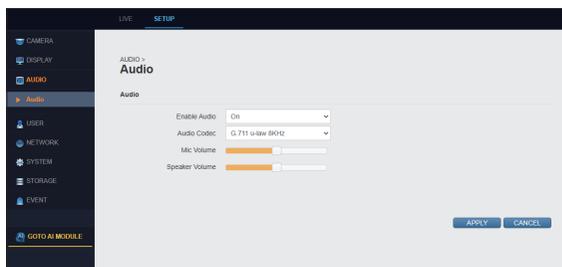
# Web Viewer

## USER

### Management

You can add or delete a user account and change password.
When completed, click <**APPLY**> to apply.

> ❯ Add/Edit/Delete : Add, edit, or delete a user account.

✔ You can register up to 8 accounts including '**ADMIN**'.

> ❯ User ID : You can log in to network camera with '**User ID**'.

> ❯ Password : You can log in to network camera with password.

> ❯ Group : Select the permission of user account.

- Admin : Allowed to change all the camera settings.
- Manager : Permission to the Live function and other selected settings are allowed to a user by default (you can modify the default permission settings).
- User : Permission to the Live function is allowed to a user by default (you can modify the default permission settings).

❗ The permission of Manager or User may be different depending on the Group Authority settings.

> ❯ E-Mail : Enter the target e-mail address which will receive the event notification.

> ❯ Notification : Select whether to use the E-mail Notification function or not.

✔ You cannot delete or change '**ADMIN**' which is main administrator account ID. (allowed to change password)
You cannot add new account with the same <**User ID**> and <**Password**>.
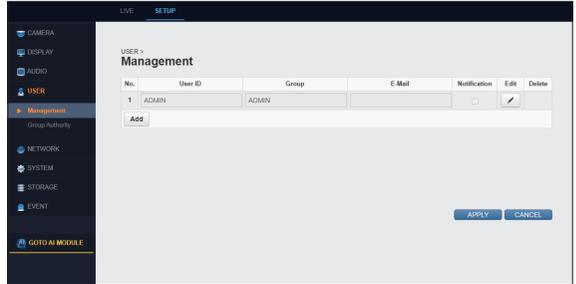
### Group Authority

You can grant different user groups different permissions to a specific menu.
When completed, click <**APPLY**> to apply.

> ❯ Event Action Control : Set the permissions to output the alarm or control the buzzer if an event such as alarm occurs.

> ❯ Listen To Audio : Set the permission to listen to the audio.

> ❯ Mic : Set the permission to speak through the microphone.

> ❯ System Reboot : Set the permission to reboot the camera.

> ❯ Factory Default : Set the permission to perform the Factory Default.

> ❯ System Setup : Set the permissions for the System Setup menu.
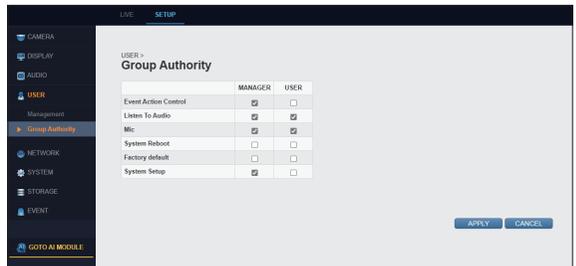
# NETWORK

## IP Setup

You can modify and check the camera network settings. Set each items. When completed, click <**APPLY**> to apply.



- IP Address

  › DHCP : If router or internet sharer in (local) network where your camera is installed, you can use "DHCP" function to apply the network settings including camera IP address automatically.

    - IP Address : Enter the camera IP address.
    - Subnet Mask : Enter the subnet mask value of your camera.
    - Default Gateway : Enter the gateway value of your camera.
    - 1st DNS : Enter the 1st domain name of your camera.
    - 2nd DNS : Enter the 2nd domain name of your camera.
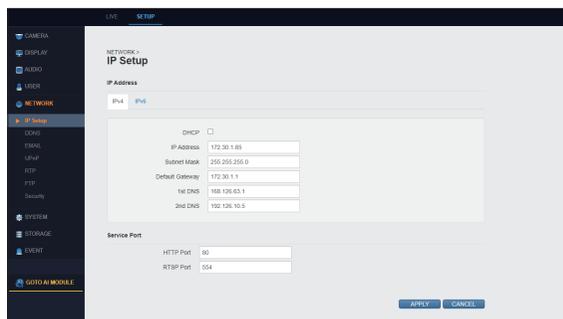
- Service Port

  You can enter the port by clicking the input field of each port.

  › HTTP Port : Allows to change the port number of web service.

  › RTSP Port : Supports AV streaming server to set port number.

  ✔ RTSP : A protocol to send/receive sound or movie in real time

  ⚠ If you change the settings without basic knowledge on network, you may not be able to access the camera. If you are forced to change the settings, contact the implementation service provider or network engineer.

# Web Viewer

## DDNS

You can configure the DDNS settings.
When completed, click <**APPLY**> to apply.

> DDNS : Select whether to use DDNS service or not.

> User Set URL: Can check the URL address that the user will use as the DDNS domain.

> DDNS Test : Can test the DDNS service for the verified domain address.
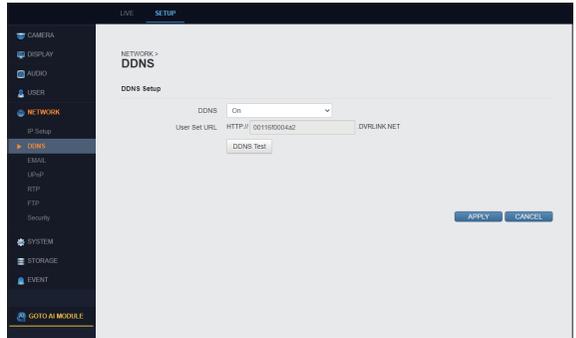
## E-MAIL

When an even occurs at camera, you can send a message to specified e-mail address by using SMTP. To send message, enter mail server or user account information.
When completed, click <**APPLY**> to apply.

> Server : Enter the sending mail server (smtp).

> Port : Enter the port of sending mail server.

> Security : Select whether to use the security function of mail server or not.

> User : Enter the user name of sending mail server.

> Password : Enter the password of sending mail server.

> Test E-Mail Address : Enter the recipient's e-mail address and use the <**Test E-Mail**> button to test e-mail.

✔ E-mail (SMTP) setup process is different depending on user's e-mail address (portal company). For more information, search for "SMTP setup" in the internet or contact your network administrator.
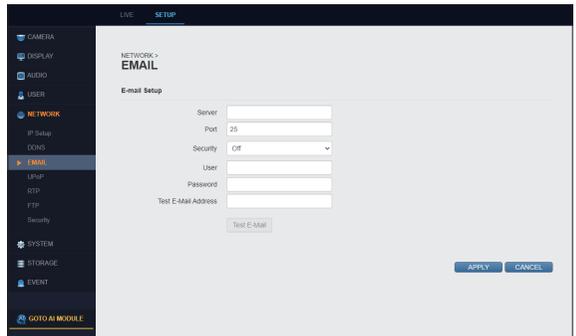
## UPnP

You can set whether to use the UPnP function or not.
When completed, click <**APPLY**> to apply.

> UPnP : Select whether to use UPnP function or not.

✔ A router or internet sharer with UPnP function should be connected with the network where the camera has been installed.

✔ To use the UPnP function of camera, the internet sharer should support the UPnP function.
Though the UPnP function is generally supported by internet sharer, some internet sharers may not support.
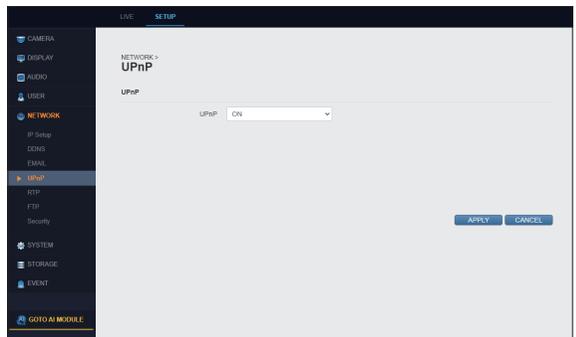
## RTP

- RTP Port Range

  › Start Port : Set the range of start port.

  › End Port : Set the range of Last port.

  ✔ **RTP (Real-time Transport Protocol)** is a protocol designed to transport real-time data such as sound, video, etc. under unicast or multicast condition.

- Multicast Setup

  › 1st Stream IP / Video Port / Audio Port / TTL : Specifies the IP address of main stream, video port, audio port and TTL.

  › 2nd Stream IP / Video Port / Audio Port / TTL : Specifies the IP address of secondary stream, video port, audio port and TTL.

  ✔ **Multicast** is a method to send the same data to multiple specific receivers simultaneously in a network.This method cuts down on network waste, gets rid of unnecessary burden, and is generally used in unrestricted network (intranet).
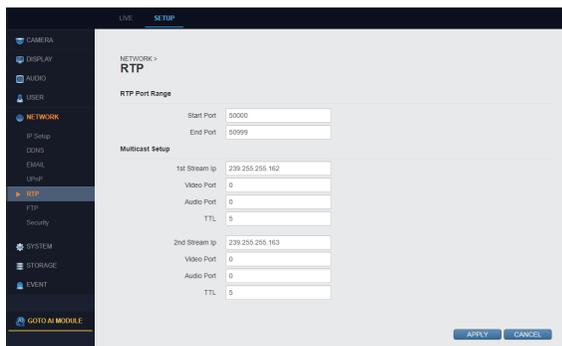
## FTP

You can configure the FTP settings so that you can transfer the images saved in camera's storage media to your PC if an event or alarm occurs.
When completed, click <**APPLY**> to apply.

- SERVER CONFIGURATION

  › FTP Server : Sets whether to use an FTP server. The default is set to <**Off**>.

  ✔ This function is available only if SD card is mounted.
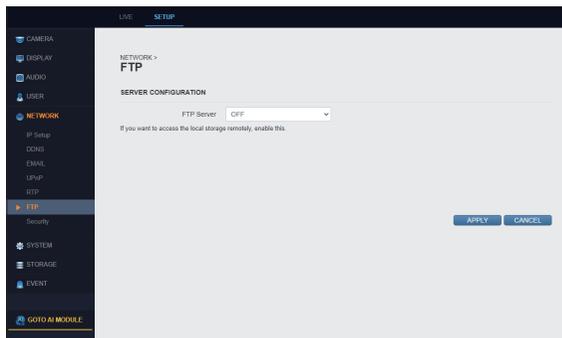
# Web Viewer

## Security

When connecting to a web service, you can choose whether to use HTTPS communication protocol or not and can register the IP address you wish to filter.

### 1. SECURITY

If using a web service, choose whether to use RTST authentication and HTTPS or not in order to enhance the security.

> RTSP AUTHENTICATION : Sets whether to use RTSP. When enabled, you can choose between <**Basic/Digest**>.

- WEB SERVICE PORT
  > HTTPS ENABLE : Sets whether to use HTTPS.
  > HTTP AUTHENTICATION : Sets the HTTP authentication method.
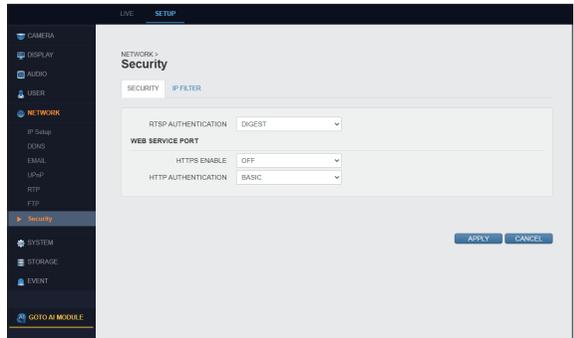
### 2. IP FILTER

You can register and manage certain IP addresses to allow or deny their access.

- IP ADDRESS FILTERING
  > IP FILTER ENABLE: Sets whether to use IP filter.
  > IP FILTER RULE: Select the IP filter you want from <**ALLOW LIST/DENY LIST**>.
  > TYPE: Select the IP type you wish to register. You can choose from <**IP ADDRESS/NETWORK A~C CLASS**>.
  > LIST: View the information of the registered IP address.
  > ADDRESS: Enter the IP address you wish to register.
  > ADD: Register the IP address you wish to filter.
  > EDIT: Change the registered IP address.
  > DELETE: Remove the registered IP address.
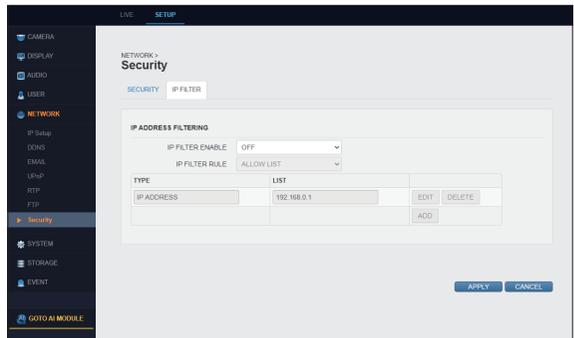
# SYSTEM

## DATE / TIME

You can set configurable date for system.
When completed, click <**APPLY**> to apply.

- Date Time Setup
  - › Date Time : Displays the date and time of current network camera.
  - › Date Format : Select your desired date format.
  - › Time Format : Select your desired time format.
- Network Time Server Setup
  - › Time Server : Enter server IP or host name.
  - › Auto Time Sync : Synchronizes the time automatically. Click the <**SYNC.**> to synchronize system time to an NTP server.
  - › Sync Time : If the Auto Time Sync is set to On, the system time is synchronized to the NTP server time in specified due time.
- Timezone / DST
  - › Timezone / DST : Select your desired time zone (divided into 24 time zones in the world)
  - › DST : Select whether to use Daylight Saving Time or not.
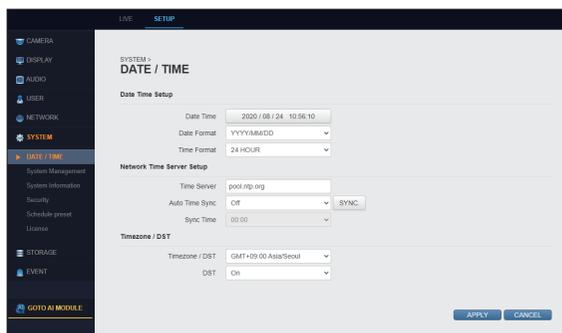
## System Management

You can rename the network camera, restart the system, initialize to factory defaults, and update the firmware.
When completed, click <**APPLY**> to apply.

- › F/W Upgrade : Updates camera firmware.

🛈 If network transfer rate is slow, error may occur during firmware update process.

🛈 It is recommended to update your firmware during your camera and PC are connected with local network.

🛈 Do not shut down devices during firmware update process.
Camera will restart if update is finished. (It takes about 2~5 minutes)

🛈 Do not remove the USB device while the upgrade is in progress.

- › Factory Default : Restores your camera settings to factory defaults. (It takes about 1 minute)

✔ If you perform the <**Factory Default**>, all the settings excepting camera network settings will be initialized.

- › System Data : Save the system settings or get the system information from other device.
  - Save : Save the settings of your camera in connected PC.
  - Load : Copy the settings saved in the connected PC to the camera.
- › System Reboot : Restarts your network camera.(It takes about 1 minute)
- › System ID : Renames your camera.
- › Device Name : Sets the device name to be displayed on the screen.
- › Expired Term Of Password : You will be prompted to change the current password after a certain period of time.

