



EN

User Manual

**1/2.8" Network Board Camera, Day/
Night, WDR, H.265, PoE, 12VDC**

ISM-62F0028W0A

ISM-65F0028W0A

ISM-68F0028W0A

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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

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 -10°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 put any 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

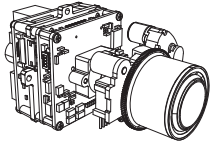
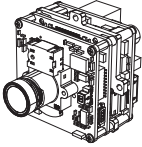
- The apparatus must be installed by a qualified engineer in accordance with relevant regulations.
- Appropriate protective devices must be fitted to prevent the network camera being damaged by a sudden voltage fluctuation when lightning flashes.
- Comply with every instruction for the safety of the 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

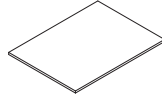
Product Features

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. It provides a sharp and clear image for monitoring in day and night.

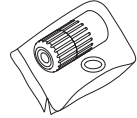
What's Included



Fixed/MFZ Camera



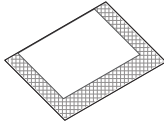
Quick Guide



RJ45 waterproof accessory



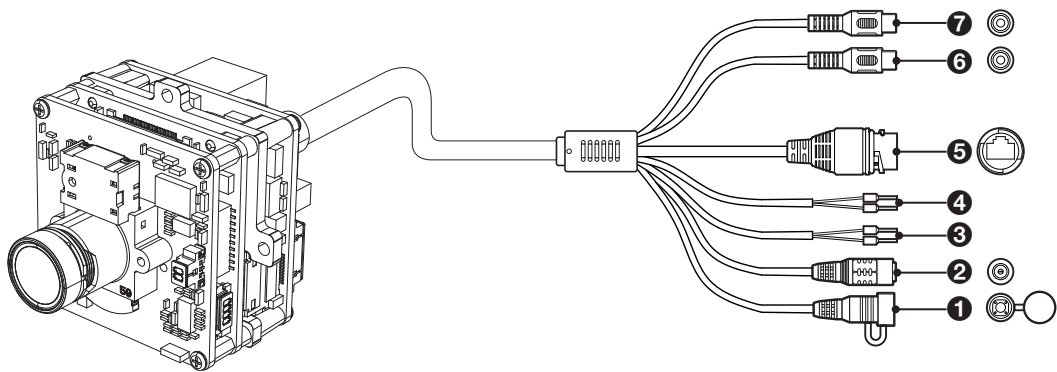
Cable Joint Block (Option)



Silica Gel

Overview

At a Glance



Item	Name	Description
1	Control Button	Used to change format, restart the camera, and reset to factory default depending on it's operating method. - To change analog format : Press and hold for less than 5 seconds. - To restart the camera : Press and hold for more than 5 seconds. - To reset to factory default : Press and hold for more than 10 seconds.
2	Power Jack_RED (DC12V IN)	Used to connect to a DC power cable.
3	Alarm In	Connect alarm in signal.
4	Alarm Out	Connect alarm out signal.
5	Network	Used to connect the PoE cable between power supply and network.
6	Audio In Jack_Black	Used to connect the audio cable.
7	Audio Out Jack_White	Connect to speaker.

Connecting to External Device

Checking the image on the installation monitor

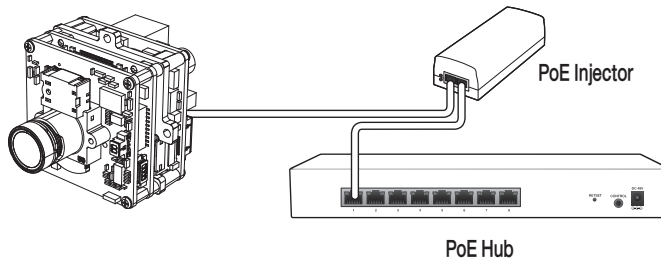
Connect the video output cable of the network camera with the installation monitor. You can watch the video input from the installed camera in the monitor.

! The installation monitor is used to check the video output during installation of the camera. After installation, do not use the monitor.

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.

