FlexWATCH® Web Admin User Manual

September, 2025

Seyeon Tech Co., Ltd.

www.flexwatch.com

Copyright Information

GNU General Public License Information

- 이 This product includes certain open source or other software originated from third parties that is subject to the GNU General Public License (GPL), GNU Library/Lesser General Public License (LGPL), and different and/or additional copyright licenses, disclaimers, and notices.

- The exact terms of GPL, LGPL, and some other licenses are provided to you with this product. Please refer to the exact terms of the GPL and LGPL at https://www.fsf.org (Free Software Foundation) or https://www.opensource.org (Open Source Initiative) regarding your rights under said license. In accordance with the terms of the GPL and LGPL, you may obtain a copy of the relevant source code by sending your request to sales@seyeon.co.kr. Subject to GPL, you may re-use, re-distribute and modify the GPL source code.

- Note that with respect solely to the GPL Software, no warranty is provided. We do not offer direct support for the distribution. This offer is valid for up to three years from the date of original purchase of the Product.

※ The images and contents of this manual may be subject to change without prior notice to improve product performance, and in such cases, there may be differences between the contents and images of this manual.

Contents

1. Introduction 7
2. Web Admin Page 8
2.1 Entering to Web Admin Page 8
2.2 Structure of Web Admin Menu 9
3. Network 11
3.1 IP Address 11
3.1.1 Static 11
3.1.2 DHCP 12
3.2 HTTP / HTTPS 12
3.3 RTP / RTSP 13
3.3.1 RTSP URL 14
3.4 Network Status 15
3.5 DDNS 15
3.6 UPnP 19
3.6.1 Port Forwarding 19
3.6.2 Display Shortcut Icon in My Network Place 20
3.7 SNMP 21
3.8 IP Filtering 21
3.9 Management White List 23
3.10 FTP/Telnet Control 25
3.11 ZeroConf 25
4. System 26
4.1 Name 26
4.2 Hostname 27
4.3 Date & Time 27
4.4 Admin. Password 28
4.5 Access Level 29
4.6 User 30
4.6.1 Add 30
4.6.2 Edit 32
4.6.3 Delete 32
4.7 Add On Service (Rev-u / Rev-v doesn't support) 33

5. Video & Audio 34
5.1 Stream Setup 34
5.1.1 Stream Setup 35
5.1.2 Primary / Secondary / Tertiary/ (Quaternary) 36
5.2 Camera Setup 36
5.2.1 Camera models supported as per below (common for ra / rp firmware) 37
5.2.2 Camera models supported as per below (common for ru / rv firmware) 40
5.2.3 Camera models supported as per below (HSM / GSM etc.) 44
5.3 Text OSD 49
5.4 PTZ Text OSD (FW7707 / FW7709 / FW8707 / FW8709 / FW9707 / FW9709) 50
5.5 Motion Detection 51
5.5.1 Motion Detection 51
5.6 Audio Detection 52
5.7 ROI (Region of Interest) 52
5.8 AI Control (Only for ru / rv firmware) 54
5.9 Privacy Zone (PTZ camera is NOT supported) 54
6. Device 56
6.1 PTZ Mode 56
6.2 Relative Zoom/Focus 58
6.3 Serial Port 58
6.4 Serial Input Port 59
6.5 Serial Output Mode 59
6.6 Transparent Mode 60
6.7 DI (Sensor Input) / DO (Alarm Output) 60
6.8 DI Status / DO Control 61
6.9 Modbus Gateway 61
6.10 Modbus Input 63
6.11 Modbus Trigger & Action 64
6.12 EdgeHandler Adpater (EHA200 / EHA300) 65
6.12.1 HDMI Resolution (EHA200 / EHA300) 65
6.12.2 USB Refresh (EHA200) 66
6.12.3 File Upload / Download (EHA300) 66
6.12.4 Remote USB Format (EHA300) 67
6.12.5 Remote USB Information (EHA300) 68

6.12.6 USB Config (EHA200 / EHA300) 69
7. Recording 70
7.1 SD Status & Format 70
7.2 SD Information 72
7.3 SD Circulation 73
7.4 SD Status Report 74
7.5 Recording Setup 75
7.5.1 Recording Configuration 76
7.5.2 Recording Condition 76
7.5.3 Recording Control 81
7.6 Recording Profile 81
7.7 Clear Setup 82
7.8 Delete Recorded Data 82
8. Advanced 84
8.1 Advanced Services 84
8.2 E-mail 85
8.2.1 E-mail Configuration 85
8.2.2 E-mail Stream Configuration 86
8.2.3 E-mail Condition 87
8.3 FTP (Buffered) 90
8.3.1 FTP(Buffered) Configuration 91
8.3.2 FTP(Buffered) Channel Configuration 92
8.3.3 FTP(Buffered) Condition 92
8.4 FTP (Periodic) 95
8.4.1 FTP(Periodic) Configuration 96
8.4.2 FTP(Periodic) Channel Configuration 97
8.4.3 FTP(Periodic) Condition 97
8.5 Sensor Notification 100
8.5.1 Sensor Notification Configuration 100
8.5.2 Sensor Notification Stream Configuration 101
8.5.3 Sensor Notification Condition 102
8.6 Alarm Output 105
8.6.1 Alarm Output Configuration 106
8.6.2 Alarm Output Condition 106

9. Utilities 110
9.1 Log 110
9.2 Reboot 112
9.3 Restore Default 113
9.4 System Update 114

1. Introduction

This manual is applicable to Seyeon Tech's FlexWATCH® products.

It works in Edge Browser, and Chrome Browser, but this manual explains based on the UI of Edge Browser.

Note: All instructions and information in this manual are valid for FlexWATCH® devices mentioned above unless otherwise stated

2. Web Admin Page

When you access the product through a web browser, the following main page appears. Click the Admin at the upper right corner then enters to the product's admin page.