English | 35
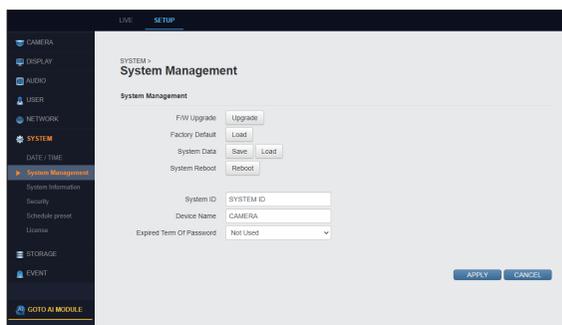
# Web Viewer

## System Information

You can confirm the firmware version, model name, MAC address, IP address, etc. of your camera.

- › Model : Displays camera 'Model Name'.
- › F/W Version : Displays camera 'F/W Version'.
- › SD Card Capacity : The capacity of the SD card installed in the camera is displayed.
- › SD Card usage : The usage of the SD card attached to the camera is displayed.
- › MAC Address : Displays camera 'MAC Address'.
- › Others : Displays network setup information for the camera.
- › IR LED : The camera's IR LED information is displayed.
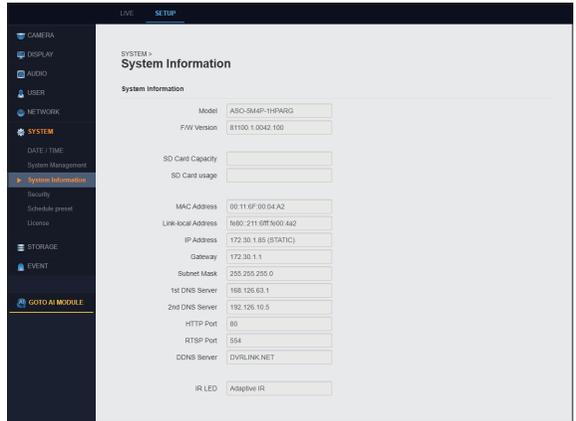
## Security

- › Auto Logout : If there is no user input for a certain period of time, you can set to log out automatically.
- › Auto Logout Duration : Specify the waiting time for Auto Logout.
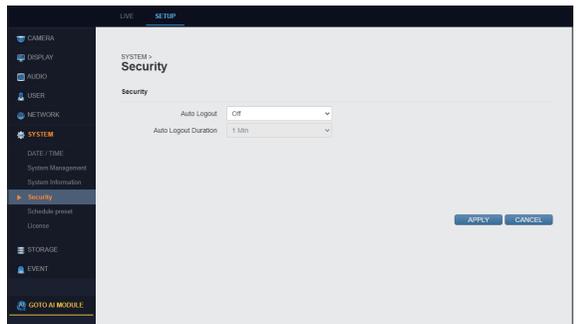
## Schedule preset

This function configures the Preset actions which will be activated during a live Event. Use the Schedule Preset function to arrange a schedule for a set of specific actions at specified time and then associate it with a specific event.

- › Name : Enter the name of preset.
- › Type : You can select one between <Daily> and <Weekly>, and decide your desired weekday(s) by clicking the < ✎ >.
- › Start/End Time : Set the start time and end time for schedule preset.
- › Add/Delete : Add or delete your desired schedule preset.
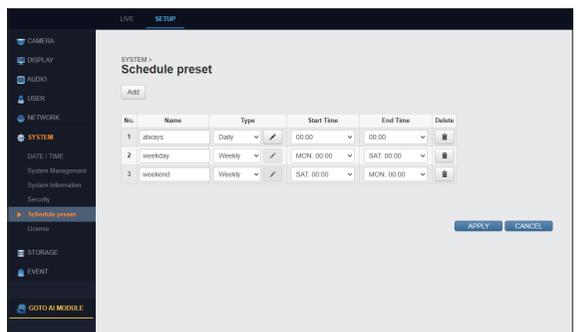
## ❚ License

### License

You can import and register license information registered on the server.

After completing the settings, click <**Apply**> to apply the changes.

> IMPORT FROM SERVER : Gets the license information registered on the server.

> ADD LICENSE : Registers the license imported from the server.

### Device information

You can check product information such as model name and FW version.
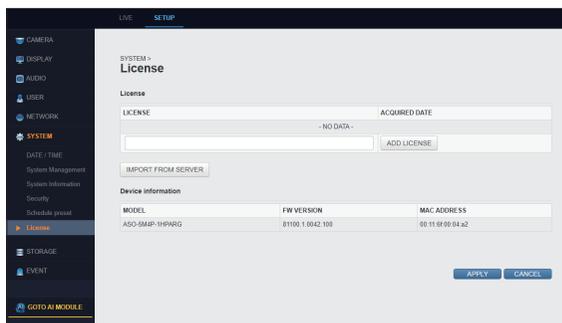
# Web Viewer

## ▌STORAGE

### SD Card

You can set the inserted SD card directly.
When completed, click <**APPLY**> to apply.

- DISK WRITE MODE
    - › DISK WRITE MODE : If <**ONCE**> is selected, the SD card will stop recording when the SD card is full. If <**OVERWRITE**> is selected, old data will be deleted so that new data can be saved when the SD card is full.

- SD Card
    - › Total Size : Displays the total capacity of SD card.
    - › Used : Displays the occupied capacity of SD card.
    - › Available : Displays the remaining capacity of SD card.
    - › Status : Displays the information about SD card status.

- Configuration
    - › Storage Name : You can rename the storage device.
    - › Storage Type : Displays the type of the storage device.
    - › Storage Status : Displays the information about SD card status. Click the <**UNMOUNT**> to safely dismount the SD card.
    - › SD Card Format : Formats the SD card.
    - › Check Disk : Checks the status of your storage device.
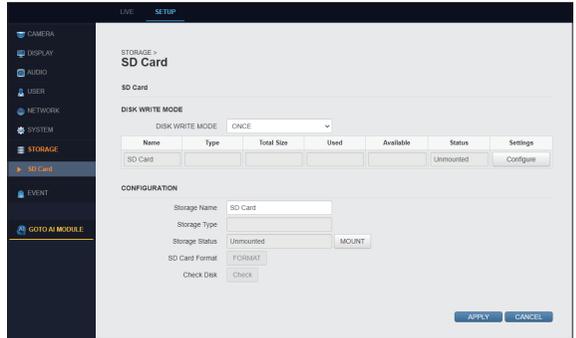
✔ If the front cover is not completely fastened after mounting your SD card, the inside of camera may get damp.

# EVENT

## Action

### 1. Alarm Out

You can set the Alarm Out conditions and its schedule.

> Name : Rename the alarm.

> Port : Specify the Alarm Out port.

> Operation : Specify the Alarm Out mode.

- ALARM OUT : Alarm Out operates according to the mode.
- ON : Always activate Alarm Out.
- OFF : Alarm Out is disabled.

> Schedule : Arrange a schedule for the Alarm Out as you prefer.

✔ To set your preferred schedule, make a new preset in "**SYSTEM** > **Schedule preset**" (page 36).

> Type : Specify the Alarm Out type.

> Duration : Specify the duration.
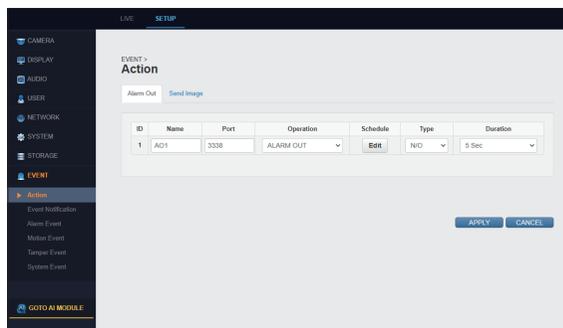
### 2. Send Image

> Receiver : Enter the recipient's e-mail address to send the image.

> Type : Send the image in your preferred type between <**SD card**> and <**FTP**>.

> Host : If selecting <**FTP**> type, you can specify the host.

> Min. Frequency : Specify the event transfer interval (Immediately or within 5~300 seconds).

> Log : Specify whether to include the log or not when transferring the event.

> Configure : You can set the <**Receiver Type**>, <**Receiver**>, <**File Priefix**>, <**Min.Frequency**>, <**Log**> and your preferred <**Schedule**>.
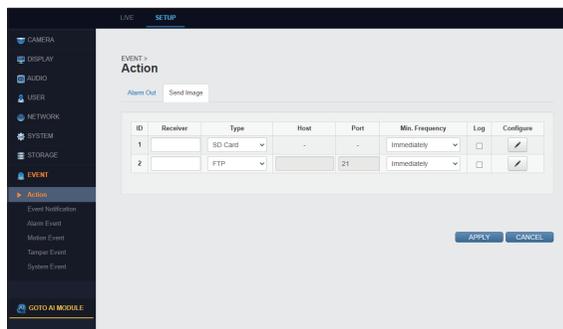
# Web Viewer

## Event Notification

### 1. E-Mail

- E-Mail List

  When an event occurs, email can be sent to a preset
  address. Click the <**Add**> button to register an
  e-mail.

- Options
  - › Minimum E-Mail Frequency : Specify the minimum
    e-mail frequency for notification.
  - › Include Snapshot : Select whether to include
    snapshot(s) or not.

- Schedule

  You can select your preferred event notification
  schedule.

  ✔ To set your preferred schedule, make a new preset in "**SYSTEM** > **Schedule preset**" (page 36).
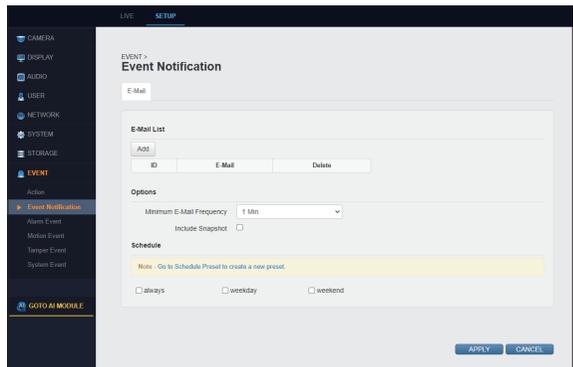
## Alarm Event

- **Event Parameter**
  - › Port : Enter the alarm event port.
  - › Name : Enter the alarm event name.
  - › Operation : Select <**N/O**> or <**N/C**> for alarm event operation.

  ✔ For more information, refer to "**Event** > **Action**" (page 39).

- **Action**
  - › Alarm Out : Specify whether to activate Alarm Out or not when an event occurs.
  - › Send Image : Specify whether to send corresponding image or not when an event occurs.

  ✔ For more information, refer to "**Event** > **Action**" (page 39).

- **Notification**
  - › E-mail : Specify whether to send an e-mail notification or not when an event occurs.

  ✔ For detail settings, refer to "**Event** > **Event Notification**" (page 40).
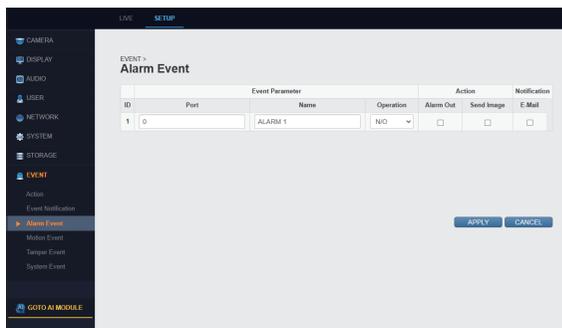
## Motion Event

- **Event Parameter**
  - › Ignoring Interval : Select the ignoring duration for detected motion event in the range of 5 through 30 seconds.

- **Action**

  Setting details are the same as "**Event** > **Alarm Event**".

- **Notification**

  Setting details are the same as "**Event** > **Alarm Event**".
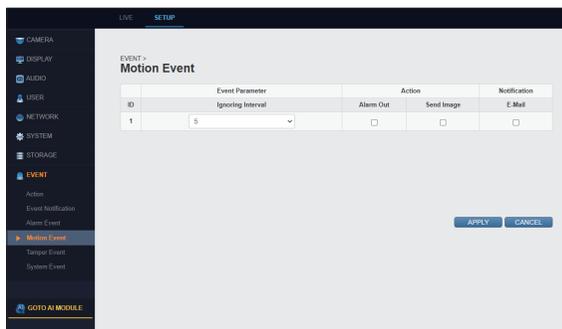
# Web Viewer

## Tamper Event

- Event Parameter

  › Ignoring Interval : Select the ignoring duration for detected motion event in the range of 5 through 30 seconds.

- Action

  Setting details are the same as "**Event** > **Alarm Event**". (page 41)

- Notification

  Setting details are the same as "**Event** > **Alarm Event**". (page 41)
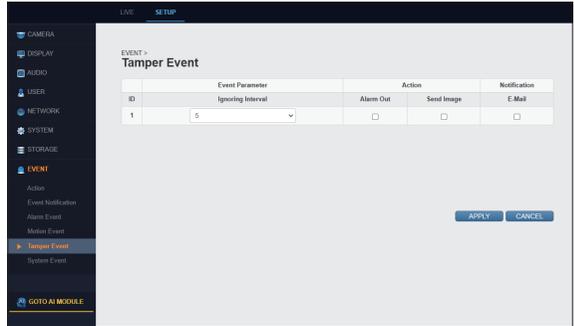
## System Event

- Event Parameter

  › Booting Event : Specify to activate an event when the system boots up.

  › Temperature Failure Event : Specify to activate an event when a system temperature failure is detected.

- Action

  Setting details are the same as "**Event** > **Alarm Event**". (page 41)

- Notification

  Setting details are the same as "**Event** > **Alarm Event**". (page 41)
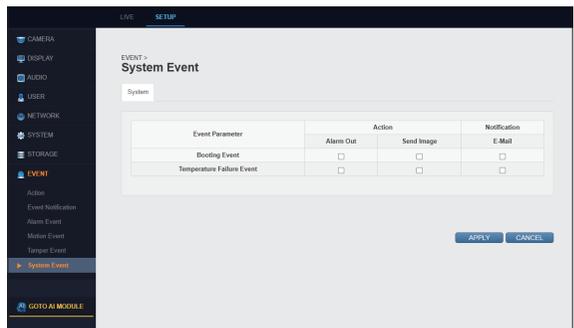
## AI Module

You can set the various AI-related functions of the camera.

Click <**GOTO AI MODULE**> at the bottom of the **"SETUP"** menu to go to the AI Module setting page.

> ⚠ The AI Module setting is available only in the Google web browser.
> To configure the AI Module, open the settings page in the Google web browser.
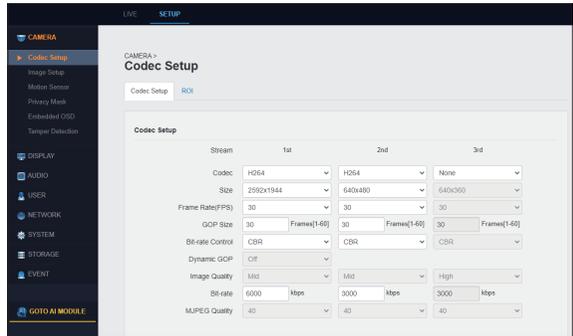


## ▌ Setting the AI Module language

Click < 🌐 English > at the top right of the AI Module screen to set the desired language.

> ✔ The default language is set to English, and you can set it to your preferred language.

English | **43**
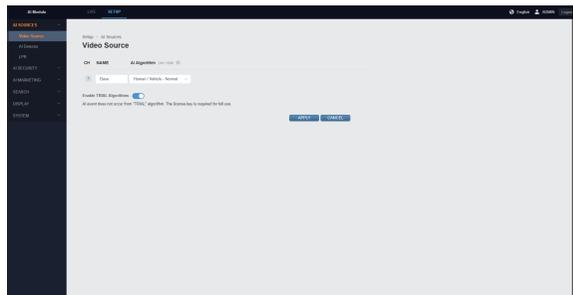
# Web Viewer

## ▌ AI SOURCES

### Video Source

You can set the default AI algorithm to use when analyzing the camera's video source.
After completing the settings, click <**Apply**> to apply the changes.

> ❯ CH: Channel information is displayed.

> ❯ Name: The video source name is displayed. You can change it to any name you want.