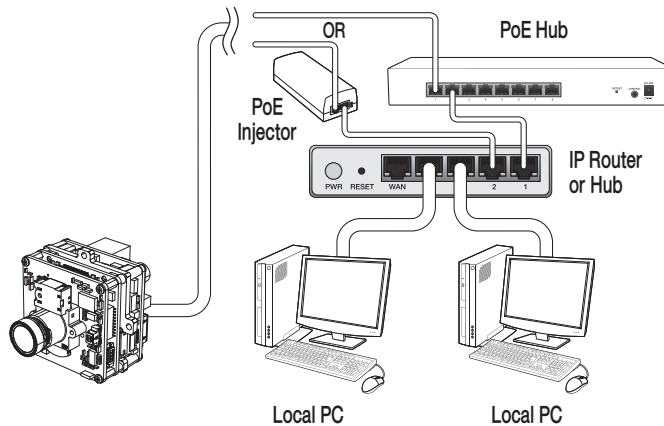


● ● Installation

■ Connecting to the network

To connect with a PC in local network

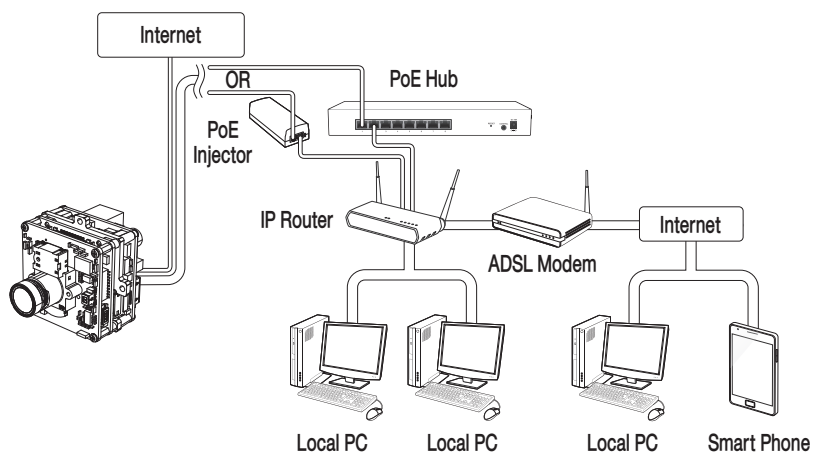
If you connect the network camera with a PC in the same network, you can perform monitoring and setting process by using the PC's Web Viewer.



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 12)

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 28)

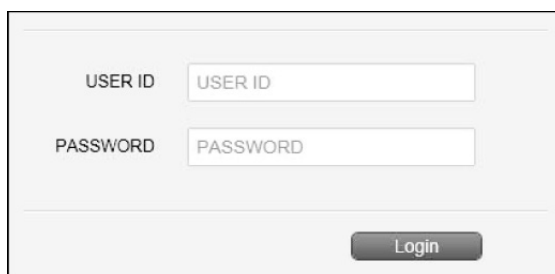
• Web Viewer

Quick Network Setup

1. After the camera is connected to the network, start '*eneo Site Manager*' tool (downloadable from www.eneo-security.com).
2. You will get a list of cameras connected to the local network. Highlight your camera in the list and open a context menu with a click of the right mouse button.
3. Select the „Set IP Address [dhcp / static]“ option to open a window for setting the camera's IP properties. When you are done click the „OK“ button to update the camera settings.
4. By default the camera is set to DHCP. If there is no DHCP server present in the network the camera will fall back to a default IP address after a while. In this scenario please only add one camera at a time to the network to avoid conflicts due to identical IP addresses.
The network camera's default IP address is: **192.168.1.10**.
5. Right clicking the device name in the eneo Site Manager will bring up the context menu. Use the '*Open Device Web Site*' option to access the camera.
6. The web viewer login page will open up in your default web browser.
In case of Microsoft Internet Explorer install Active-X named VIDEOR E. Hartig GmbH according to the instruction at the bottom of the browser.
7. Use the default user name and password to log in.

Default user name: admin

Default password: admin



The image shows a login form with two input fields and a button. The first field is labeled 'USER ID' and contains the text 'USER ID'. The second field is labeled 'PASSWORD' and contains the text 'PASSWORD'. Below the fields is a button labeled 'Login'.


Live

Learning the Live screen




Item	Name	Description
1	MFZ setup	Move to the MFZ screen. Manually sets the zoom/focus of the lens.
2	Stream Change	If selecting Dual Stream, the streams are shifted in the order of the 1st (the first stream) ◀▶ 2nd (the second stream).
3	Full Screen	Displays the image in full screen.
4	Multi Window	Plays the video in two screens.
5	OSD	Display or hide the OSD menu on the screen.
6	Freeze	Stops transmitting the image manually.
7	Mute	Used to mute the sound.
8	Duplex Audio	Delivers the sound to the camera by using a microphone connected to a PC.
9	Snapshot	Saves current image as .jpg image file.

Web Viewer

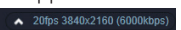
Item	Name	Description
10	Print	Prints current screen.
11	Panic Record	Start the panic recording.
12	Alarm	Turns on if an event occurs. It does not turn on if no reaction to the event is yet defined. Click this to check the information of the event that occurred.
13	Stream Status	Click to display the network information.
14	Date/Time	Display the current time and date.
15	Event Status/ Information	Click to see the event status, network information, streaming session, storage status, and system status.
16		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 <  >.

- ✓ You can shift between the streams only if the 2nd stream is set in "**Setup > Camera > Codec setup**". (page 20)

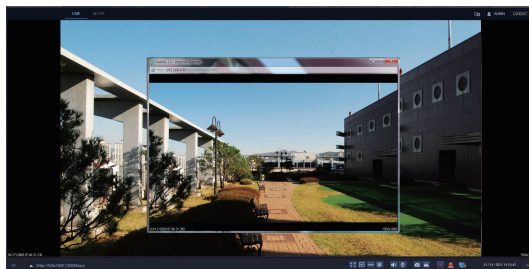
Full Screen

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.

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.