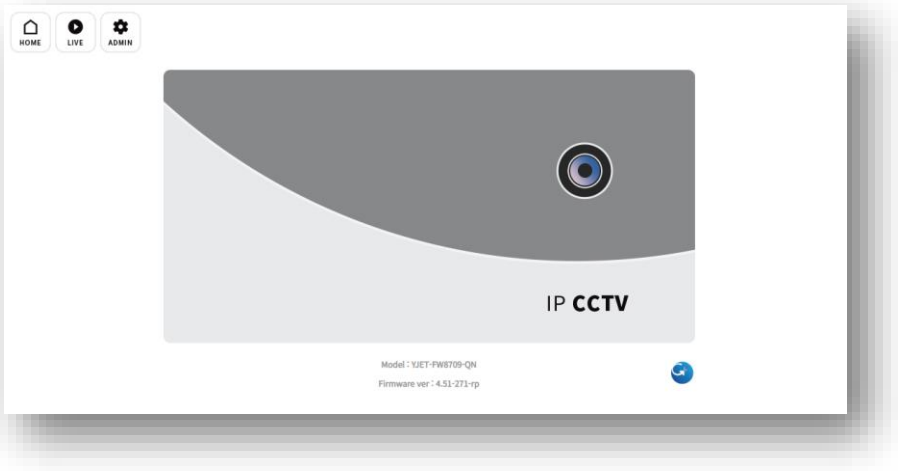
2.1 Entering to Web Admin Page

To login to the Web Admin Page, follows the below steps.

1) Enter the IP Address or Domain name of FlexWATCH® device at the address bar **on your Web browser**.

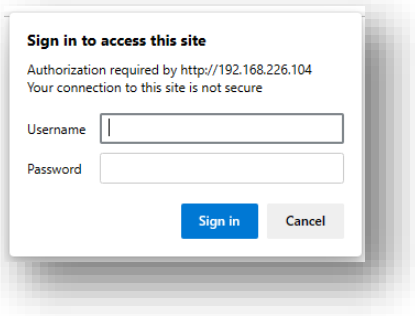
> *Note: The initial IP of the FlexWATCH® device is 10.20.30.40. You can set the IP by downloading and installing the IP Installer Plus software from the software page of the FlexWATCH® website (http://flexwatch.com/51).*

2) When connected to the FlexWATCH® device via the web browser successfully, the device home page will be displayed as shown below.



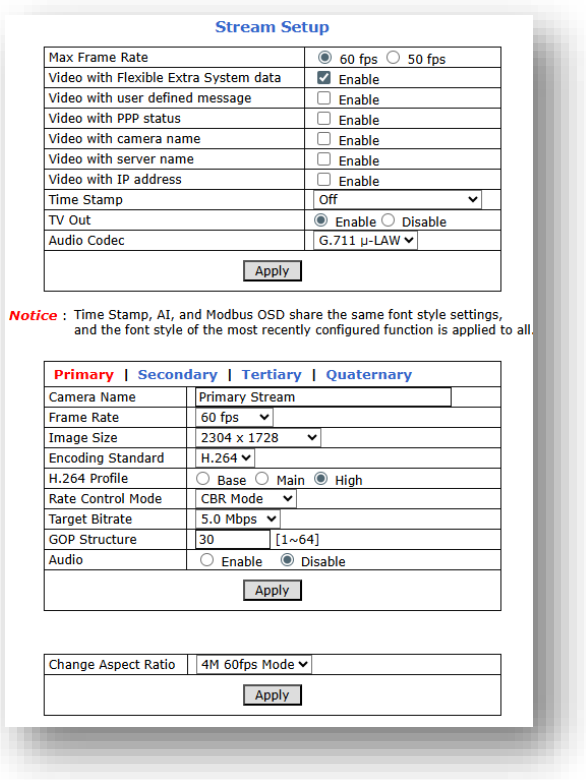
3) Click **Admin** at the upper right corner of the device home page.

4) Enter **User name** and **Password** when an authentication window is appeared and then click **OK.**



> *Note: The default User name and Password is "root" and "root".*

5) If login is successful, the Web Admin page appears as shown below.



The detailed Menu of Web Admin page may appear differently depending on the camera model.

2.2 Structure of Web Admin Menu

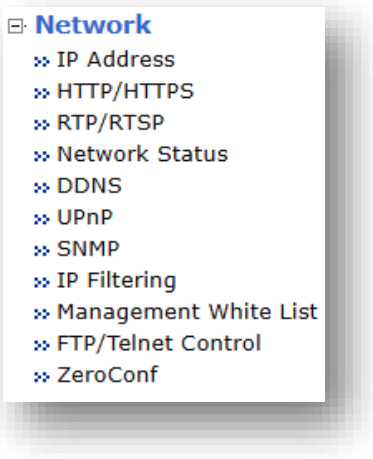
The structure of Web Admin Page is composed as follows.

Category	Main Menu	Level 1 Sub-Menu	Level 2 Sub-Menu
Network	IP Address		
	HTTP/HTTPS		
	RTP/RTSP		
	Network Status		
	DDNS		
	UPnP		
	SNMP		
	IP Filtering		
	Management White List		
	FTP / Telnet Control		
	ZeroConf		
System	Name		
	Hostname		

	Date & Time		
	Admin. Password		
	Access Level		
	User		
Video & Audio	Stream Setup		
	Camera Setup		
	Text OSD		
	PTZ Text OSD		
	Motion Detection		
	Audio Detection		
	ROI		
	AI Control		
	Privacy Zone		
Device	PTZ Mode		
	Relative Zoom/Focus		
	Serial Ports		
	Serial Input Mode		
	Serial Output Mode		
	Transparent Mode		
	DI/DO		
	DI Status / DO Control		
	Modbus Gateway		
	Modbus Input		
	Modbus Tiger & Action		
Recording	SD Status & Format		
	SD Information		
	SD Circulation		
	SD Status Report		
	Recording Setup		
	Recording Profile		
	Clear Setup		
	Delete Recorded Data		
Advanced	Advanced Service		
	E-mail		
	FTP(Buffered)		
	FTP(Periodic)		
	Sensor Notification		
	Alarm Output		
Utilities	Log		
	Reboot		
	Restore Default		
	Update		