> ❯ AI algorithm: You can set the AI algorithm you want.

>   - Human / Vehicle - Normal: It is an algorithm that identifies and detects people and vehicles at a medium distance.

>   - Human - Normal: It is an algorithm that identifies and detects people at a medium distance.

>   - LPR (optional): It is an algorithm that recognizes and detects vehicle license plates.

>   - Fallen person detector (optional): It is an algorithm that recognizes and detects a person falling.

> ❯ Enable TRIAL Algorithms: Set whether to use the AI license trial version.

✔ If you do not purchase an AI license, the video source will be analyzed using the trial algorithm. The trial algorithm does not generate an event. If you want to use the AI video analysis function, please purchase a full license. To purchase an AI module license, contact a sales office or distributor.
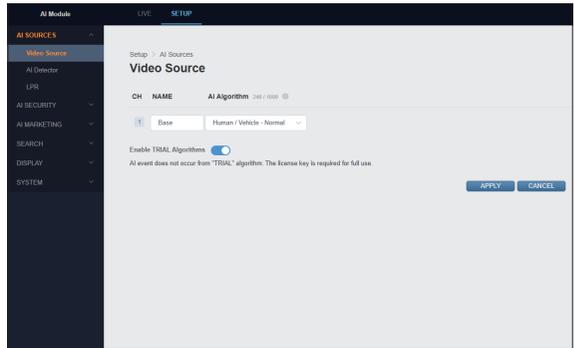
## AI Detector / Tracker Settings

### 1. Detector / Tracker

Users can set the camera for conditions for object recognition and object tracking.
After completing the settings, click <**Apply**> to apply the changes.



> ❯ Track Reference Point: Set the reference point of the object when tracking an object in the video. Select the center, bottom, top, left, or right side of an object.

> ❯ Criteria for determining object in area: Set the criteria for determining the area of an object when tracking an object in the video. Select the object tracking reference point or all points of the object's bounding box.

> ❯ Number of consecutive frames for classification: Set the number of consecutive frames to detect an object in the video.

> ✔ If the number of frames is set to High, accurate results can be obtained when recognizing objects, but it may take longer to detect.

> ❯ Object size filter: When detecting an object in an image, set the size standards to detect an object. Select the minimum or maximum size of an object to detect.

> ✔ Objects larger or smaller than the set object size are not detected. To set the size for each area, set it in the AI Trigger menu. (page 50)

> ❯ Minimum Confidence Threshold: Set the threshold when recognizing an object. The default value is set to <**15%**>, and it is recommended to set it to the default in general.

> ✔ The confidence score threshold may vary depending on the lighting conditions, camera angle, AI algorithm, etc.
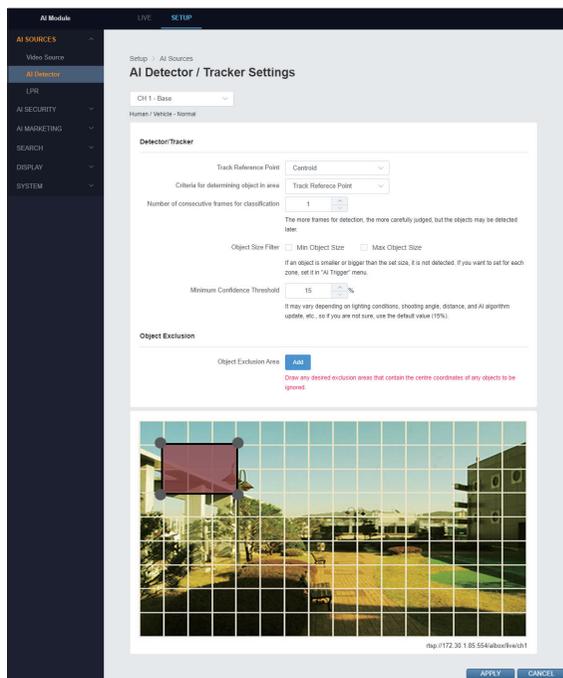
### 2. Object Exclusion

You can set the conditions to exclude objects from detection by the camera.
After completing the settings, click <**Apply**> to apply the changes.

> ❯ Object Exclusion Area: Click <**Add**> to set the area to exclude from object detection. Use the mouse to add an area on the screen containing the coordinates of the center of the object.

> ✔ To delete an area excluded from object detection, right-click on the area. If you click <**OK**>, the excluded area is deleted.

# Web Viewer

## LPR Settings

### 1. Group registration and management

You can add or delete a license plate group.

> ❯ Add: Enter a group name, and click <**Add**> to add a group. When the group is added, it is displayed in the list.

- You can edit group information by clicking < 🖉 > next to the group name.

- You can delete a group by clicking < ✖ > next to the group name.

- If you click < ❯ > on the right of the group name, you can add the registered plate number.
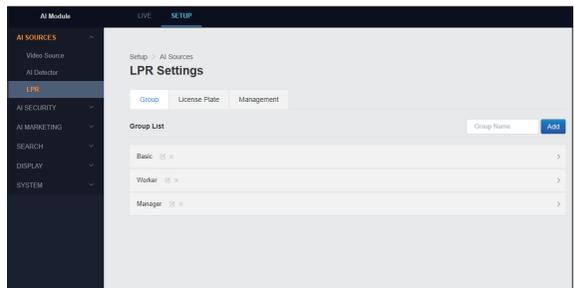
### 2. Registering and managing license plates

You can add or delete plate numbers.

> ❯ Add License Plate: Enter the vehicle number, owner's name, contact information, etc., and click <**ADD**> to add the plate number. When the plate number is added, it is displayed in the list.

✔ Among the items to be added to the license plate, "**Plate number***" is required.

- You can edit the license plate information by clicking on < 🖉 > next to the license plate.

- You can delete the license plate information by clicking on < ✖ > next to the license plate.
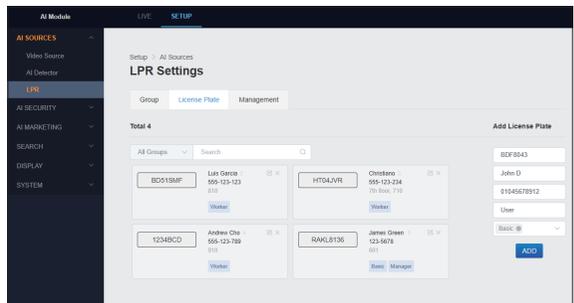
### 3. License plate management

You can register information of the plate numbers at once, or delete all registered plate numbers.

> ❯ Reset: Click <**Remove All**> to delete all registered plate numbers.

> ❯ Bulk Upload: If you click <**CSV**>.You can register an Excel file saved in CSV format. All the plate numbers saved in the Excel file is registered at once.

✔ When creating an Excel file in CSV format, you need to fill out the form according to the example on the screen for successful registration.
In the first line, enter "NAME/PLATE/PHONE/MEMO/GROUP" items. The plate number is required, so be sure to enter it.
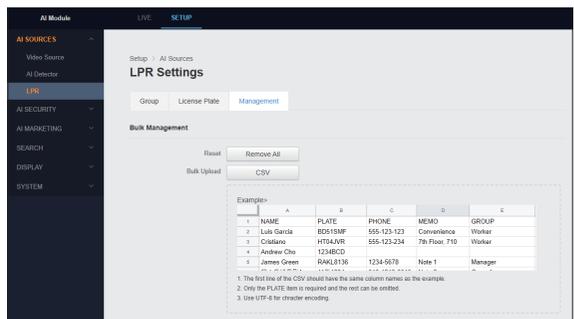
## AI SECURITY

### Action Rules

You can register AI event action rules to be applied when the camera detects video.
Action rules consist of triggers, conditions, and actions. After the action rule is set, if a trigger occurs and the set condition is satisfied, the action is executed.

✔ Triggers are divided into AI triggers and system triggers. An AI trigger occurs due to events caused by the AI module's artificial intelligence, and a system trigger occurs due to events caused by system factors such as sensor state changes. Both types of triggers can be included in action rules.

✔ Conditions refer to the filter components for a trigger that has occurred. Typically, for the schedule condition, the time filters are set.

✔ Actions define the type of actions taken when a trigger event occurs and a condition is satisfied. You can define and perform various types of actions, including sending out an alarm or delivering events to the ONVIF metadata stream.

Set the action rules by referring to the sequence of settings displayed at the top of the Action Rules screen.

✔ You can only create an action rule after setting the trigger, schedule, and action items. Therefore, before setting an action rule, set the required items first.

✔ Each time you proceed one step in settings, the setting status of the action rule is updated at the top of the screen, and you can check the current setting stage.
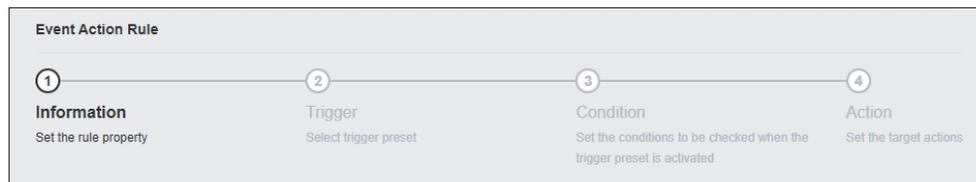


Click <**Add**> in the Action Rules screen.

> ❯ Channel: Displays the channel information for which action rules are set.

> ❯ Rule name: Displays the name of action rules.

> ❯ Trigger type: Displays the trigger information set in the action rule.

> ❯ Trigger name: Displays the trigger name set in the action rule.

> ❯ Activation: Displays whether to use action rules.

> ❯ Operation: You can check, copy, edit, or delete the details of action rules.
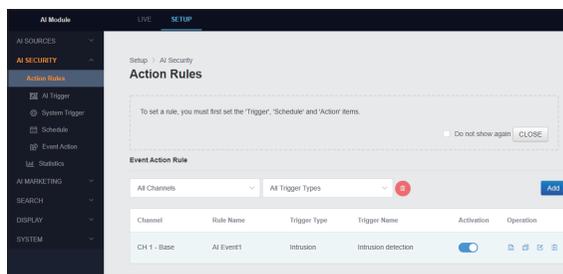


✔ After selecting a channel, set the trigger type, and click < 🗑 >, then you can batch delete the action rules that meet the conditions.

# Web Viewer

## 1. Information

Enter the action rule name, and click <**NEXT**>.

## 2. Trigger Setup

After selecting the registered trigger, click <**NEXT**>.

> ❯ Trigger: Select from AI trigger, System trigger and Bulk operations, and set a desired preset.

✔ Click < 🔗 > to register a trigger.

✔ For details on trigger registration, see "**AI SECURITY ❯ AI Trigger**" (page 50).

✔ If you move to the trigger registration screen, the items you set for the action rule are not saved. In that case, set the action rules again after registering the trigger.

✔ To return to the previous step, click <**PREV**>.
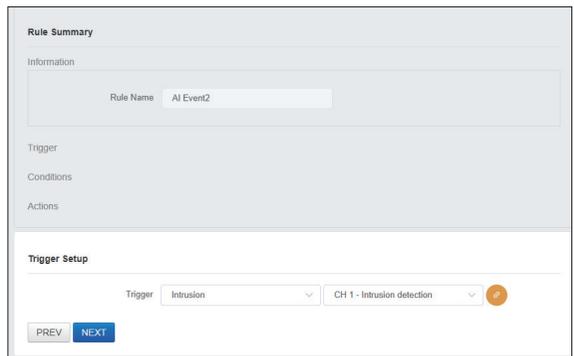
## 3. Condition Setup

After adding the registered schedule and conditions, click <**NEXT**>.

> ❯ Schedule: Set the registered schedule preset.

✔ If you do not select a schedule preset, it is set to <**Always**>.

✔ If multiple schedules are selected, only one of the selected items needs to be satisfied.

> ❯ Condition: To add another trigger, click < ➕ >.
> Select the trigger and the applicable preset.
> Set the valid time for the trigger, and click <**Add**>.

✔ You can click < 🗑 > to delete the selected condition.

✔ It is based on the trigger occurrence time of the rule set in the trigger settings.
  - + t seconds: It becomes true if a condition has been met within t seconds after the trigger occurrence.
  - - t seconds: It becomes true if a condition has been met within t seconds before the trigger occurrence.
  - +/- t seconds: It becomes true if a condition has been met within t seconds before/after the trigger occurrence.

✔ To return to the previous step, click <**PREV**>.
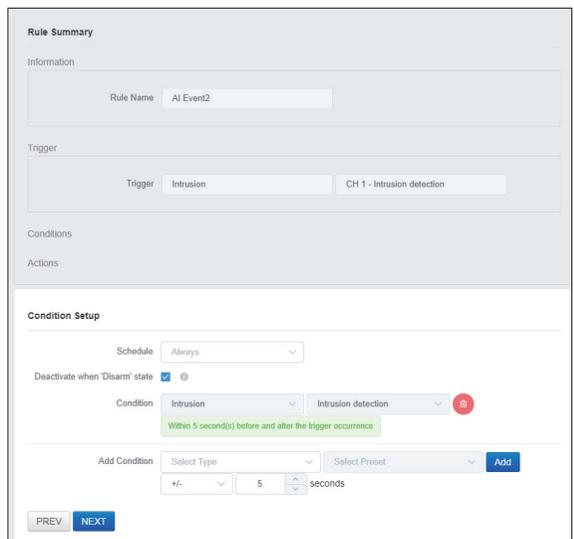
### 4. Action Setup

After setting the registered action, click <**NEXT**>.

> › Action: Select an action type from Network, System, VMS, NVR/DVR, and then set the applicable preset. Click <**Add**> to add the selected action.

✔ During the action setting, "ONVIF/Event Log" is the default item, and cannot be changed or deleted.

✔ Click < 🗑 > to delete the selected action.

✔ For details on action registering, see "**AI SECURITY › Event Action**" (page 61).

✔ To return to the previous step, click <**PREV**>.

Check the details of the action rule and click <**APPLY**> to register the rule.

## AI Trigger

You can set the AI trigger to use when creating the camera's action rule. In the General tab, you can set the trigger to occur an event when motion detects, such as intrusion or loitering, and in the Advanced tab, you can set the trigger to generate an event when the license plate is recognized.

### 1. Intrusion

Intrusion is a trigger that is activated when a new detection target appears in the detection area set on the screen.

To set an intrusion detection preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

› Video source: Select a video source channel.

› Name: Enter a name of the intrusion detection preset.

› Target Object: Select the class of a detection target. You can select from Person, Bike, and Car.

✔ Multiple items can be selected as detection targets.

✔ The detection targets may differ depending on the algorithm settings of the selected video source.

› Ignore Duplicate Event: During an intrusion event, another event is not activated even if an intrusion by another object is detected. If you select this item, an event occurs only when the first object is detected.

✔ An event notification is issued when the time set in "Reminder Duration" has passed.

› Advanced Setup: Additional setting items for intrusion detection are displayed.
  - Intrusion label: Enter a counter name of the widget.
  - Event Count Reset: Set the time to reset the widget's counter. To reset it manually, click <**RESET**>.
  - Ignore Static Object: Set to ignore motionless objects when detecting intrusion.

› Object size filter: Set the object size limit for detecting intrusion.

› Import Zone Information: You can import and apply the information of a set area.

› Area setting: Use the mouse to set the intrusion detection area.
  ✓ You can move the entire area by dragging the created area.
  ✓ You can move the vertex by dragging the corner of the created area.
  ✓ When you click the line of the created area, a new vertex is created.
  ✓ When you right-click the vertex of the created area, the vertex is deleted.