Web Viewer

Setup

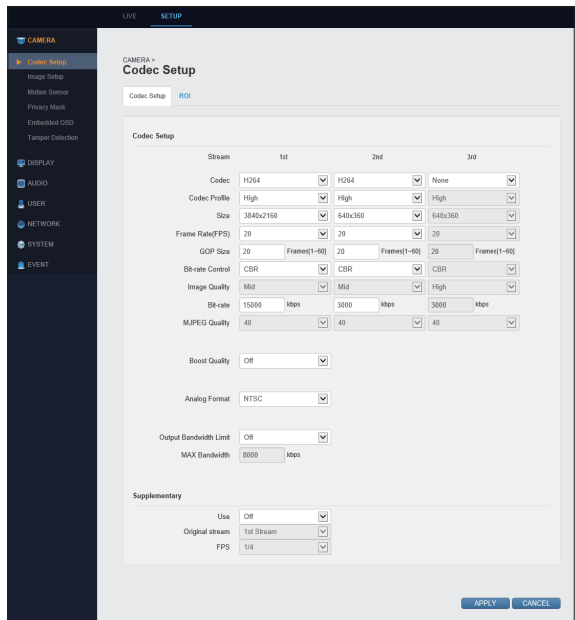
CAMERA

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.
- › Codec Profile : Used to configure the Codec profile.
- › 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.
- › 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.
- › MJPEG Quality : When **<MJPEG>** is selected for Codec, you can set the image quality.
 - ✓ As the MJPEG setting increases, the image quality and size increase. In a slow network environment, it is recommended not to set a high value.
- › 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.

- **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.
 - Off : The ROI operation mode is not used.
 - 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.

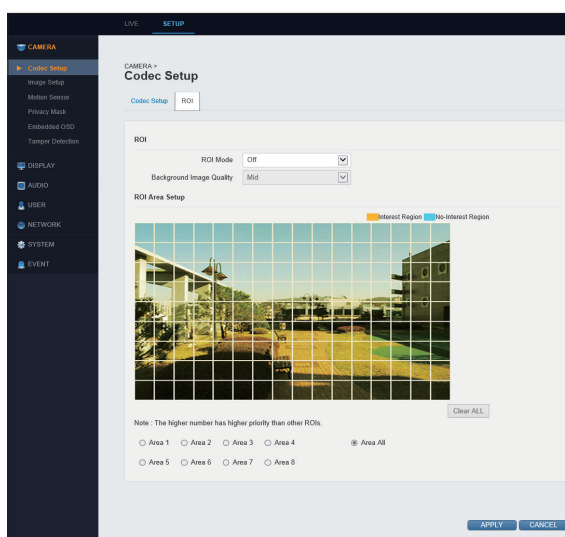
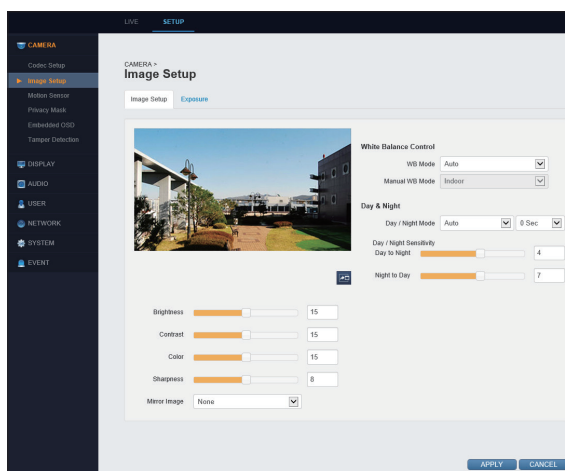


Image Setup

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.



Web Viewer

- 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.
- External : Automatically switches between day and night modes depending on the generated alarm.

- ✓ <Auto>, <0 sec> is recommended in usual 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 Brightness, Contrast, Color, and Sharpness 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 (▲▼).
- Flip(H+V) : Flips the captured image horizontally (◀▶) + vertically (▲▼).

2. EXPOSURE

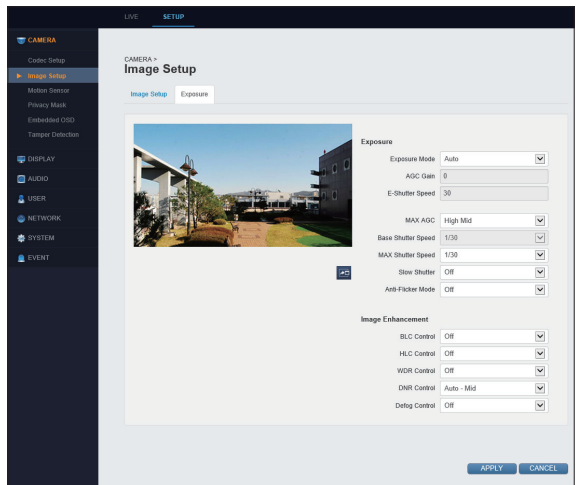
- Exposure

- › Exposure Mode : Select the exposure mode.

- 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.



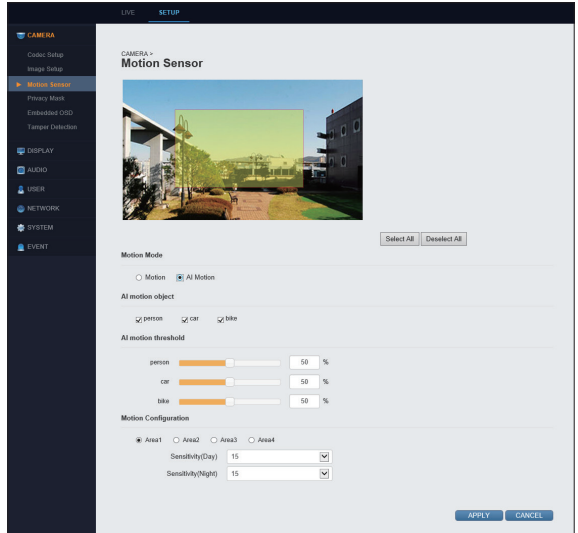
Web Viewer

Motion Sensor

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

- Motion: Sets the motion detection function.
- AI motion: Sets the AI motion detection function.
- AI motion object: You can set the object to be recognized by AI motion detection function. Select a desired object among persons, cars and bikes.
- AI motion threshold: You can set the reference value for each object to be recognized by AI motion detection function.
- 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.