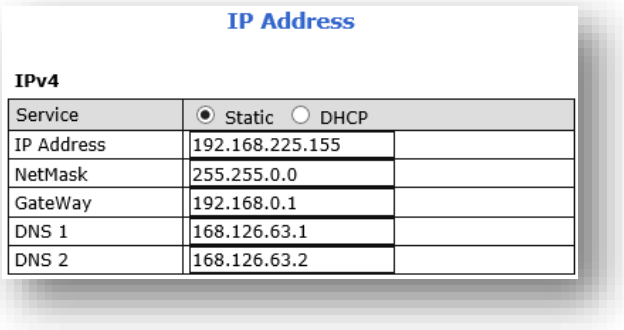
3. Network

This is the Menu for all network related settings.



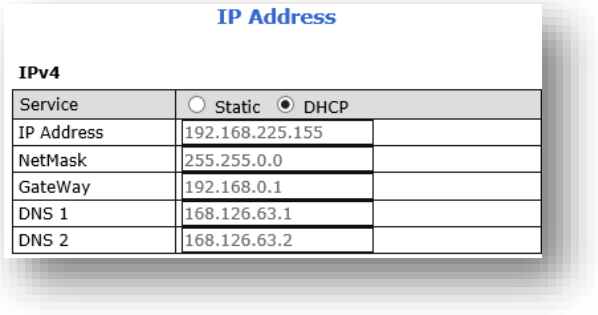
3.1 IP Address

3.1.1 Static



If you click Static IP, you can edit or set IP Address, NetMask, Gateway, DNS1, DNS2, etc. as shown in the figure above. After entering each value, click the Apply button to apply. After setting, connect again using the changed IP.

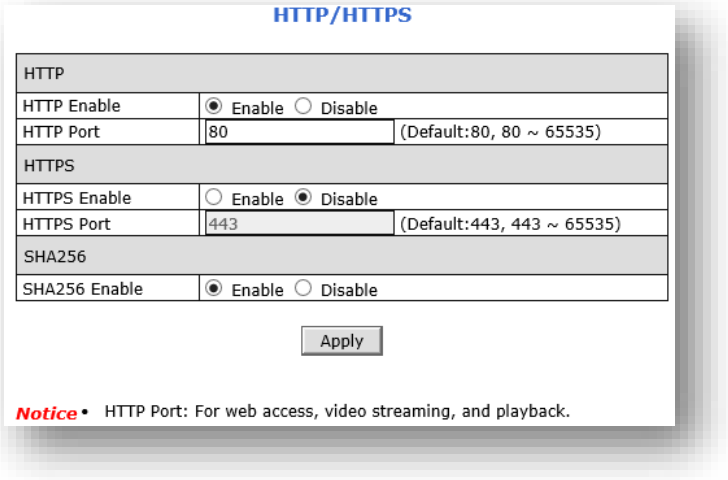
3.1.2 DHCP



To use the DHCP function, a DHCP server is required. Usually, the IP Router acts as a DHCP server. If set to DHCP, the input window for setting the IP will be disabled.
After selecting DHCP, click the Apply button at the bottom. The changed IP can be checked in IP Installer Plus.

3.2 HTTP / HTTPS

This is the menu to change the HTTP / HTTPS Port of the product. The HTTP port is a network port used by a PC to access the product's web page, and can be used by specifying a port in the range of 80 to 65535.



HTTP: This menu sets whether to use HTTP. The default port number is 80.

HTTPS: This menu sets whether to use HTTPS. The default port number is 443.

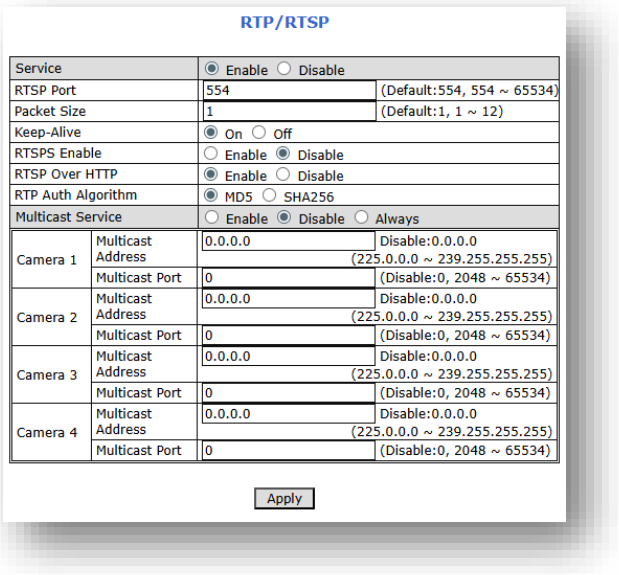
SHA256: This is a menu to set whether to use SHA256 encryption.

Note1: If the HTTP port, HTTPS port is set to a different value than default (80, 443), make sure the port number must be entered at the end of IP address . For example, when an IP address of FlexWATCH® camera is 192.168.1.100 and changed HTTP port 8080 / HTTPS Port 4430, you will have to enter http://192.168.1.100:8080 or https://192.168.1.100:4430 at the address bar on your Web browser to connect to camera.

Note2 : It is impossible to disable both HTTP Port and HTTPS Port. One of them must be Enabled..

3.3 RTP / RTSP

RTSP (Real-time Streaming Protocol) is a protocol used when transmitting video and audio streams over a network. FlexWATCH server supports all types of applications that support the RTSP standard. Apple QuickTime and VLC programs are also supported, but may not be available in a network environment where a firewall is used. There are two ways to utilize RTSP: unicast and multicast.