› Widget location setting: To set a location where the widget will be displayed, drag the widget square in the upper right corner.
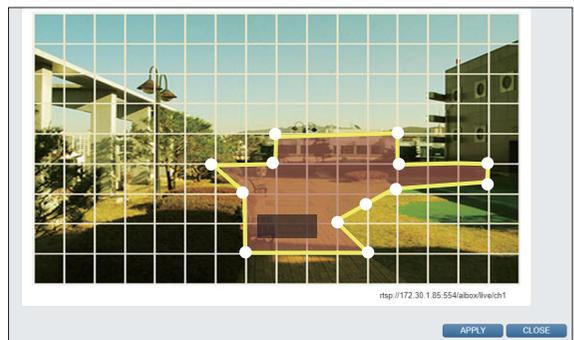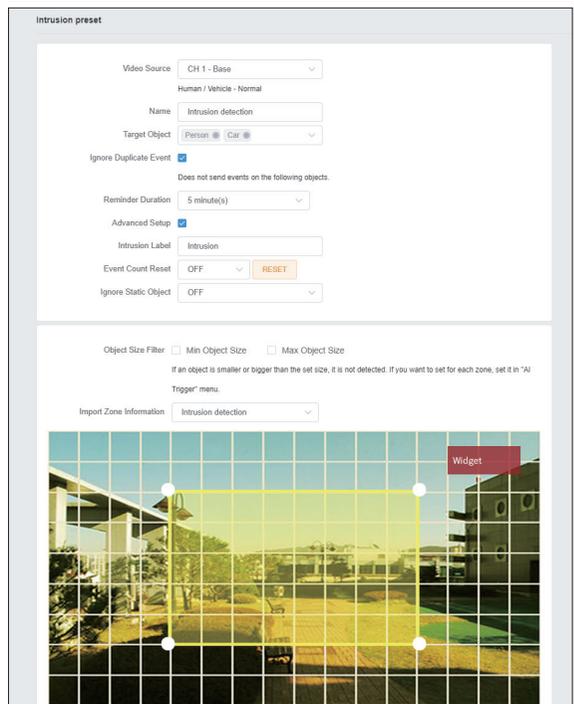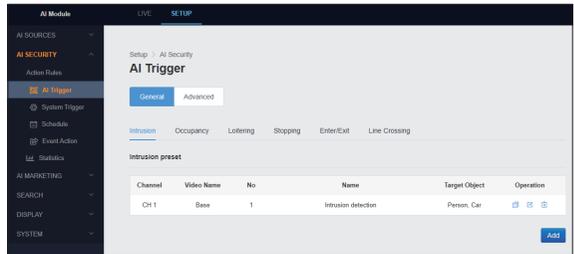
## 2. Occupancy

Occupancy is a trigger that is activated when a detection area is set on the screen, and the number of detection targets in that area is outside the specified range.
For example, an event is triggered when a car that must be parked in a designated area disappears or when three or more people enter an area that can only accommodate 2 people.

To set an occupancy detection preset, click <**Add**> on the screen.



When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

> ❯ Video source: Select a video source channel.

> ❯ Name: Enter a name of the occupancy detection preset.

> ❯ Target Object: Select the class of a detection target. You can select from Person, Bike, and Car.

✔ Multiple items can be selected as detection targets.

✔ The detection targets may differ depending on the algorithm settings of the selected video source.

> ❯ Dwell Time: Set the detection threshold time. You can choose either Immediately or 1-10 seconds.

> ❯ Trigger method: Select the method to trigger occupancy detection.

  - Limits: A trigger event occurs when the number of objects exceeds or falls below the limit. When selecting "Limits", set the under and over thresholds.

  - Every N objects: A trigger event occurs when the number of objects in the detection area is a multiple of N. When selecting "Every N objects", set the value of count "N".

> ❯ Advanced Setup: Additional setting items for occupancy detection are displayed.

  - Num Objects Label: Enter a counter name of the widget.

  - Fewer Than Label: Enter the under threshold.

  - More Than Label: Enter the over threshold.

  - Trigger N Count Label: Enter the event counter value.

✔ Fewer Than/More Than Label is displayed when "Limits" is selected as the trigger method, and Trigger N Count Label is displayed when "Every N objects" is selected for the trigger method.

  - Event Count Reset: Set the time to reset the widget's counter. To reset it manually, click <**RESET**>.

  - Ignore Static Object: When occupancy is detected, motionless objects are set to be ignored.

> ❯ Object size filter: Set the object size limit for detecting occupancy.
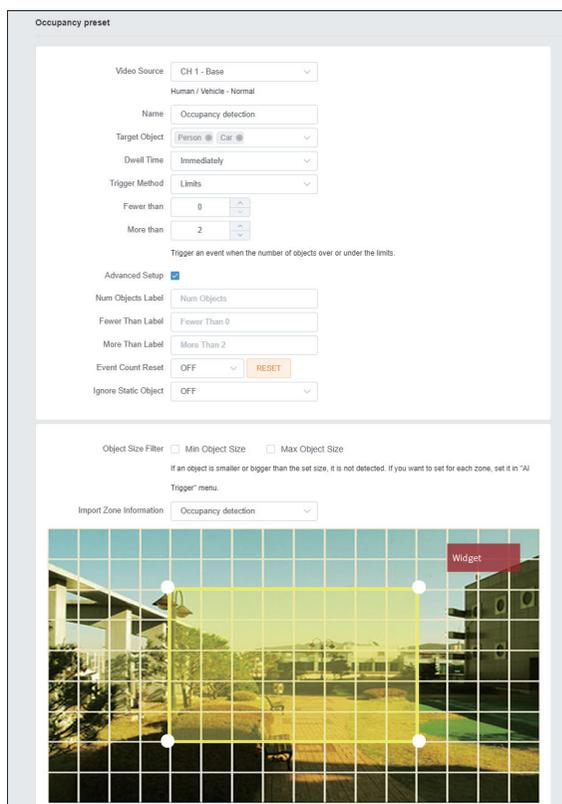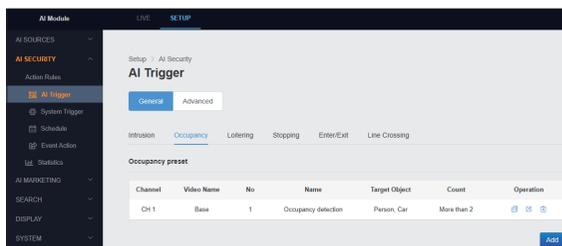
# Web Viewer

› Import Zone Information: You can import and apply the information of a set area.

› Area setting: Use the mouse to set the Occupancy detection area.

 ✓ You can move the entire area by dragging the created area.

 ✓ You can move the vertex by dragging the corner of the created area.

 ✓ When you click the line of the created area, a new vertex is created.

 ✓ When you right-click the vertex of the created area, the vertex is deleted.



rtsp://172.30.1.85:554/aibox/live/ch1

APPLY    CLOSE

› Widget location setting: To set a location where the widget will be displayed, drag the widget square in the upper right corner.
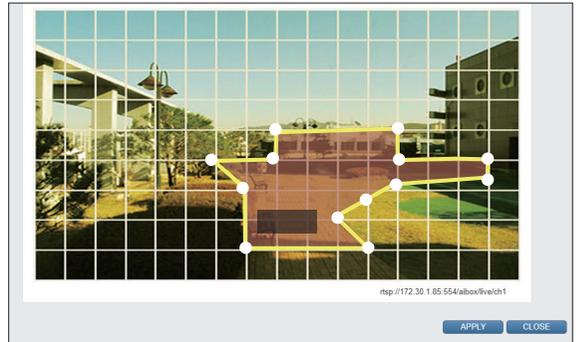
### 3. Loitering

Loitering is a trigger that is activated when a detection area is set on the screen, and the detection target stays in the area for more than a certain time.
For example, an event is triggered when a person has been hanging around for a long time in a specific area.

To set a loitering detection preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.



> Video source: Select a video source channel.

> Name: Enter a name of the loitering detection preset.

> Target Object: Select the class of a detection target. You can select from Person, Bike, and Car.

✔ Multiple items can be selected as detection targets.

✔ The detection targets may differ depending on the algorithm settings of the selected video source.

> Dwell Time: Set the detection threshold time. It is triggered when a detection target stays longer than the set time.

> Ignore Duplicate Event: During a loitering event, another event is not activated even if an intrusion by another object is detected. If you select this item, an event occurs only when the first object is detected.

> An event notification is issued when the time set in "Reminder Duration" has passed.

> Advanced Setup: It displays the additional setting items for loitering detection.

- Loitering Label: Enter a counter name of the widget.
- Event Count Reset: Set the time to reset the widget's counter. To reset it manually, click <**RESET**>.
- Ignore Static Object: When loitering is detected, motionless objects are set to be ignored.

> Object size filter: Set the object size limit for detecting loitering.
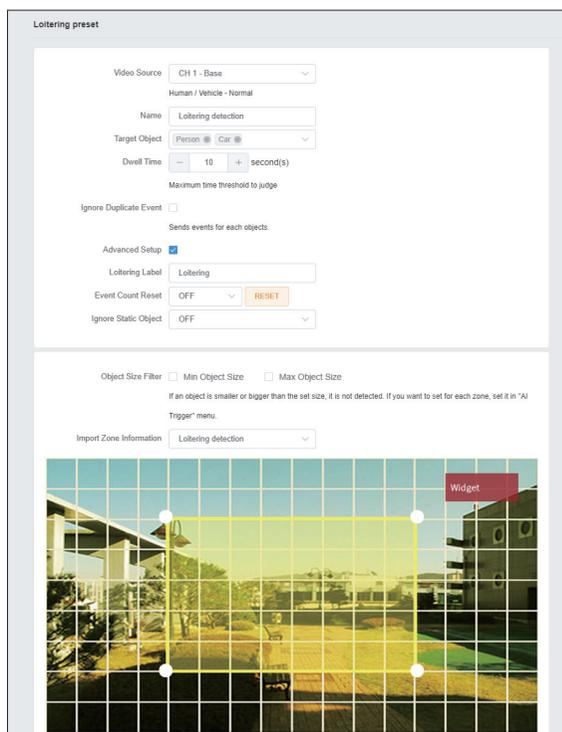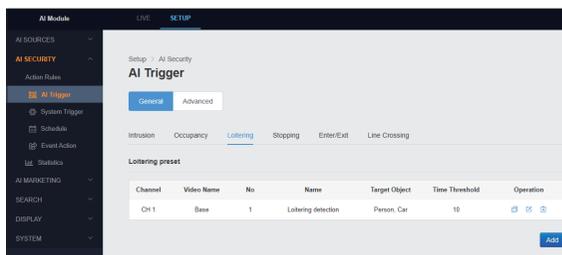
# Web Viewer

›  Import Zone Information: You can import and apply the information of a set area.

›  Area setting: Use the mouse to set the loitering detection area.

 ✓ You can move the entire area by dragging the created area.

 ✓ You can move the vertex by dragging the corner of the created area.

 ✓ When you click the line of the created area, a new vertex is created.

 ✓ When you right-click the vertex of the created area, the vertex is deleted.

›  Widget location setting: To set a location where the widget will be displayed, drag the widget square in the upper right corner.



rtsp://172.30.1.85:554/aibox/live/ch1

APPLY    CLOSE
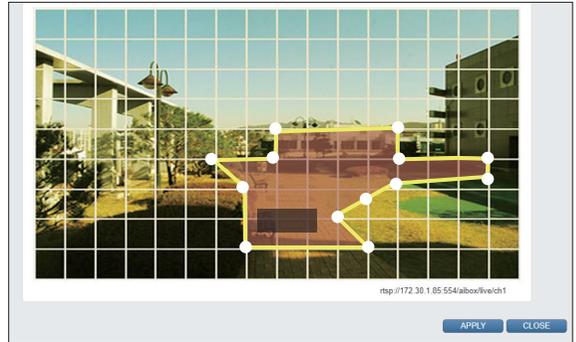
## 4. Stopping

Stopping is a trigger that is activated when a detection area is set on the screen, and the detection target stays motionless.

For example, if a vehicle is parked for a certain amount of time in a specific area, an event is triggered.

To set a stopping detection preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.



> Video source: Select a video source channel.

> Name: Enter a name of the stopping detection preset.

> Target Object: Select the class of a detection target. You can select from Person, Bike, and Car.

✔ Multiple items can be selected as detection targets.

✔ The detection targets may differ depending on the algorithm settings of the selected video source.

> Dwell Time: Set the detection threshold time. It is triggered when a detection target stays longer than the set time.

> Advanced Setup: Additional setting items for stopping detection are displayed.

- Stop Label: Enter a counter name of the widget.
- Event Count Reset: Set the time to reset the widget's counter. To reset it manually, click <**RESET**>.
- Ignore Static Object: When Stop is detected, motionless objects are set to be ignored.

> Object size filter: Set the object size limit for detecting stopping.

> Import Zone Information: You can import and apply the information of a set area.

> Area setting: Use the mouse to set the stopping detection area.

✔ You can move the entire area by dragging the created area.

✔ You can move the vertex by dragging the corner of the created area.

✔ When you click the line of the created area, a new vertex is created.

✔ When you right-click the vertex of the created area, the vertex is deleted.

> Widget location setting: To set a location where the widget will be displayed, drag the widget square in the upper right corner.
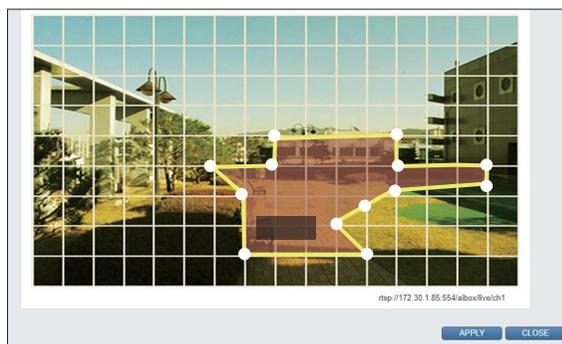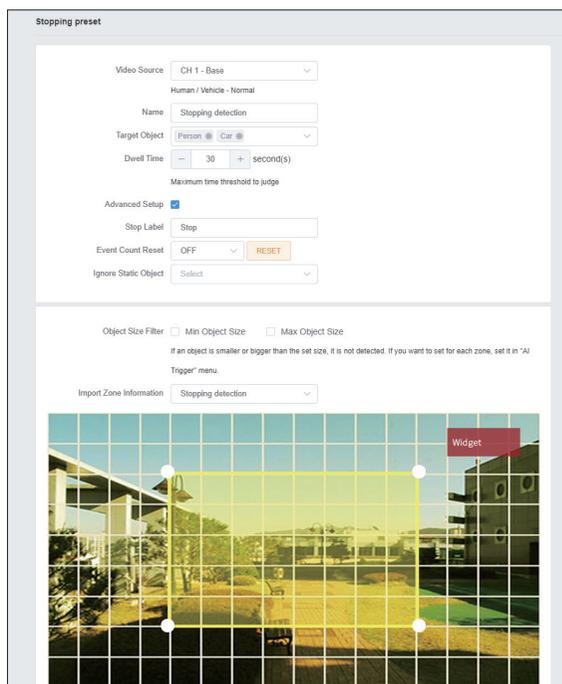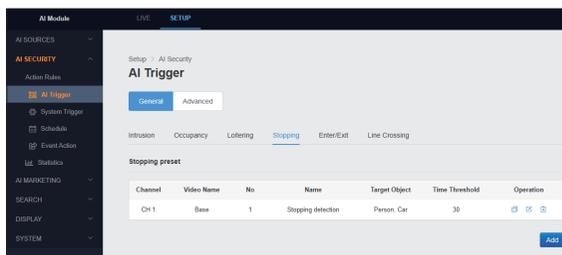
# Web Viewer

## 5. Enter/Exit

Enter/Exit is a trigger that is activated when a detection area is set on the screen, and a detection target enters or exits the boundary of the area.

To set an Enter/Exit detection preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

> Video source: Select a video source channel.

> Name: Enter a name of the Enter/Exit detection preset.

> Target Object: Select the class of a detection target. You can select from Person, Bike, and Car.