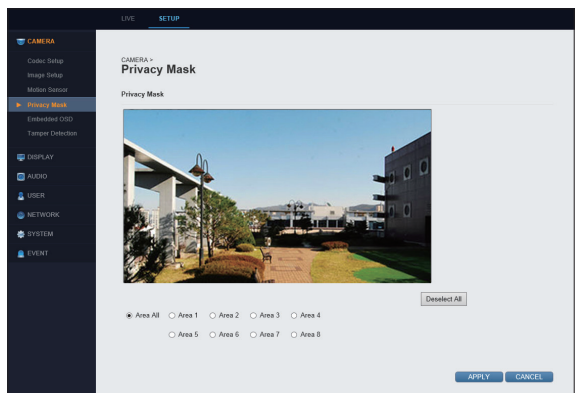
✓ If you specified multiple "Motion" areas, some of camera functions may be slow down.



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 8 different areas to be blocked to protect privacy.
- COLOR : Allows to specify blocking color for each area.
- Select All : You can set the entire area for monitoring protection.
- Deselect All : Deselects all the areas.



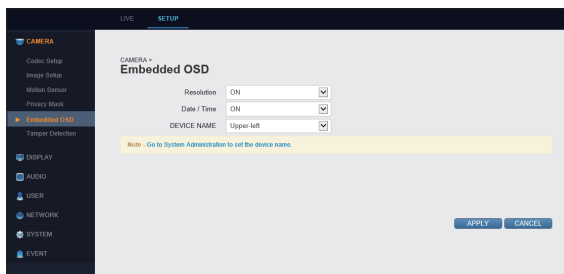
Embedded OSD

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 32)

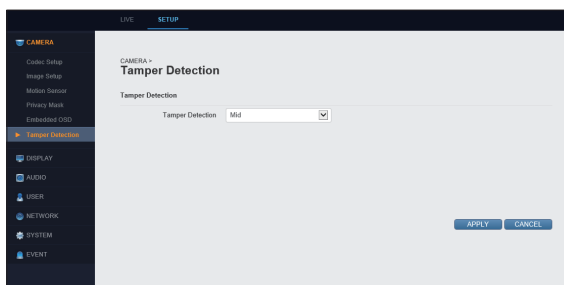


Tamper Detection

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.



Web Viewer

DISPLAY

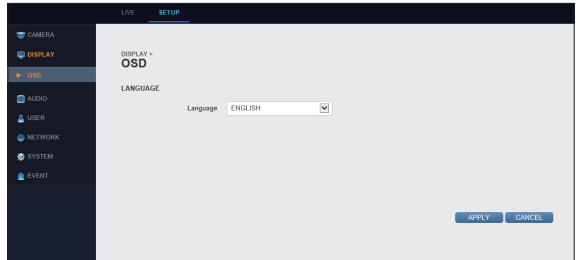
OSD

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.

When completed, click <APPLY> to apply.

- › LANGUAGE : Select the language to be displayed on the screen.

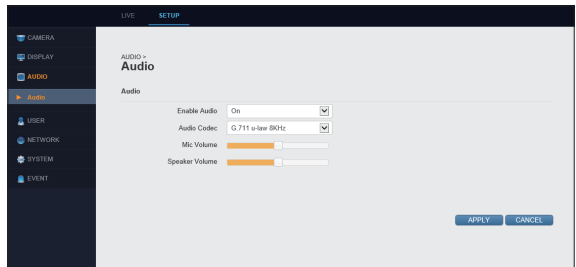


Audio

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.

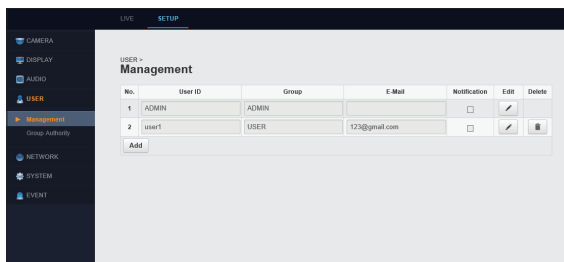


USER

Management

You can add or delete a user account and change password.

- 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>.

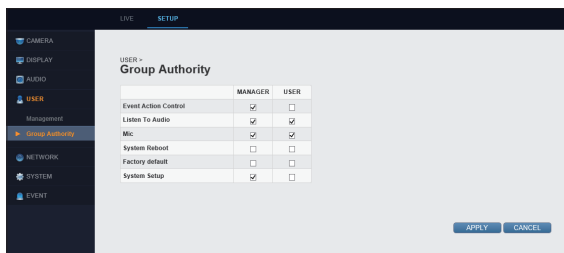


Group Authority

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.