RTP/RTSP protocol Menu

1) **Service : Set whether to use RTP/RTSP.**
2) **RTSP Port : Set RTSP Port. Default is 554.**
3) **Packet Size : This is the menu to set the packet size to be transmitted by RTP/RTSP..**

a. Low values maintain compatibility with many Software. Divide small packets and send.

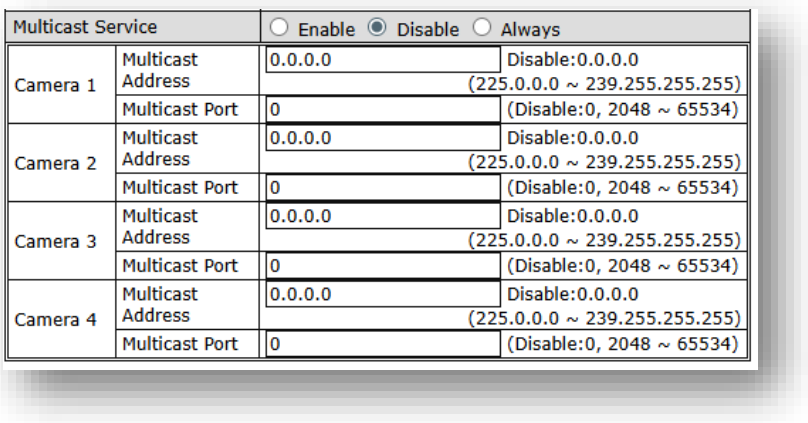
b. The higher the value, the fewer times the packet is divided and transmitted. However, if the program doesn't support high values, the video will not be displayed.

4) **Keep-Alive :** Sends current camera status through continuous UDP communication.
Some S/W and equipment are not supported

5) **RTP Auth Algorithm :** Determine the RTP encryption authentication method. MD5 is compatible with many S/W. When set to SHA256, stronger encryption is applied, but cannot be played on S/W or devices that do not support SHA256, such as VLC.

6) **Multicast Service** : Set whether to use Multicast. Even if Multicast is set, it does not work if Service is Disabled.

7) **Multicast Setting :** Multicast must be set for each channel you want to use. Multicast Address can be set from 225.0.0.0 to 239.255.255.255, and Multicast Port can be used from 2048 to 65534. Address and Port must be set differently for each channel, and when using multicast, connect using the actual IP of the camera, not the IP registered in the multicast.



3.3.1 RTSP URL

FlexWATCH® device support two types of RTSP URL which are Unicast and Multicast.

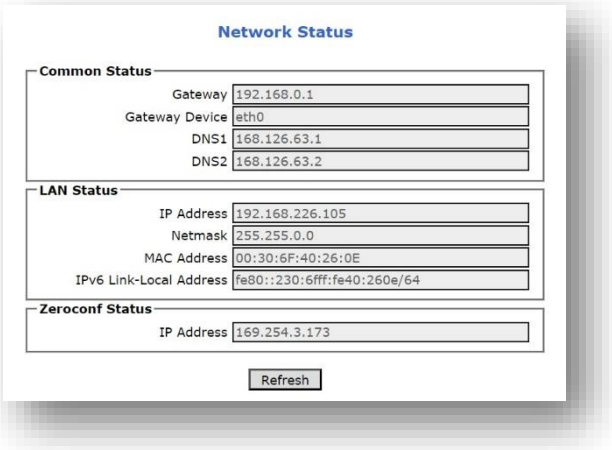
If multicast is not set, this address does not work.

- Unicast RTSP address is shown below. (General Use)
  - Primary Stream : rtsp://camera IP/cam0_0
  - Secondary Stream : rtsp://camera IP/cam0_1
  - Tertiary Stream : rtsp://camera IP/cam0_2
  - Quaternary Stream : rtsp://camera IP/cam0_3

- Multicast RTSP address is shown below.
  - In order to use Multicast, Multicast must be set.
  - Primary Stream : rtsp://camera IP:(RTSP Port+1) /mcam0_0
  - Secondary Stream : rtsp://camera IP:(RTSP Port+1) /mcam0_1
  - Tertiary Stream : rtsp://camera IP:(RTSP Port+1) /mcam0_2
  - Quaternary Stream : rtsp://camera IP:(RTSP Port+1) /mcam0_3

3.4 Network Status

It is a menu to view the overall network setting status currently set in the product.
Network setup is not possible in this menu.



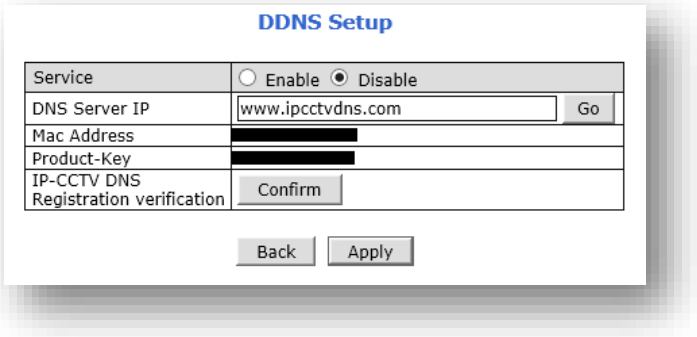
3.5 DDNS

If Camera is used in a dynamic IP environment and the IP address could be changed from time to time, a fixed domain address (URL) is available through the DDNS service and then you can freely access it..

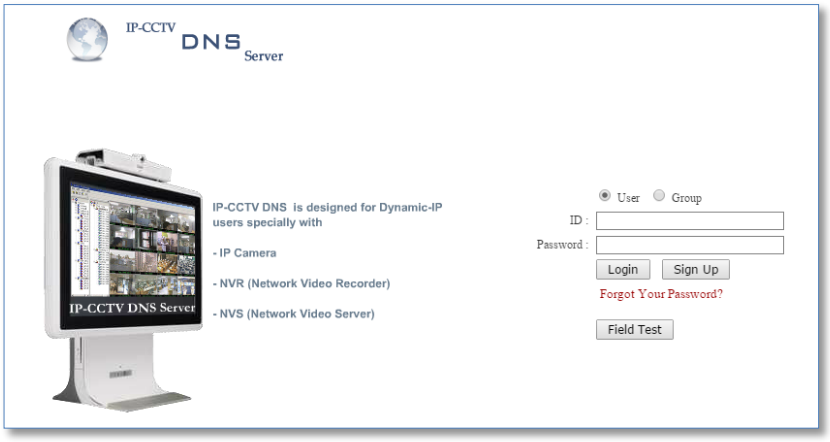
In order to use the DDNS service, port forwarding (port mapping) must be set in advance.