✔ Multiple items can be selected as detection targets.

✔ The detection targets may differ depending on the algorithm settings of the selected video source.

> Direction: Set the object detection direction.

- enter: When the detection target enters in the area

- exit: When the detection target goes out of the area

- both: Detect both directions

> Advanced Setup: Additional items set in the Enter/Exit detection menu are displayed.

- Crossing count: Set the number of objects crossing the boundary of the area that can trigger an event.

- Enter Direction Label: Enter a counter name of the widget.

- Exit Direction Label: Enter a counter name of the widget.

- Event Count Reset: Set the time to reset the widget's counter. To reset it manually, click <**RESET**>.

> Object size filter: Set the object size limit for Enter/Exit detection.

> Import Zone Information: You can import and apply the information of a set area.

> Area setting: Use the mouse to set Enter/Exit detection area.

✓ You can move the entire area by dragging the created area.

✓ You can move the vertex by dragging the corner of the created area.

✓ When you click the line of the created area, a new vertex is created.

✓ When you right-click the vertex of the created area, the vertex is deleted.

> Widget location setting: To set a location where the widget will be displayed, drag the widget square in the upper right corner.
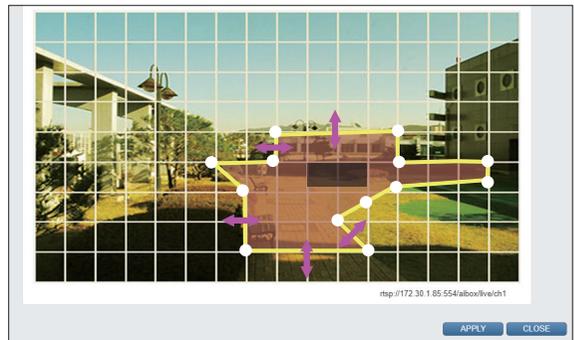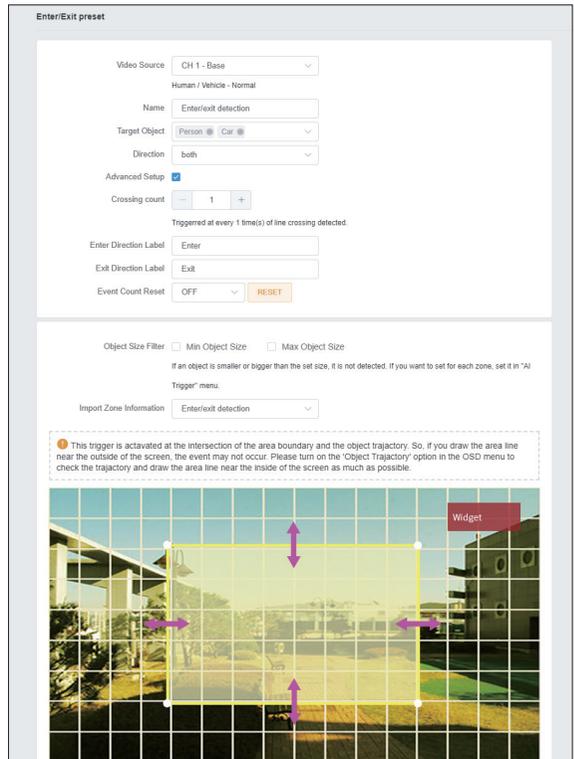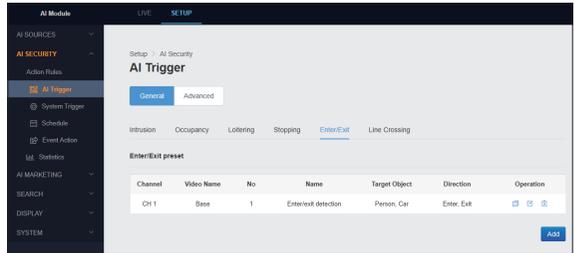
## 6. Line Crossing

Line crossing is a trigger that is activated when a polyline is set on the screen, and a detection target crosses that line.

To set a line crossing detection preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

> Video source: Select a video source channel.
> Name: Enter a name of the line crossing detection preset.
> Target Object: Select the class of a detection target. You can select from Person, Bike, and Car.
  ✔ Multiple items can be selected as detection targets.
  ✔ The detection targets may differ depending on the algorithm settings of the selected video source.
> Direction: Set the object detection direction.
  - reverse: Crossing from left to right when looking from the start point to the end point
  - forward: Crossing from right to left when looking from the start point to the end point
  - both: Detect both directions
> Advanced Setup: The additional setting items for line crossing detection are displayed.
  - Crossing count: Set the number of objects crossing the boundary of the area that can trigger an event.
  - Forward Direction Label: Enter a counter name of the widget.
  - Reverse Direction Label: Enter a counter name of the widget.
  - Event Count Reset: Set the time to reset the widget's counter. To reset it manually, click <**RESET**>.
> Object size filter: Set the object size limit for detecting it on the boundary.
> Import Zone Information : You can import and apply the information of a set area.
> Area setting: Set the boundary with the mouse.
  ✔ You can move a point on the boundary by dragging it.
  ✔ To create a new point, click a point on the boundary line.
  ✔ To delete a point, right-click it on the boundary line.
> Widget location setting: To set a location where the widget will be displayed, drag the widget square in the upper right corner.
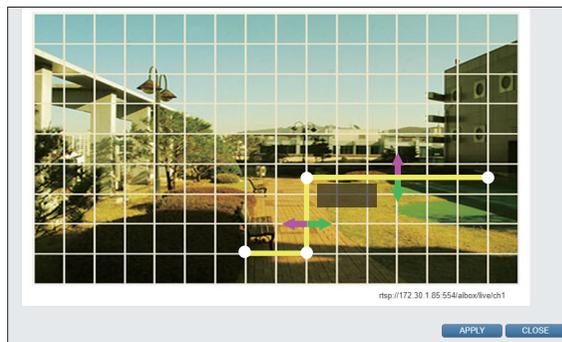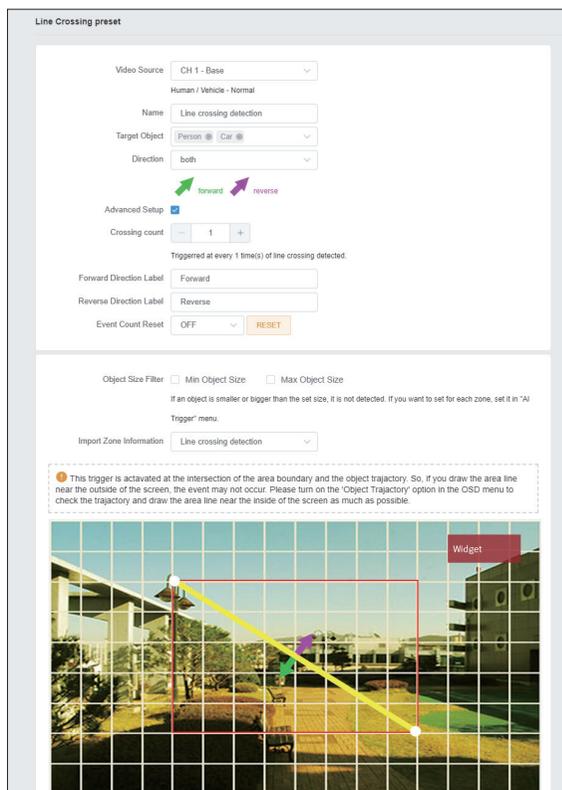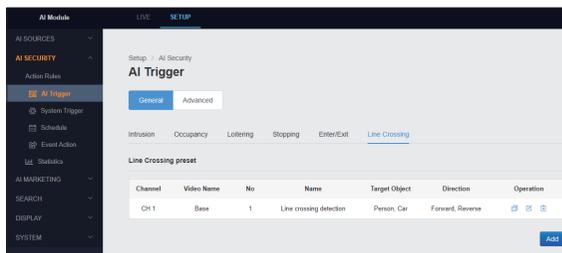
## 7. LPR(License Plate Recognition)

It can be set to recognize license plates.

To set a license plate recognition preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

> Video Source: Select a video source channel.

> Name: Enter a name of the license plate recognition preset.

> Recognition Mode: Set the license plate recognition mode.

- All Recognized LPs: It displays information of all license plate recognized by the camera.

- LPs in Groups: Only the plate numbers registered in advance is recognized.

- Unregistered LP: Only unregistered plate numbers are recognized.
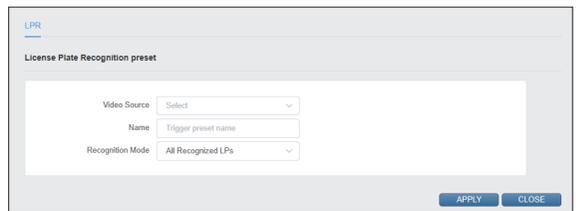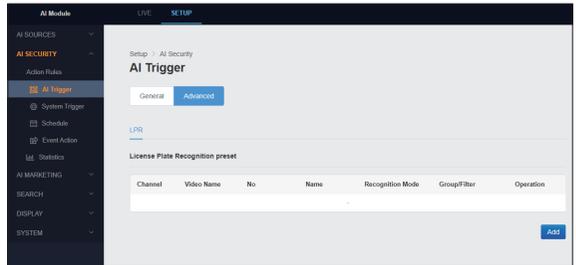
## System Trigger

You can set the system trigger used when creating an action rule.

### 1. Alarm In

You can set the alarm input method.

✔ The Alarm In item does not require a separate preset. You can add the Alarm In item directly in the action rule setting.

❯ Alarm In: Set the alarm input method.

- **N/O:** The alarm sensor is always open. The alarm is triggered when the alarm sensor is closed.
- **N/C:** The alarm sensor is always closed. The alarm is triggered when the alarm sensor opens.
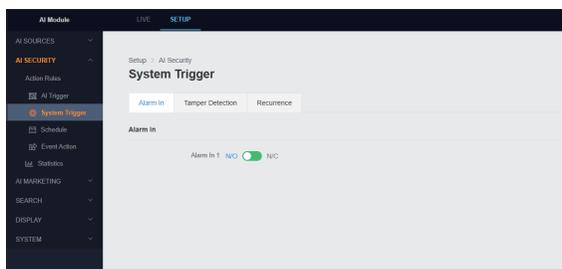
### 2. Tamper Detection

You can set the time to ignore a trigger when camera neutralization is detected.
After setting the desired time, click <**Apply**>.

❯ Ignoring Interval: Set the time to ignore a trigger when camera neutralization is detected.
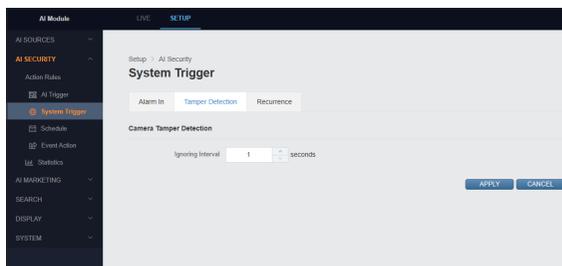
### 3. Recurrence

You can set a repetitive preset.

To set a repetitive preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

❯ Name: Enter a name of the repetitive preset.

❯ Repeat every: Set the repeat cycle. Select the number of repeat cycles, and then select the repeat cycle interval from days, hours, minutes, and seconds.

❯ Start time: Set the start time of the repeat cycle.
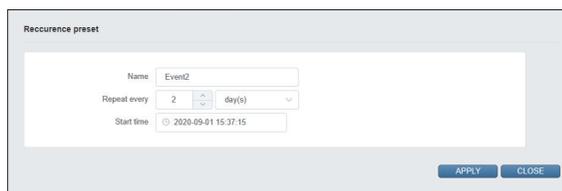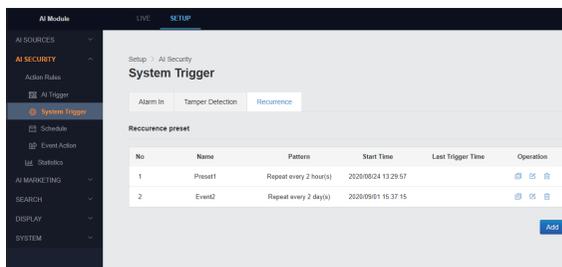
# Web Viewer

## Schedule

You can set the schedule used when creating an action rule.

To set a schedule preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

> Name: Enter a name of the schedule preset.
>
> Schedule Cycle: Set the schedule cycle. Select from Weekly, Monthly, and Yearly.
>
> Schedule Designation: Set the scheduling criteria.

✔ If you select "Weekly" in the schedule cycle, you cannot select the scheduling method.

> Schedule: Set the date or day of week or week of month for the schedule to run.
>
> Time Range: Set the start time and end time for the schedule to run.
>
> Exclusion Schedule: Set a schedule to exclude from execution.

✔ Action rules don't work during the schedule period to be excluded.
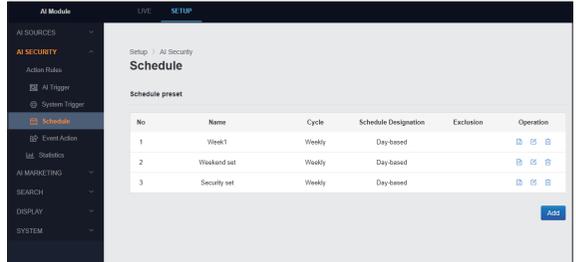


• Example of schedule preset setting

If the start time and end time are set the same, the schedule includes 24 hours.
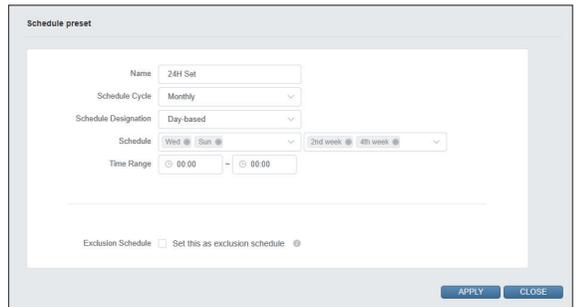


If the time range is set beyond midnight, the schedule continues until the end of the following day.
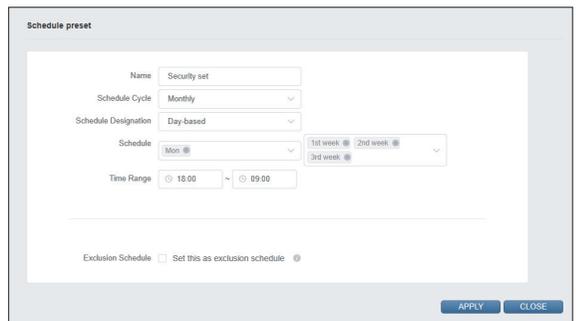
## Event Action

You can set the event action used when creating an action rule.

### Network

#### 1. Email

You can set an e-mail preset to be executed when an event occurs.

To set a e-mail preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

> ❯ Name: Enter the name of the e-mail action preset.

> ❯ To: Enter the e-mail address to receive alerts. If there are multiple recipients, enter addresses separated by commas (,).

> ❯ Attach snapshot: When sending e-mails, you can attach snapshot images.

> ❯ Snapshot Time Range: Set the time range of snapshots to receive by e-mail.

> ✔ Snapshots are taken approximately every second.

> ❯ Provider: Select a service provider from the E-mail Service Provider section. If the service provider you want is not listed, select <**Custom**>.

>   - SMTP server: Enter the SMTP server address and port number.

>   - Encryption: Select the encryption type.

>   - Validate Server Certificate: Select an option to validate the server certificate of the SMTP server.

>   - SMTP Authentication: Set whether to authenticate SMTP.

>   - Username: Enter user ID for authentication by the e-mail server.

>   - Password: Enter password for authentication by the e-mail server.

> ❯ Event Action Message: When sending an e-mail, you can use a template or include an event attribute token in your message. Select a template message, and click <**Use**>.