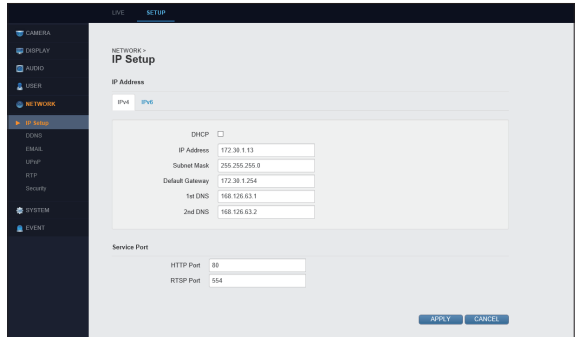
Web Viewer

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.



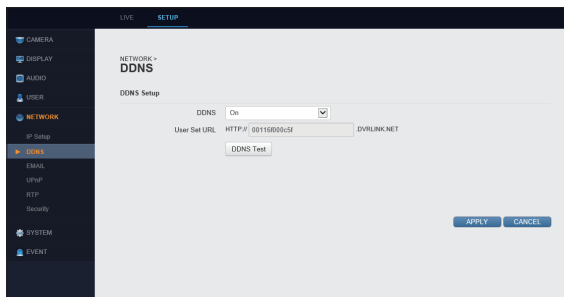
- Service Port
 - You can enter the port by clicking the input field of each port.
 - › HTTP Port : Allows to change the port number of web service.
 - › RTSP Port : Supports AV streaming server to set port number.
 - ✓ RTSP : A protocol to send/receive sound or movie in real time

! 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.

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.



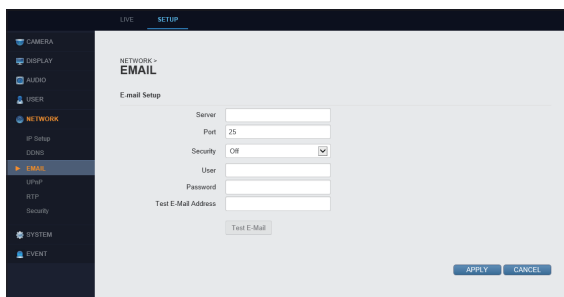
E-MAIL

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.

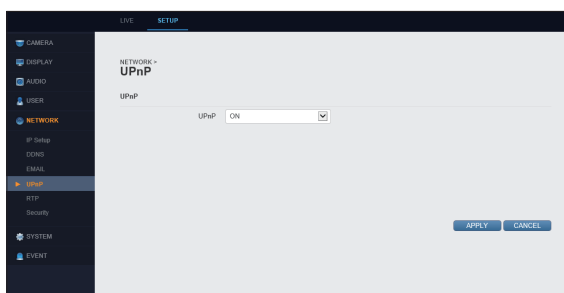
- ✓ E-mail (SMTP) setup process is different depending on user's e-mail address (portal company). For more information, search for "SMTP setup" in the internet or contact your network administrator.



UPnP

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

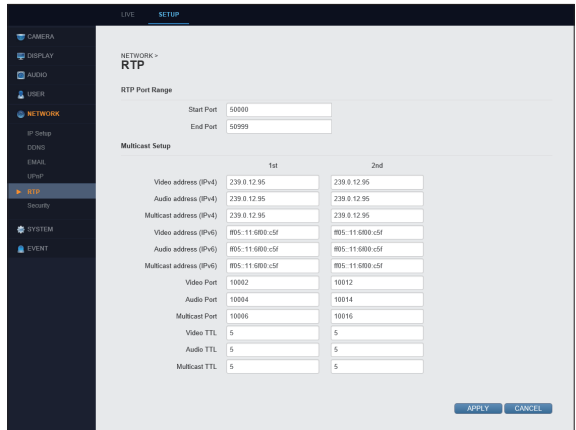
- UPnP : Select whether to use UPnP function or not.
- ✓ A router or internet sharer with UPnP function should be connected with the network where the camera has been installed.
- ✓ To use the UPnP function of camera, the internet sharer should support the UPnP function. Though the UPnP function is generally supported by internet sharer, some internet sharers may not support.



Web Viewer

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
 - Video address (IPv4) / Audio address (IPv4) / Multicast address (IPv4) : Set the multicast for first and second streams when IPv4 is used.
 - Video address (IPv6) / Audio address (IPv6) / Multicast address (IPv6) : Set the multicast for first and second streams when IPv6 is used.
 - Video Port : Set the video port for first and second streams.
 - Audio Port : Set the audio port for first and second streams.
 - Multicast Port : Set the multicast port for first and second streams.
 - Video TTL : Set the video TTL for first and second streams.
 - Audio TTL : Set the audio TTL for first and second streams.
 - Multicast TTL : Set the multicast TTL for first and second streams.
- ✓ **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).



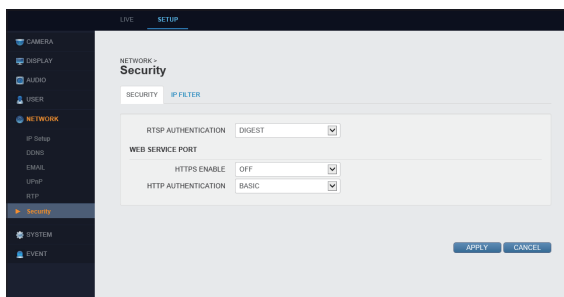
Security

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 RTSP authentication and HTTPS or not in order to enhance the security.