For port forwarding (port mapping) settings, please refer to the router manual..

To activate IP-CCTV DNS™ service, please follow the steps below.



1) Select Enable to use IP-CCTV DNS™ service and click Apply button.
2) Click Go to go to IP-CCTV DNS™ web site or go to www.ipcctvdns.com directly through the web browser.

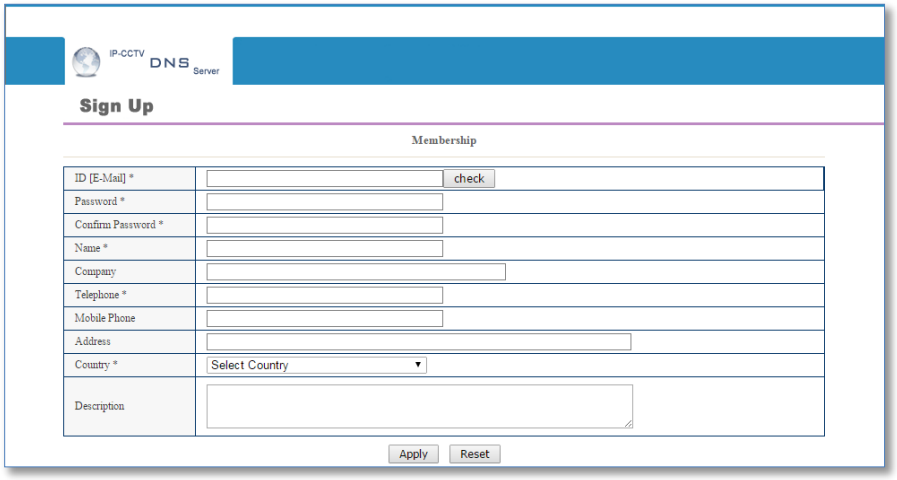


3) Click Sign Up to create an account if you do not have one

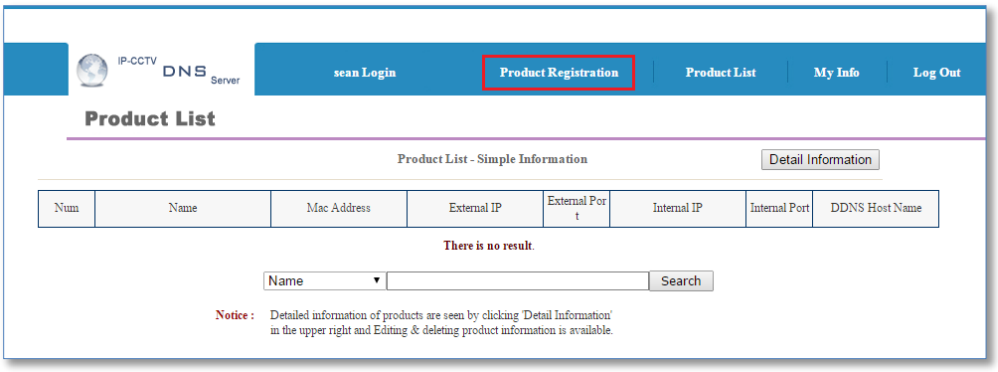
If you have one, proceed from the step 6)

4) Select “I Agree” and click Next as shown below.

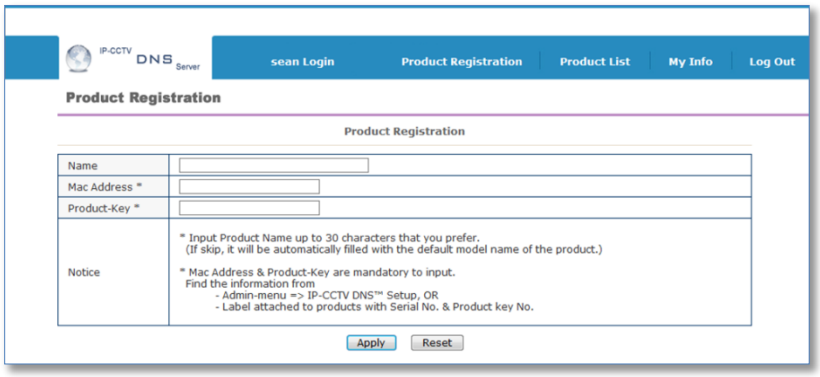
5) Enter the information requested such as ID, Password and Name, and then click Apply to finish.



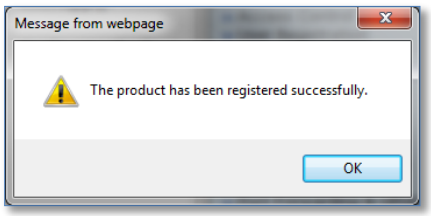
6) You will not be able to log in until approved.
   To activate the registered ID (E-mail), send an approval request mail to sales@seyeon.co.kr.
7) After activated, login to the IP-CCTV DNS™ with the ID and password
8) Click on Product Registration on Top Menu as shown below