> ❯ Editable Box: You can edit the message by adding or deleting items to it. Select the token information to enter in the action message and click <**Add**> to compose the message.

> ❯ Message Example: Check out message example that will be sent.

> ❯ Send example message: Click <**TEST**> to send an example message via e-mail to test whether the settings are applied correctly.
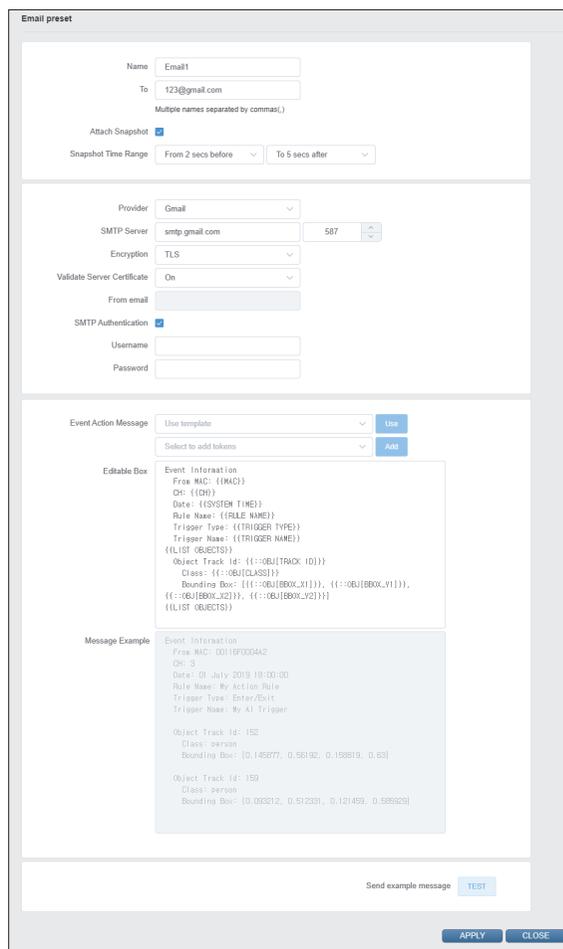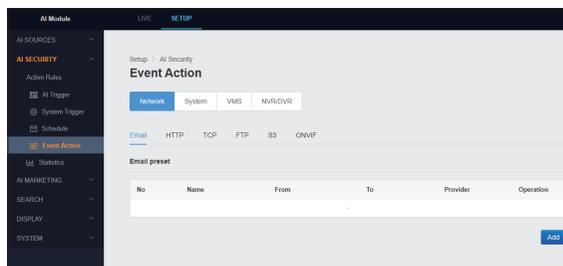
# Web Viewer

## 2. HTTP

You can set an HTTP preset to be executed when an event occurs.

To set an HTTP preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Settings screen, click <**Apply**> to register**.**

- ❯ Name: Enter a name of the HTTP action preset.
- ❯ Protocol: Set the HTTP/HTTPS protocol.
- ❯ Method: Set the request method.
- ❯ URL: Enter the URL of the server.
- ❯ Authentication: Set the authentication method.
- ❯ Custom header: To set a custom header, click <**Add**>, and enter the key and value in the pop-up window.
- ❯ Attach snapshot: When sending messages to the server, you can attach snapshot images.
- ❯ Snapshot Time Range: Set the time range of snapshots to be sent to the server.

✔ Snapshots are taken approximately every second.

- ❯ Event Action Message: When sending an HTTP action message to the server, you can use a template or include an event attribute token in your message.
  Select a template message, and click <**Use**>.
- ❯ Editable Box: You can edit the message by adding or deleting items to it. Select the token information to enter in the action message and click <**Add**> to compose the message.
- ❯ Message Example: Check out message example that will be sent.
- ❯ Send example message: Click <**TEST**> to send an example message via server to test whether the settings are applied correctly.
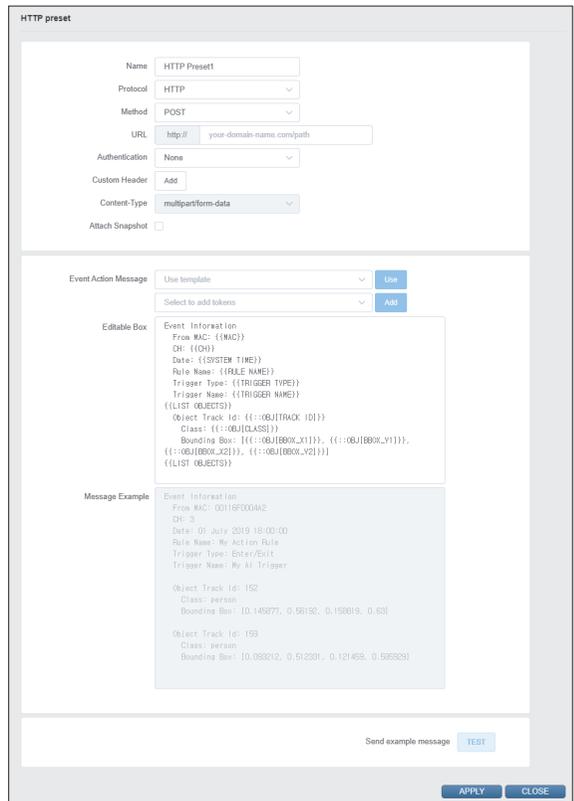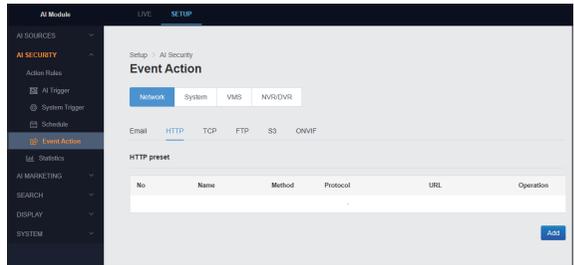
## 3. TCP

You can set a TCP preset to be executed when an event occurs.

To set a TCP preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Settings screen, click <**Apply**> to register**.**

> ❯ Name: Enter a name of the TCP action preset.

> ❯ Host: Enter the host IP address or domain name where the TCP receiving server is running.

> ❯ Port: Enter the host port number of the TCP receiving server.

> ❯ Event Action Message: When sending a TCP action message to the server, you can use a template or include an event attribute token in your message. Select a template message, and click <**Use**>.

> ❯ Editable Box: You can edit the message by adding or deleting items to it. Select the token information to enter in the action message and click <**Add**> to compose the message.

> ❯ Message Example: Check out message example that will be sent.

> ❯ Send example message: Click <**TEST**> to send an example message via server to test whether the settings are applied correctly.
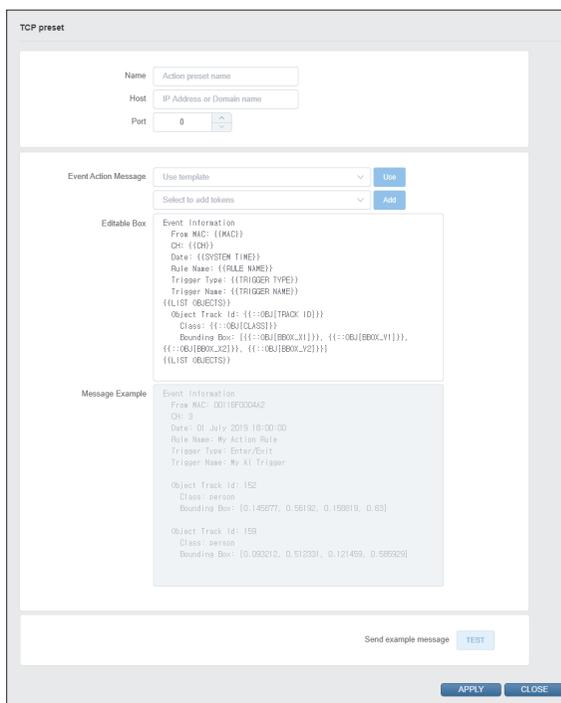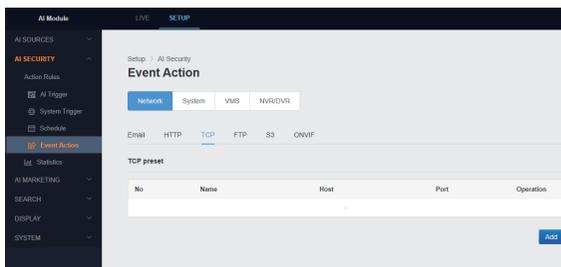
# Web Viewer

## 4. FTP

You can set an FTP preset to be executed when an event occurs.

To set an FTP preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Settings screen, click <**Apply**> to register**.**

> Name: Enter a name of the FTP action preset.

> Snapshot Time Range: Set the time range of snapshots to be sent to the server.

✔ Snapshots are taken approximately every second.



- Register new FTP Server: If there is no registered FTP server, you can register a new server.

> Name: Enter the FTP server name to register.

> Host: Enter the host IP address or domain name where the FTP receiving server is running.

> Port: Enter the host port number of the FTP receiving server.

> Username: Enter user ID for authentication by the FTP receiving server.

> Password: Enter password for authentication by the FTP receiving server.

> Passive Mode: Set whether to use passive mode.

- Existing list of FTP Servers: If there is a registered FTP server, select the server from the list to set the action preset.

> File Path Format: When sending an FTP action message to the server, you can use a template or include an event attribute token in your message. Select a template and click <**Use**>.



✔ Select the token information to enter in an action message, and click <**Add**> to compose the message.

> Message Example: Check the example file to be actually sent.

> Send example file: Click <**TEST**> to send a sample file to the server to test whether the settings are applied correctly.
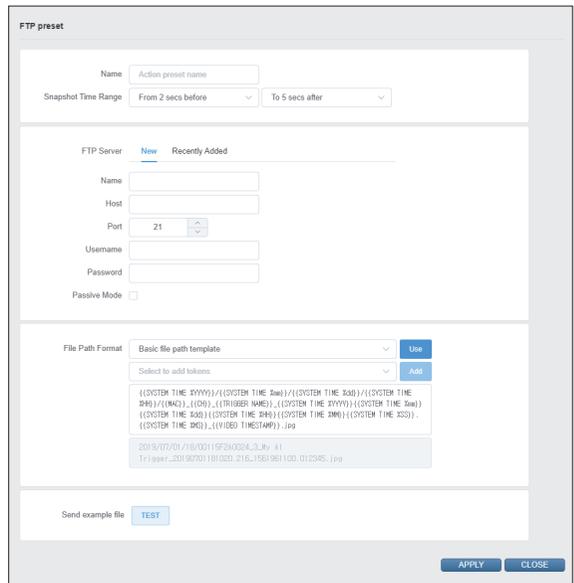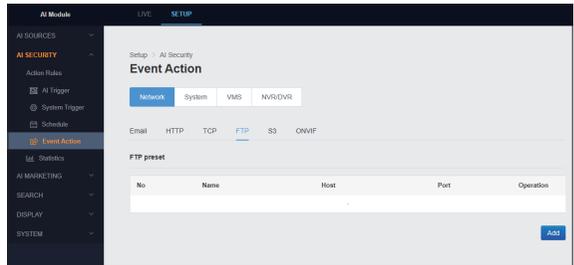
## 5. S3

You can set an S3 preset to be executed when an event occurs.

To set an S3 preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Settings screen, click <**Apply**> to register.

> Name: Enter a name of the S3 action preset.

> Snapshot time range: Set the time range of snapshots to be sent to the server.

✔ Snapshots are taken approximately every second.



- Register new S3 Server: If there is no registered S3 server, you can register a new server.
  > Name: Enter the S3 server name to register.
  > Key File (*.CSV): Click <**File**> to import and register a file saved in *.CSV format.
  > Access Key: Enter the server access key.
  > Secret Key: Enter the server secret key.
  > Region: Set the server access region.
  > Bucket: Enter the information of the bucket on the server.

- List of existing S3 Servers: If there is a registered S3 server, select the server to set the action preset from the list.
  > File Path Format: When sending an action message to an S3 server, you can use a template or include an event attribute token in your message.
    Select a template and click <**Use**>.

✔ Select the token information to enter in an action message, and click <**Add**> to compose the message.

> Message Example: Check the example file to be actually sent.

> Send example file: Click <**TEST**> to send a sample file to the server to test whether the settings are applied correctly.
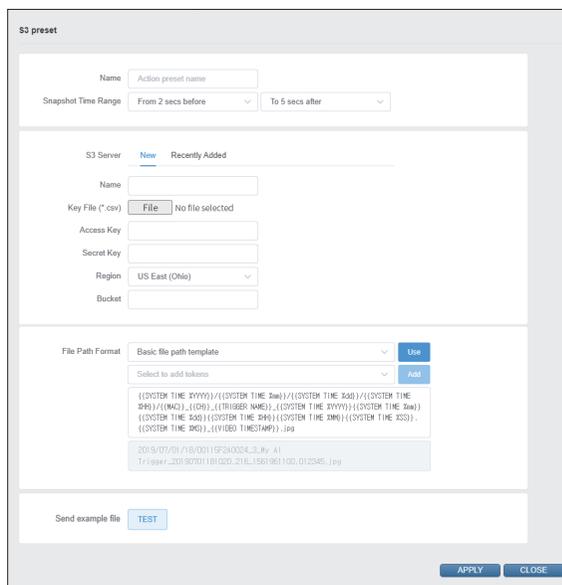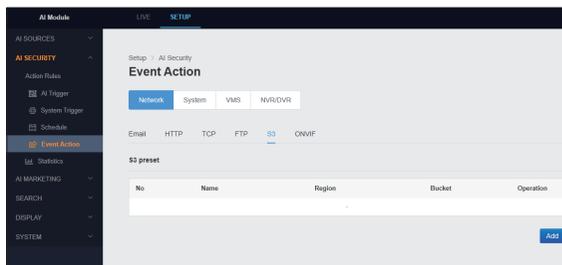
# Web Viewer

## 6. ONVIF

You can set an ONVIF preset to be executed when an event occurs.

✔ ONVIF is the default setting, so no separate preset setting is required. You can add ONVIF items directly in the action rule settings.

When detailed settings are completed in the ONVIF setting screen, click <**Apply**> to register.

❯ ONVIF Event Transmission: Set the ONVIF event transmission method.

- Custom AI Event + Motion: Transmit AI events and motion detection events.

- Motion only: Transmit AI events as the ONVIF motion detection events.

❯ CH0 Encoding Profile: Set whether to use CH0 encoding profile.

❯ ONVIF Event Topics: You can check the event topics that are set as AI triggers.
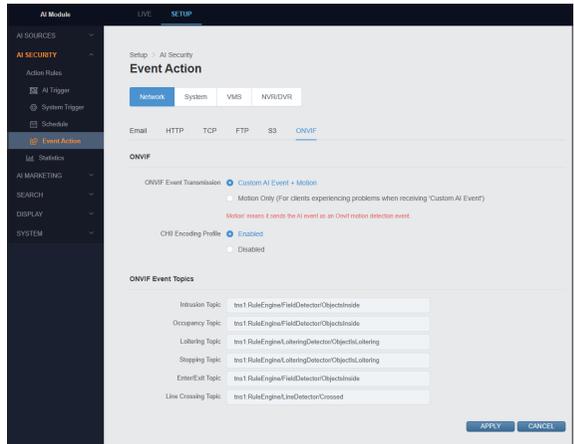
### System

### 1. Disarm

You can check the arming status of the system, and set whether to use the disarming of the connected controller.

When detailed settings are completed in the Disarm Setting screen, click <**Apply**> to register.

> › Status: You can check the current arming status of the system.