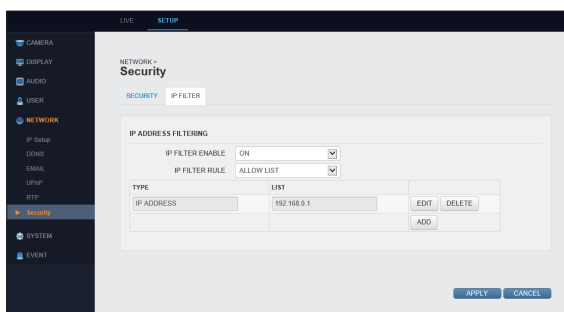
- › RTSP AUTHENTICATION : Sets whether to use RTSP. When enabled, you can choose between **<Off/Basic/Digest>**.
- WEB SERVICE PORT
 - › HTTPS ENABLE : Sets whether to use HTTPS.
 - › HTTP AUTHENTICATION : Sets the HTTP authentication method.



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.



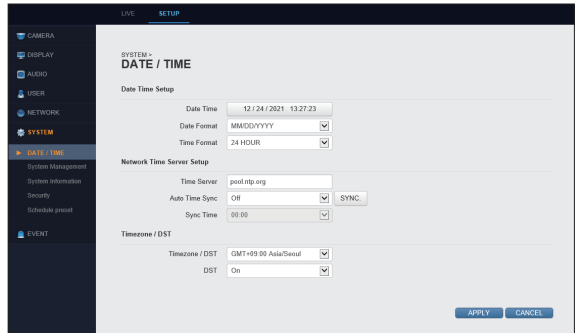
Web Viewer

SYSTEM

DATE / TIME

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

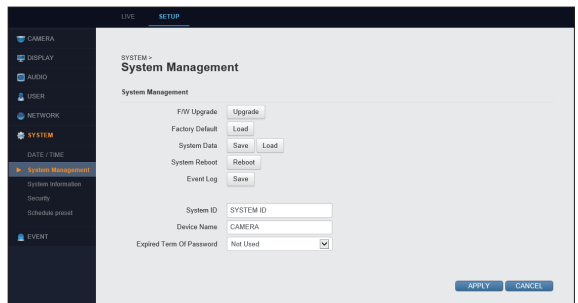
- Date Time Setup
 - › Date Time : Displays the date and time of current network camera.
 - › Date Format : Select your desired date format.
 - › Time Format : Select your desired time format.
- Network Time Server Setup
 - › Time Server : Enter server IP or host name.
 - › Auto Time Sync : Synchronizes 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.

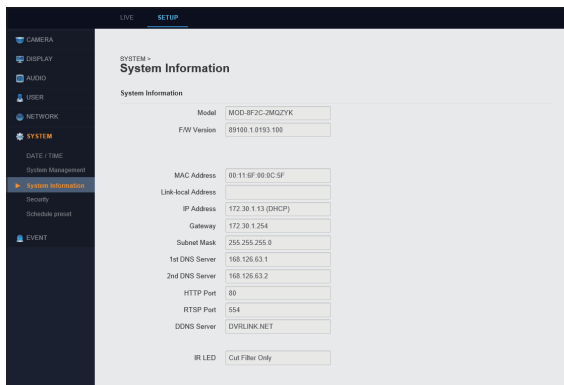
- › F/W Upgrade : Updates camera firmware.
 - ❗ If network transfer rate is slow, error may occur during firmware update process.
 - ❗ It is recommended to update your firmware during your camera and PC are connected with local network.
 - ❗ Do not shut down devices during firmware update process.
Camera 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)
- › Event Log : Used to save the event log of the camera in .txt format on your computer.
- › 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.



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**'.
- MAC Address : Displays camera '**MAC Address**'.
- Others : Displays network setup information for the camera.

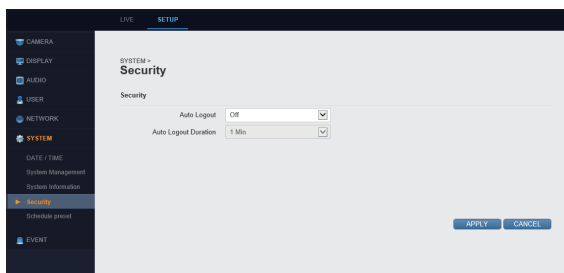


Security

When using the Web Viewer, you can set for automatic logout.

When completed, click <APPLY> to apply.

- 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.

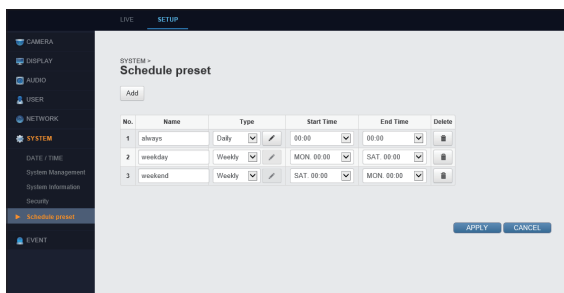


Schedule preset

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.

When completed, click <APPLY> to apply.

- 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.