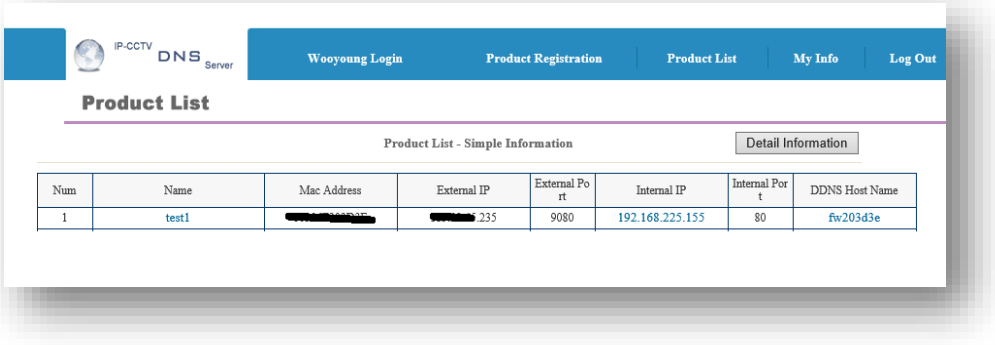
9) Enter the information requested (Camera Name, MAC Address, Product Key) and Click Apply as shown below.
   a. Name is the name displayed on DDNS.
   b. You can check the Mac Address and Product Key in the DDNS menu or sticker on the bottom of the product.



10) If registration is successful, the following message appears.

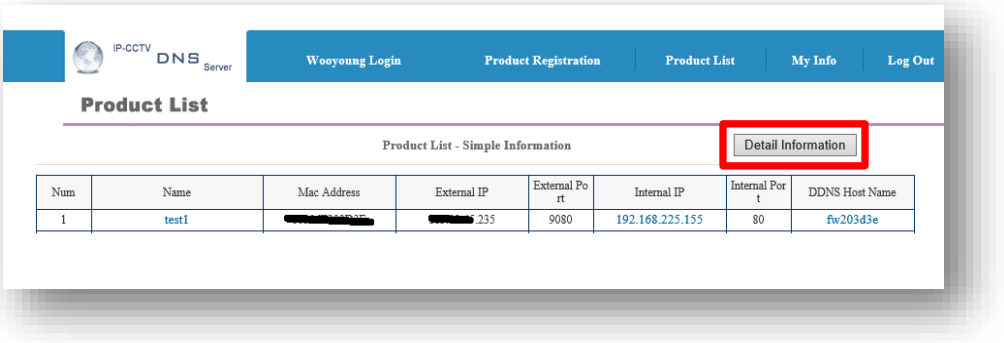


11) If registered successfully in DDNS, it will be appeared in Product List.
   a. If you have port forwarded (port mapped) the camera's External Port to 9080 on the router, you can access it by clicking External IP or DDNS. (If it is not set to 9080, it will not connect.)
   b. External Port can be changed in UPNP menu. This part will be explained again in the UPNP menu below.

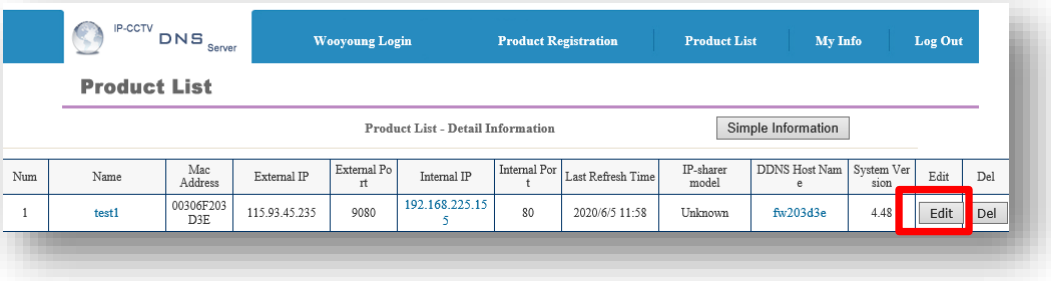


c. The default DDNS Host Name is fw****** which is last 6 digits of Mac Address. DDNS Host Name can be changed as per below steps.

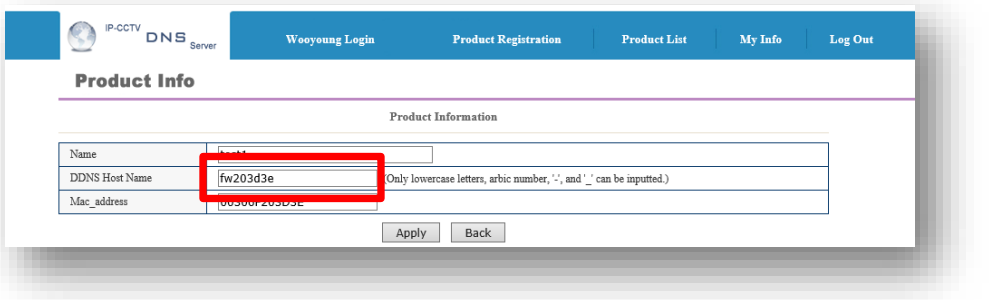
i. Click Detail Information.



ii. Click Edit as shown below.

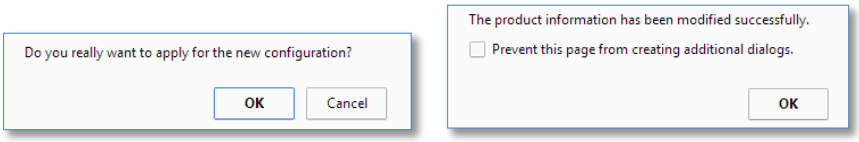


iii. Enter desired DDNS Host Name (Only English Letters and numbers are allowed)

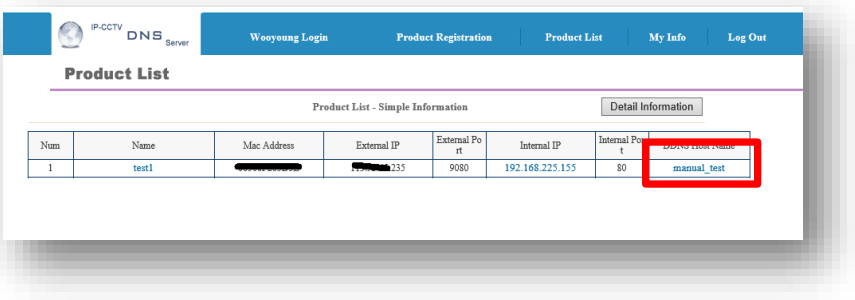


iv. Enter Host Name and click Apply

When the confirmation message appears, click OK button to complete.



v. Check the changed DDNS Host Name as shown below.