> › Connected Control: You can select the controller connected to the system.
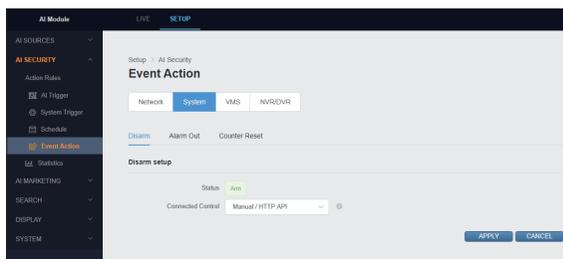


### 2. Alarm Out

You can set an alarm output preset to be executed when an event occurs.

To set an alarm output preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

> › Name: Enter a name of the alarm output action preset.

> › Output Type: Set whether to issue an alarm and the duration of an alarm when an alarm condition is met.

> - On for Duration: Set to output an alarm for a certain duration. The default is set to <**5 seconds**>.

> - Off for Duration: Set it not to output an alarm for the duration. The default is set to <**5 seconds**>.

> - On: Set to output an alarm when an event occurs.

> - Off: Set not to output an alarm when an event occurs.
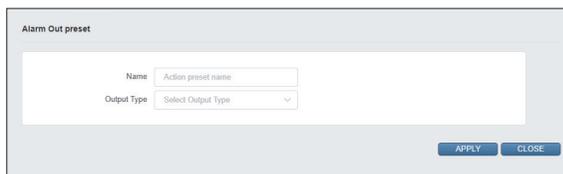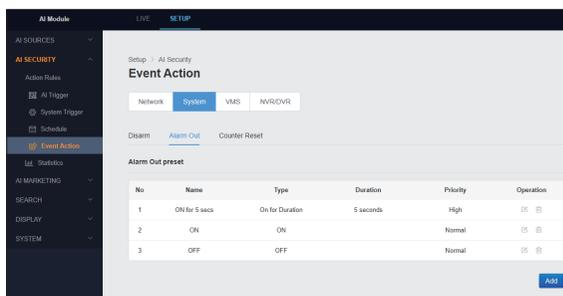
# Web Viewer

## 3. Counter Reset

You can make a preset to reset the system counter.

To preset a counter reset trigger, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Settings screen, click <**Apply**> to register.

> ❯ Name: Enter a name for the counter reset action preset.

> ❯ Target Counter: Set the trigger counter to be reset.

> ❯ Reset Count: Set the reset count value.
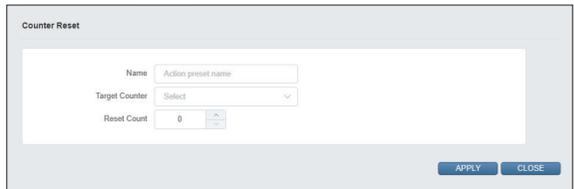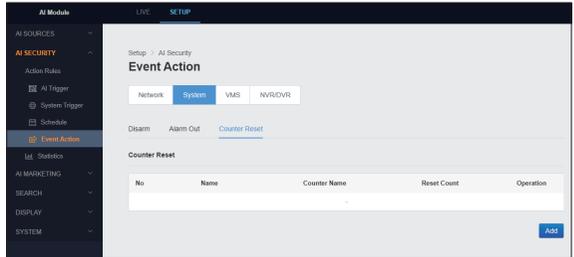
**VMS**

**1. Control**

You can set a VMS control preset to be executed when an event occurs.

To set a VMS control preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Settings screen, click <**Apply**> to register**.**

> Name: Enter a name of the VMS control action preset.

> Host: Enter the host IP address or domain name of the VMS.

> Port: Enter the host port number of the VMS.

> Username: Enter user ID for authentication by the VMS.

> Password: Enter password for authentication by the VMS.

> Event Channel: Click <**Update List**> to open the registered event channel. Set the event channel in the channel list.

> Title: Set the Title token to enter. You can select a sub-item from Common, Face Recognition, and License Plate Recognition.

✔ You can select multiple items of Title.

> Description: Set the items to define the control. You can select a sub-item from Common, Face Recognition, and License Plate Recognition.

✔ You can select multiple items from Description.

> Send example message: Click <**TEST**> to send an example message via VMS to test whether the settings are applied correctly.
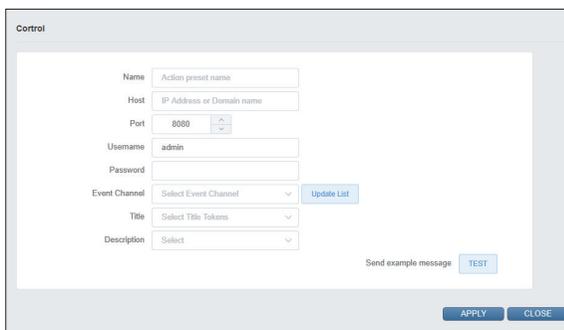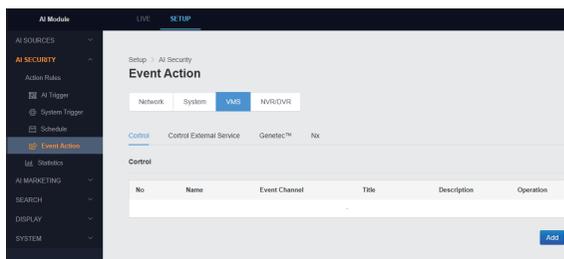
# Web Viewer

## 2. Control External Service

You can set an external service preset to be executed when an event occurs.

When detailed settings are completed in the settings screen, click <**Apply**> to register.

› External Service Title: Enter the name of the external service server.

› Host: Enter the host IP address or domain name of the external service server.

› Port: Enter the host port number of the external service server.

› Username: Enter user ID for authentication by the external service server.

› Password: Enter password for authentication by the external service server.

› Connection: Click <**CHECK**> to check whether the connection is made with the entered server.

› Service Type: Set the external service to be used. You can choose between AI Detector and License Plate Recognition.

› Channel Mapping: Click <**Mapping**> to map the control channel to the video source in the pop-up window.

› Send example message: Click <**TEST**> to send an example message via external service server to test whether the settings are applied correctly.
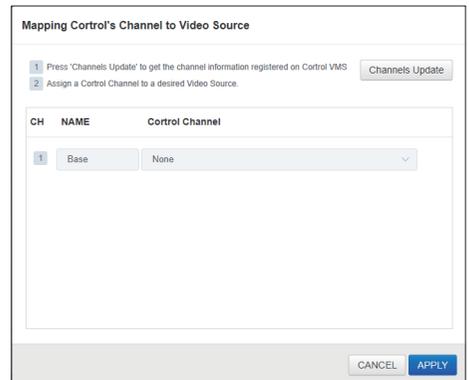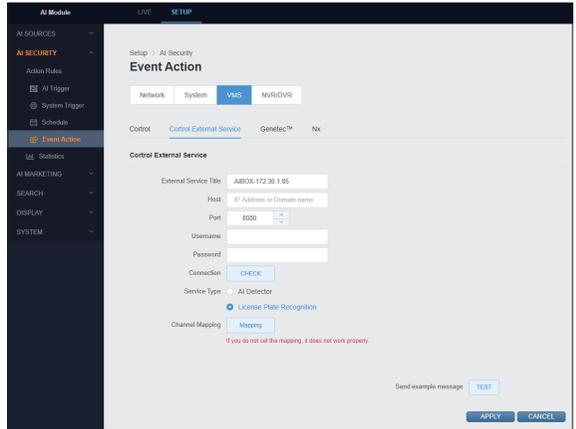
### 3. Genetec™

You can set a Genetec™ preset to be executed when an event occurs.

To set a Genetec™ preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Setting screen, click <**Apply**> to register.

> Name: Enter a name of the Genetec action preset.

> Host: Enter the host IP address or domain name of the Genetec server.

> Port: Enter the host port name of the Genetec server.

> Base URL: Enter the URL address of the Genetec server.

> Use SSL Connection: Set whether to use SSL connection when connecting to Genetec server.

> Event Value: Set the event value to apply to the Genetec server. When you check <**Range setup**>, you must set the First/Last Logical ID.

> Username: Enter user ID for authentication by the Genetec server.

> Password: Enter password for authentication by the Genetec server.

> Send example message: Click <**TEST**> to send an example message via Genetec server to test whether the settings are applied correctly.
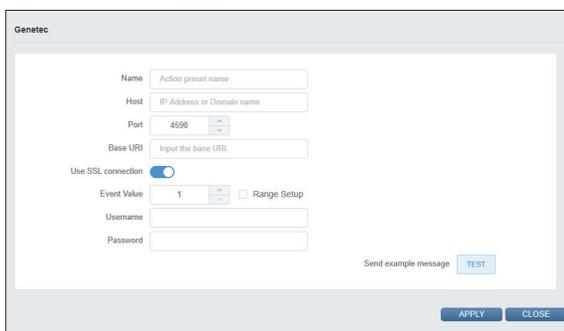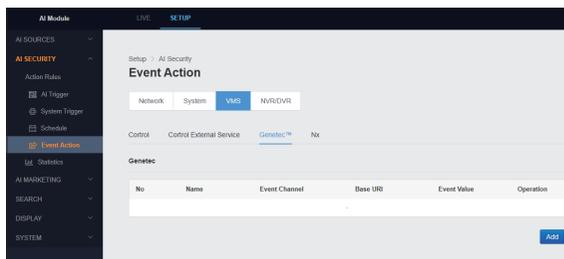
# Web Viewer

**4. Nx**

You can set a network optics witness preset to be executed when an event occurs.

To set a network optics witness preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Settings screen, click <**Apply**> to register**.**

> ❯ Name: Enter a name of the network optics witness action preset.

> ❯ Host: Enter the host IP address or domain name of the Network Optics Witness server.

> ❯ Port: Enter the host port number of the Network Optics Witness server.

> ❯ Source: Enter an event source.

> ❯ Caption: Set the Caption item.

> ❯ Description: Set the items to define the control. You can select a sub-item from general, face recognition, and license plate recognition.

> ✔ You can select multiple items from Description.

> ❯ Username: Enter user ID for authentication by the Network Optics Witness server.

> ❯ Password: Enter password for authentication by the Network Optics Witness server.

> ❯ Send example message: Click <**TEST**> to send an example message via Nx server to test whether the settings are applied correctly.
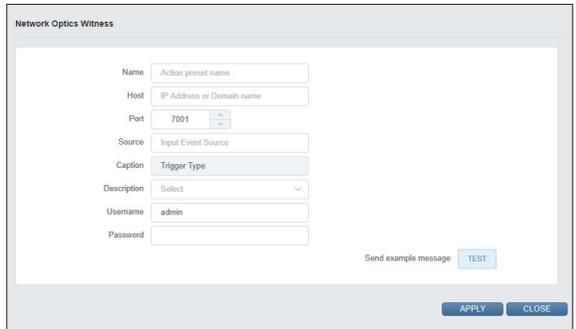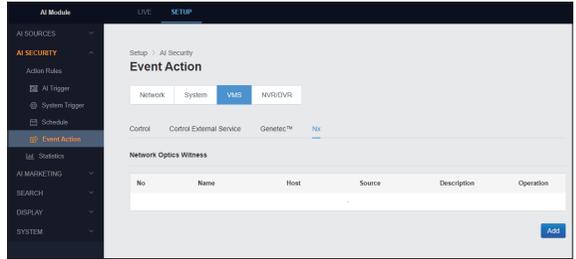
### NVR/DVR

**Sequrinet**

You can set a Sequrinet preset to be executed when an event occurs.

To set a Sequrinet preset, click <**Add**> on the screen.

When the detailed settings are completed in the Preset Settings screen, click <**Apply**> to register**.**

> Name: Enter a name of the Sequrinet action preset.

> Host: Enter the host IP address or domain name of the Sequrinet server.

> Port: Enter the host port number of the Sequrinet server.

> Protocol: Select the protocol to use from HTTP and HTTPS.

> Username: Enter user ID for authentication by the Sequrinet server.

> Password: Enter password for authentication by the Sequrinet server.

> Connection: Click <**CHECK**> to check whether the connection is made with the entered server.

> Event data: Set whether to use event data.

> Panic Recording: Set whether to use emergency recording.
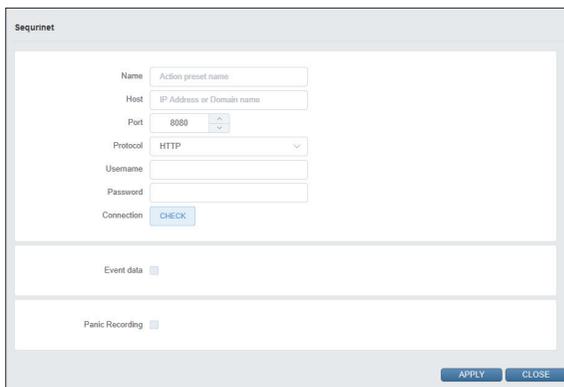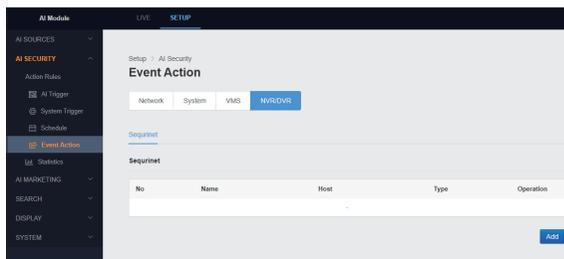
# Web Viewer

## Statistics

### 1. Counting

#### Trigger Counting

You can check the number of trigger occurrences by trigger channel, type, and time, and export it in a file.

> ❯ Channel: Set the channel to check the number of trigger occurrences.
>
> ❯ Trigger Type: Set the trigger to check the number of occurrences.
>
> ❯ Counting Type: Set the trigger count type. You can choose between Hourly and Daily.
>
> ❯ Time Range: Set the start time and end time to check the number of trigger occurrences. Click <**Counting**> to display the trigger count list.
>
> ❯ Export: Click <**CSV**> to export the trigger count list in a *.csv file.
>
> ❯ Trigger counting list: You can check the trigger history.
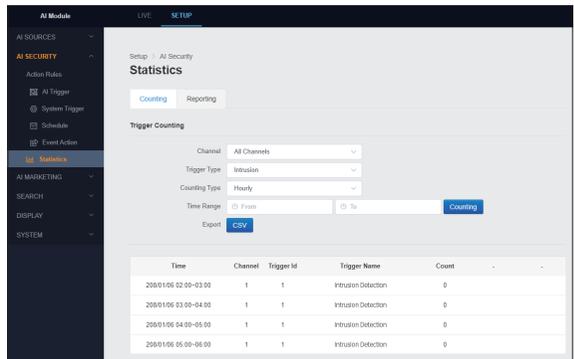
### 2. Reporting

You can summarize the trigger history in a report, and send it to an e-mail or FTP server.

Click <**Add**> on the screen to configure report sending.

After completing the settings, click <**Apply**> to apply the changes.

> ❯ Name: Enter the report name.
>
> ❯ Period: Set the report creation cycle. You can select from Hourly, Daily, Weekly and Monthly.
>
> ❯ Add Target Trigger: Set the trigger to create the report. Select the trigger and the applicable preset and click <**Add**>.
>
> ❯ Add Recipient: Set the recipients to receive the report. Select between E-mail Preset and FTP and click <**Add**>.
>
> ✔ The content entered in the report setting items are applied to the report setting summary items at the top of the screen.
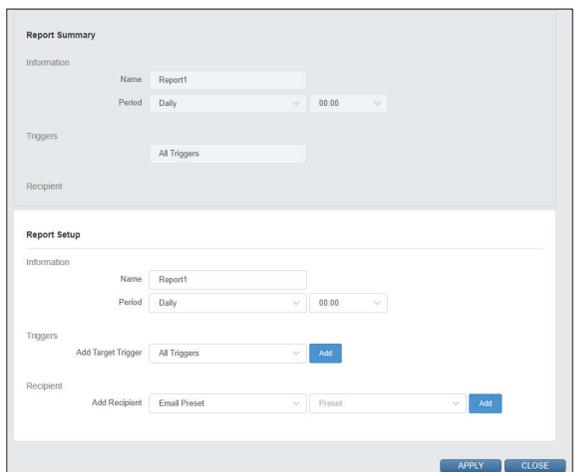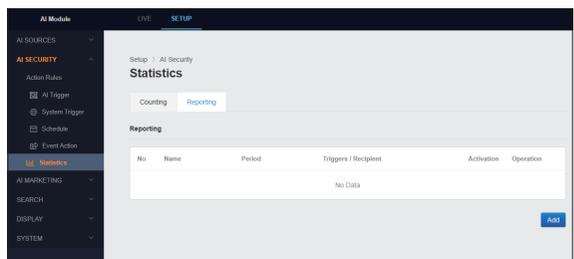
# AI MARKETING

## AI Counters

You can create an AI counter, reset the counter or check the statistics.