Web Viewer

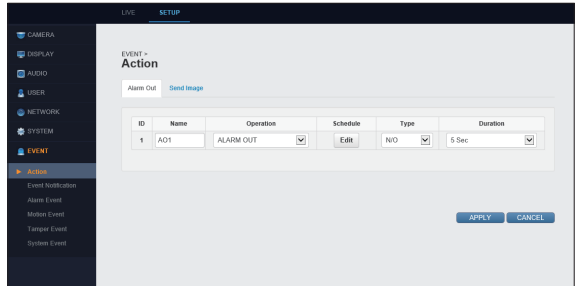
EVENT

Action

1. Alarm Out

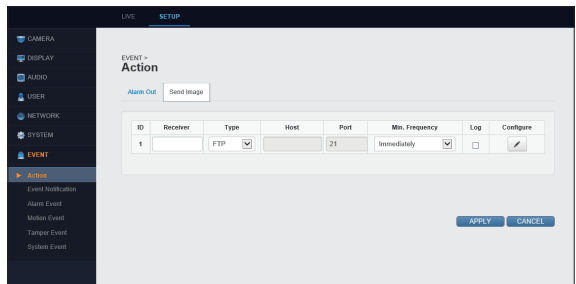
You can set the Alarm Out conditions and its schedule.

- › Name : Rename the alarm.
- › 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 33).
- › 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 : Set to send the image to the FTP server.
- › Host : Set the host for the FTP server.
- › Port : Set the FTP port.
- › 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 : To send the image, configure the environment such as <Receiver Type>, <Receiver>, and <Schedule>.



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.

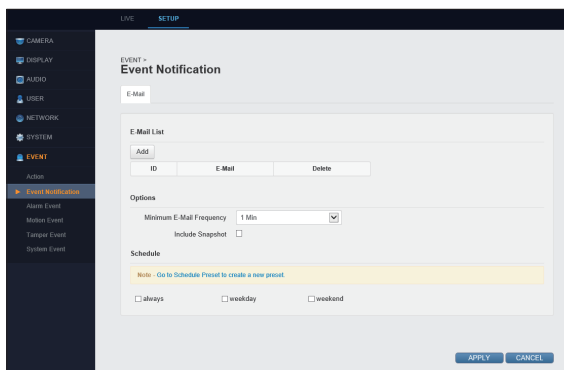
- Options

- › 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 33).



Alarm Event

- Event Parameter

- › 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 34).

- Action

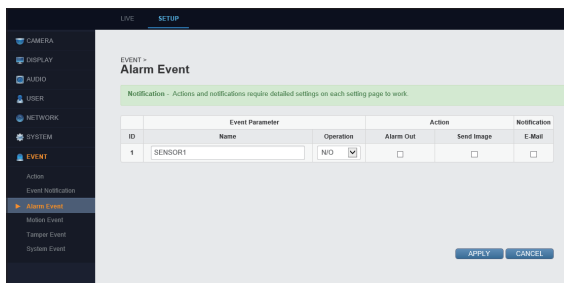
- › Alarm Out : Specify whether to activate Alarm Out or not when an event occurs.
- › Send Image : Specify whether to send corresponding image or not when an event occurs.

✔ For more information, refer to **"Event > Action"** (page 34).

- Notification

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

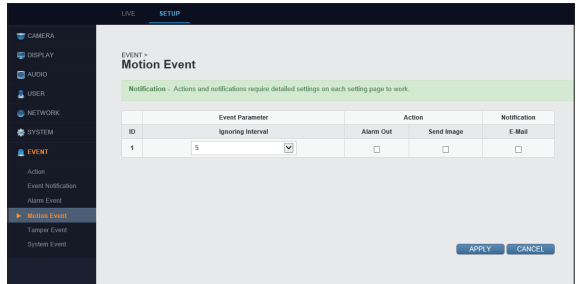
✔ For detail settings, refer to **"Event > Event Notification"**.



Web Viewer

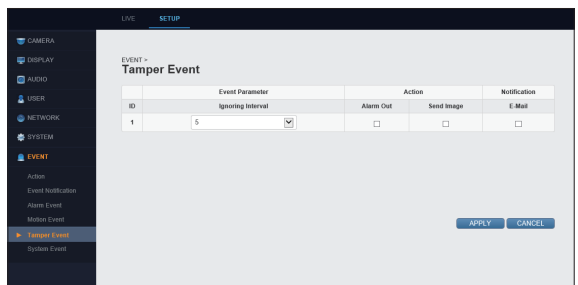
Motion Event

- Event Parameter
 - › Ignoring Interval : Select the ignoring duration for detected motion event in the range of 5 through 30 seconds.
 - Action
 - Notification
- Setting details are the same as "Event > Alarm Event". (page 35)



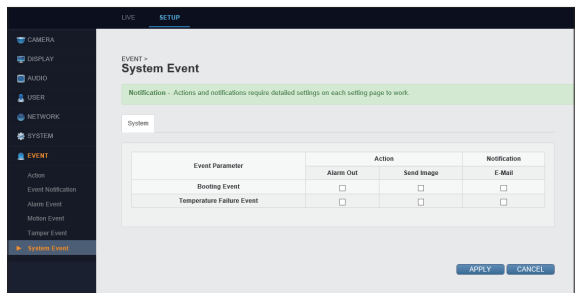
Tamper Event

- Event Parameter
 - › Ignoring Interval : Select the ignoring duration for detected motion event in the range of 5 through 30 seconds.
 - Action
 - Notification
- Setting details are the same as "Event > Alarm Event". (page 35)



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
 - Notification
- Setting details are the same as "Event > Alarm Event". (page 35)



Session Configuration

The Session Configuration influences only the browser in use. It has no effect on any other user. When completed, click **<APPLY>** to apply.