Note : If you change the DDNS Host Name, it may take time to apply to DNS, so you may not be able to connect immediately.

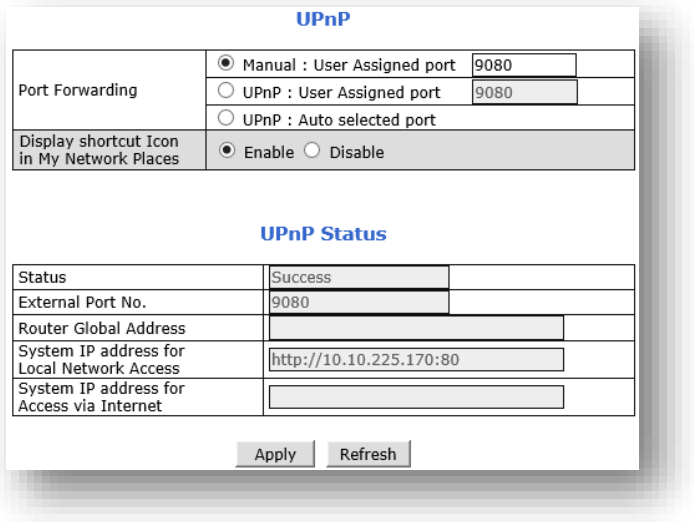
3.6 UPnP

3.6.1 Port Forwarding

UPnP (Universal Plug and Play) is a protocol used to conveniently search for and configure network devices on the local network. Port forwarding (port mapping) is a method that allows users to access an internal network from an external network using a user-specified port in an environment where multiple network devices are shared by one Internet line. Port forwarding (port mapping) is set in the router.

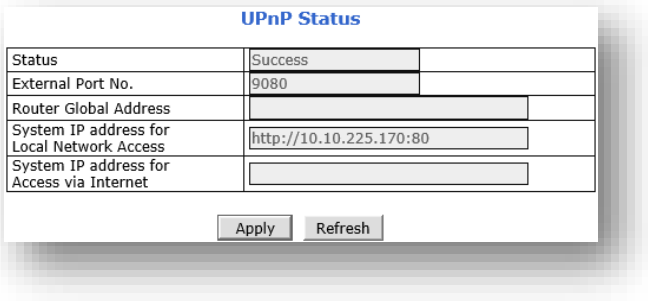
To do UPnP port forwarding (port mapping), please follow the steps below.

The external port number set in Port Forwarding (port mapping) is displayed in the External Port No of IPCCTVDNS.



- Manual (User Assigned Port): If the user did port forwarding (port mapping) directly from the router, you can enter the external port number which you set.
- UPnP (User Assigned Port): his is the function that the router automatically sets the value entered by the user. To use this function, your router must support this function. Please refer to the router manual for UPNP support.
- UPnP (Auto Selected Port): This is a function that automatically assigns the port by communicating with the camera and router. To use this function, your router must support this function.

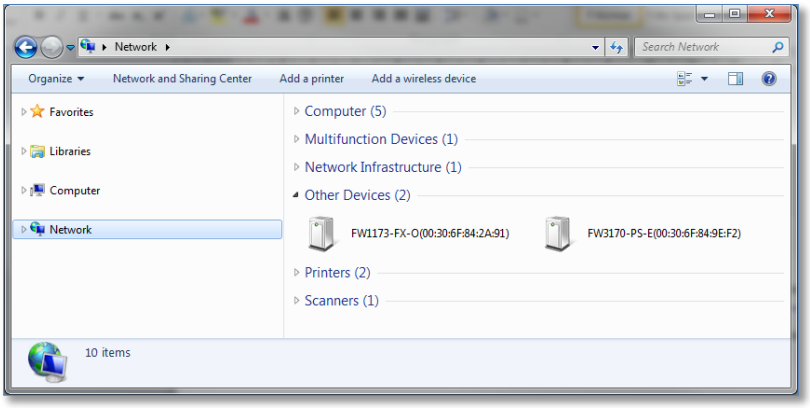
1) When the UPNP port forwarding (port mapping) process is done successfully, "**Success**" message will be appeared as shown below.



2) If error message appears, check whether the router's UPnP support and ensure that UPNP is enabled.

3.6.2 Display Shortcut Icon in My Network Place

Display shortcut Icon in My Network Places option will allow you to access the FlexWATCH® device via **Windows Explorer** as shown below. Double-click on the target to access it via your web browser.

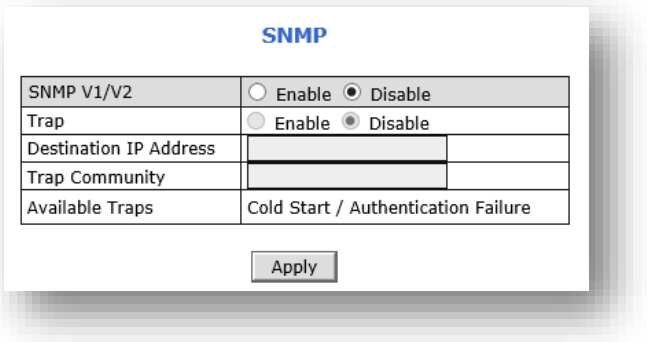


3.7 SNMP

SNMP (Simple Network Management Protocol) allows network management operators to use standard SNMP (SNMP) tools to monitor the status of FlexWATCH® devices. An SNMP system must be prepared to use this protocol

Note: Supports SNMP versions 1 and 2 and is based on MIB-2.

To setup SNMP, the below SNMP setup page appears..