✔ If you click Count < 🔄 > in the AI counter list, the count is updated with the latest information.

✔ To reset the count, click < Reset > in the AI counter list, and enter the desired value.

✔ To view counter statistics by period, click < 📊 > in the AI counter list.
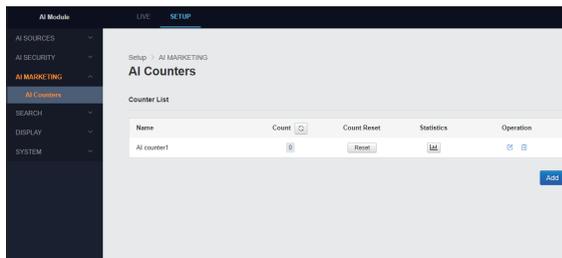
To set the AI counter, click <**Add**> on the screen.

After completing the settings, click <**Apply**> to apply the changes.



❯ Name: Enter the AI counter name.

❯ Counting Zones: To set the counting area, click <**Add Zone**> in the Area Settings window. After setting, click <**Apply**> to register.

  - Video source: Select a video source channel.
  - Target Object: Select the class of a detection target. You can select from Person, Car and Bike.

✔ Multiple items can be selected as detection targets.

  - Zone Name: Enter a counter area name.
  - Zone Type: Set the counter area type. You can choose between Line and Area.
  - Count Increase: Set a count increment trigger. You can select from None, Both, Forward, and Reverse for a Line type and from None, Both, Enter, and Exit for an Area type.
  - Count Decrease: Set a count decrement trigger. You can select from None, Both, Forward, and Reverse for a Line type and from None, Both, Enter, and Exit for an Area type.

✔ If you do not want to increase/decrease the count in the counting area, select "**None**".

❯ Count Reset: Click <**Add Schedule**> to set the cycle and time in the Count Reset window. After setting, click <**Apply**> to register.

❯ Increased Count Loss Rate: Set the count increment loss rate (%).

❯ Decreased Count Loss Rate: Set the count decrement loss rate (%).
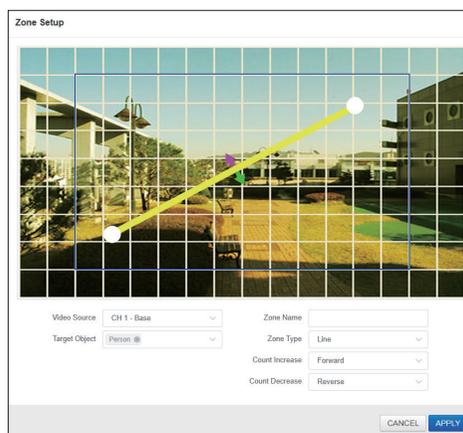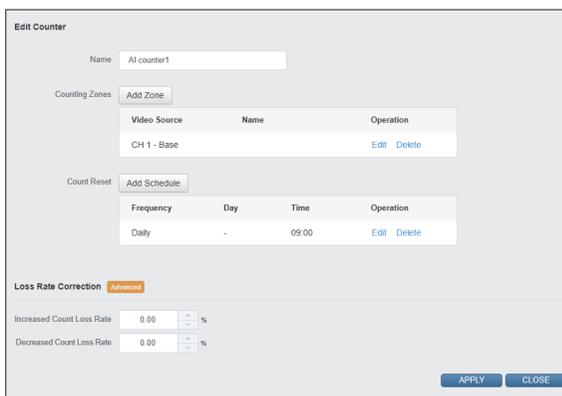
# Web Viewer

## ▍SEARCH

You can search the event log history detected by AI trigger and system trigger, and export it in a file.

### Event Log

You can check the event log history and export it in a file.



> Trigger Type: Set the trigger to check the event log.
> Channel: Set the channel to check the event log.
> Time Range: Set the start time and end time to check the event log. Click <**Search**> to display the event log search results.
> Export: If you click <**CSV**>, you can export the event log search results in a *.csv file.
> Event log list: You can check the event log history..

### System Log

You can check the system log history and export it in a file.



> Time Range: Set the start time and end time to check the system log. Click <**Search**> to display the system log search results.
> Export: If you click <**CSV**>, you can export the system log search results in a *.csv file.
> System log list: You can check the system log history.

## ▌ DISPLAY

You can set the OSD and the quality of images and snapshots to be displayed on the video screen.

### OSD

You can set the type of OSD to be displayed on the live video screen.

After completing the settings, click <**Apply**> to apply the changes.



> ❯ Object Bounding Box: Set whether to display the object bounding box on the video screen.
> ❯ Object Trajectory: Set whether to display the object trajectory on the video screen.
> ❯ Object Class Name: Set whether to display the object name on the video screen.
> ❯ Confidence Score/Tracking ID: Set whether to display the reliability/tracking ID on the video screen.
> ❯ Static Object: Set whether to display motionless objects on the video screen.
> ❯ Trigger Zone: Set whether to display the trigger area on the video screen.
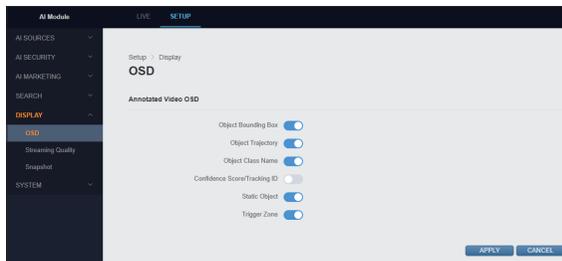
### Streaming Quality

You can set the live video streaming quality for each channel.

Select the quality of video streaming image from Highest, High, Standard, Low, and Lowest.

Click <**Apply**> to apply the changes.
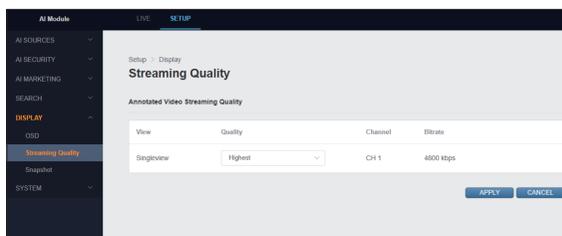


### Snapshot

You can set the quality of snapshots sent to the client.

After setting the snapshot size, click <**Apply**> to apply the changes.



> ✔ If the snapshot size is set to a value exceeding 640x360, there may be restrictions on the number of Pre/Post snapshots to send.

English | **77**
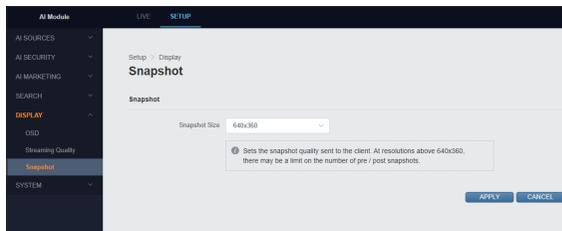
# Web Viewer

## ▍SYSTEM

You can use system management and technical support services such as factory defaults and system settings export, and can register product license keys.

### System Management

You can manage your system, including factory defaults, and access technical support services.

- **System management**
  - ❯ Factory Default: Click <**Load**> to reset all the details set in the AI module. Click <**START**> in the factory default window to perform a reset.
    - DO NOT RESET NETWORK SETTING: If you select item in the factory default window, the current network settings will remain without being reset.
    - DO NOT RESET STATISTICS / LOG: If you check the item in the factory default window, the current statistics and log history will remain without being reset.
  - ❯ System DB: You can export the system settings file, or import and apply the exported file.
    - Click <**Import**> to display the Import DB window. Click <**File**> to select the saved system configuration file (.ndb), and click <**START**>.
    - Click <**Export**> to save the current system settings in a file (.ndb).
  - ✔ The displayed language may change according to the user's PC environment.
  - ✔ If you check "DO NOT RESET NETWORK SETTING" in the DB Import window, network settings are maintained as they are when the system settings are applied.

- **Technical Support**
  - ❯ Debug Logs : Click <**Download**> to download the system debug log file.
  - ❯ Remote Assistance : You can use remote support if available.
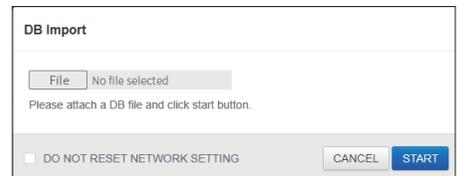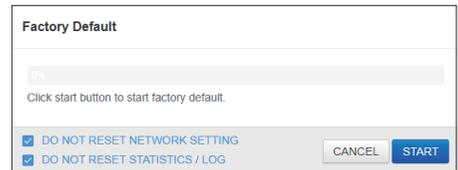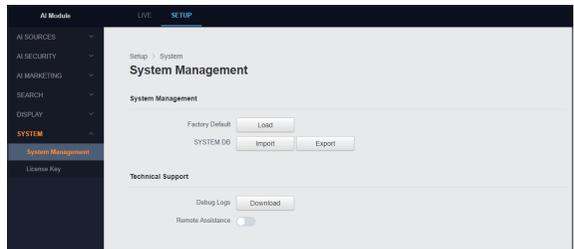
## License Key

You can register and modify the information of product license key.

After completing the settings, click <**Apply**> to apply the changes.

> ❯ Register license key: Click <**Edit**> to display the License Key Input window. Enter the license key and click <**Apply**> to register.
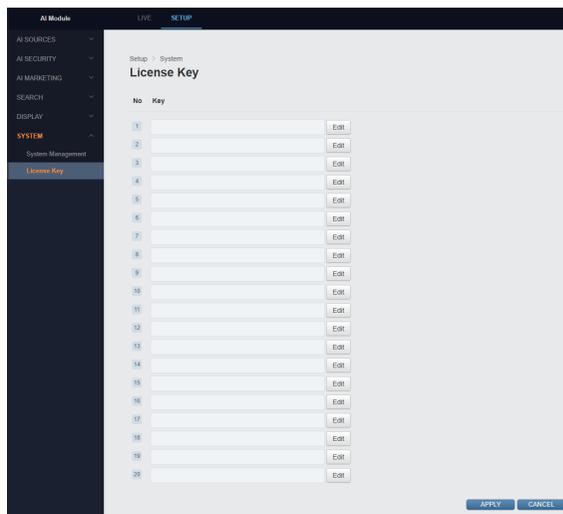
# Web Viewer

## ▌Session Configuration

The Session Configuration influences only the browser in use. It has no effect on any other user.

**⚠** This is not the data saved in your camera. The configuration may have a different action depending on the internet browser.

- Player Selection

  To select the player you want to use, go to <**Active X**> or <**No PlugIn(JPEG only)**>.

- Viewer Setup
  - › LiveView Protocol : You can select one among RTP Unicast (UDP) / RTP Multicast (UDP) / RTP over RTSP (TCP).
  - › Buffering Time : Displayed in (0~90) x 1/30 sec. (0~3 sec.)

    **⚠** If buffering time is slow, the video transmission is delayed.

- Toolbar Configuration
  - › Snapshot : For capturing a snapshot, specify whether to save it in PC or not.
  - › Panic Recording : Specify whether to save the emergency video in the PC or not.

- Download Location
  - › Default Video Download Location : Change default video download path.
  - › Default Snapshot Download Location : Change default snapshot download path.

- Display Option
  - › Aspect Ratio

    Select <**Adjust the aspect ratio to window size**> or <**Keep the aspect ratio of the original video**> for aspect ratio.

- Language
  - › System Language : Language to be displayed by the product.
  - › Session Language : You can change the session language. The changed language will only apply to the currently connected session.

# Appendix

## Troubleshooting (FAQ)

| Problem and Symptom | Solution |
|---|---|
| I can't turn on camera. | • Check the UTP cable connection.<br>• If you use PoE power supply, check if enough power is supplied to PoE switch. |
| PC is not connected with network camera. | • Check the status of LAN cable connected to network camera and the status of hub.<br>• If the network camera's network setting was set to DHCP, check the IP address history of the DHCP server (router).<br>• Check if camera network settings are changed or not by using ADMIN TOOL. |
| I cannot access via web or mobile application. | • Check if the network cable for internet access is correctly connected with the LAN port in main body.<br>• If you use sharer, check if port forwarding is correctly configured. |
| I cannot watch any video even though I can access to web or mobile application. | • If you use sharer, check if port forwarding is correctly configured.<br>• It may happen since communication company or network administrator has blocked the service port of network camera.<br>• Change the RTSP port and HTTP port of your network camera and configure the port forwarding of sharer again.<br>• Retry to access to web or mobile application by using new port. |

# Appendix

⌀100.5

⌀151.4

109.3

58.5
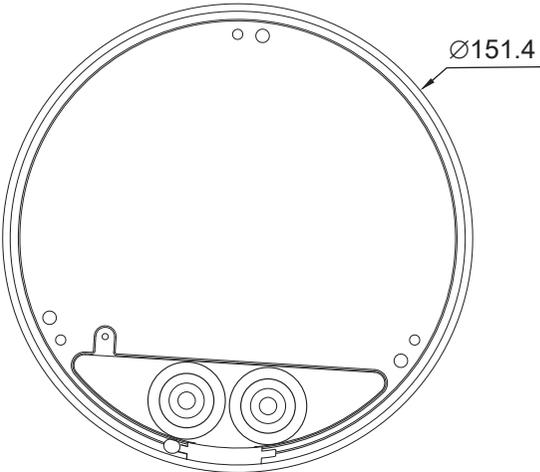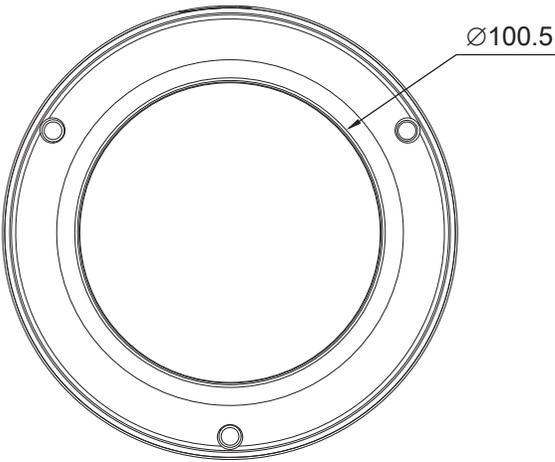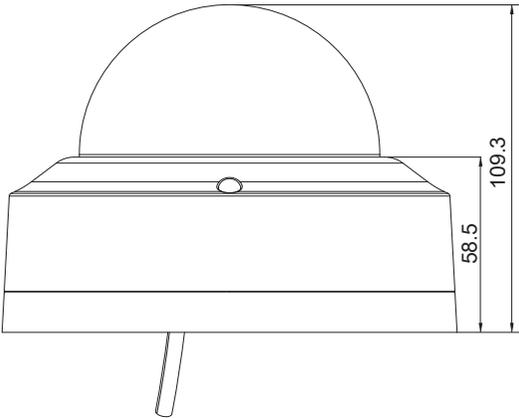
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