! 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.

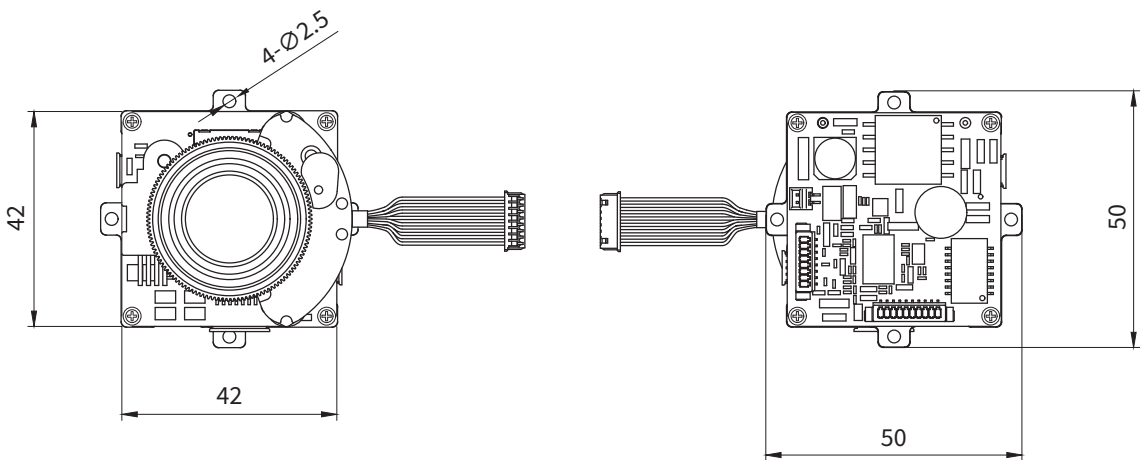
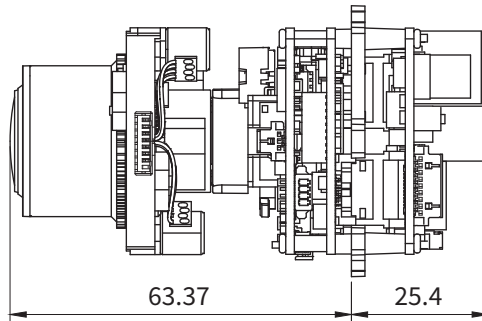
Appendix

Troubleshooting (FAQ)

Problem and Symptom	Solution
I can't turn on camera.	<ul style="list-style-type: none">• Check the UTP cable connection.• If you use PoE power supply, check if enough power is supplied to PoE switch.
PC is not connected with network camera.	<ul style="list-style-type: none">• Check the status of LAN cable connected to network camera and the status of hub.• If the network camera's network setting was set to DHCP, check the IP address history of the DHCP server (router).• Check if camera network settings are changed or not by using ADMIN TOOL.
I cannot access via web or mobile application.	<ul style="list-style-type: none">• Check if the network cable for internet access is correctly connected with the LAN port in main body.• 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.	<ul style="list-style-type: none">• If you use sharer, check if port forwarding is correctly configured.• It may happen since communication company or network administrator has blocked the service port of network camera.• Change the RTSP port and HTTP port of your network camera and configure the port forwarding of sharer again.• Retry to access to web or mobile application by using new port.

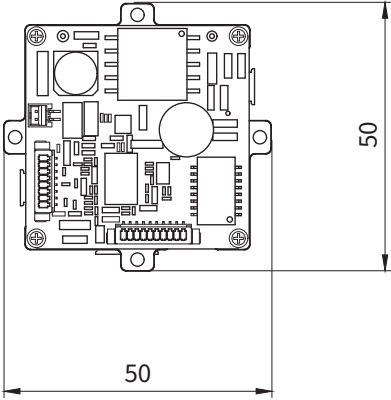
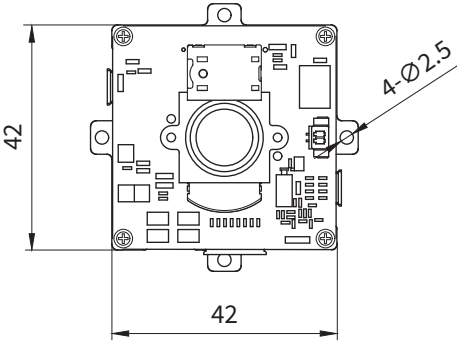
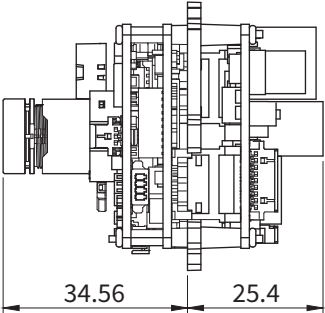
Product Overview

MFZ type camera



● ● Appendix

Fixed type camera



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