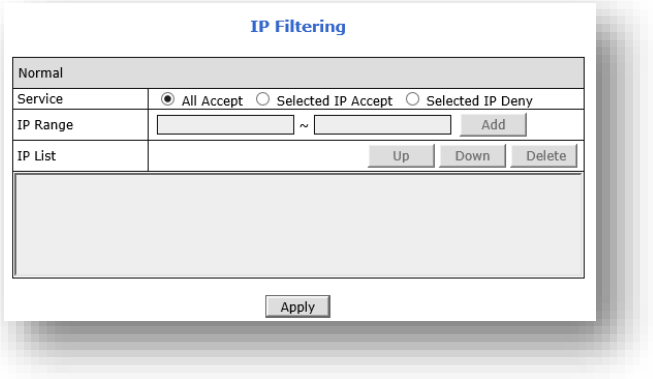


To use SNMP,

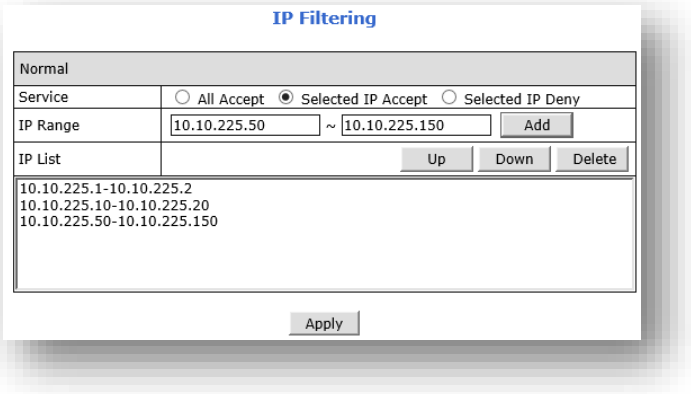
1) Enable SNMP V1/V2 protocol.
2) **Enable SNMP Trap service if necessary.**
3) Enter the IP address of the server to receive SNMP Trap messages in Destination IP Address field
4) **Enter the Trap Community.**
5) **Click Apply.**

3.8 IP Filtering

IP Filtering is a function to set IP list to allow or deny access to a specific IP.



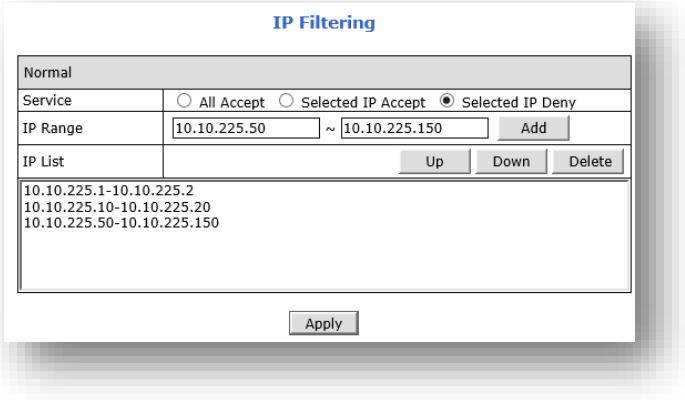
- All Accept : Disable the IP Filtering function. Can be accessed from any device.
- Selected IP Accept : Enter the IP list to allow access.
- Selected IP Deny : Enter the IP list to deny access.
- Setting Method
  - Selected IP Accept
    - Enter IP address Range to be allowed.



    - Click the Add button then allowed IP address Rage will be displayed in the list.
    - Click Apply button to save.

> *Note : When setting Selected IP Accept, the IP address of the PC must be included. Otherwise, you will not be able to connect after setup.*

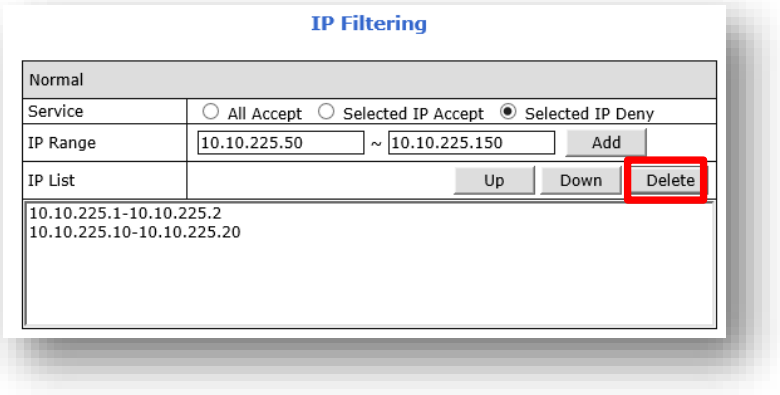
  - Selected IP Deny
    - Enter the IP address range to be denied.
    - Click the Add button then denied IP address Rage will be displayed in the list.



- Click Apply button to save.

Note : When setting Selected IP Deny, the IP address of the PC must NOT be included. Otherwise, you will not be able to connect after setup.

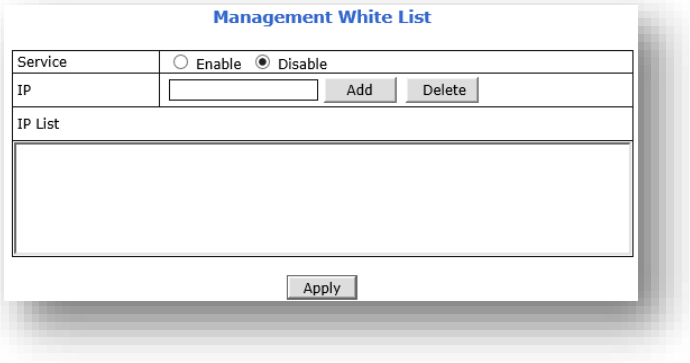
- The registered list can be moved by clicking the UP / Down button..
- How to delete the list and apply
  - Select a value registered in the IP List and click the Delete button to delete it..
  - Click Apply button to save.



- To disable IP Filtering function, select All Accept.

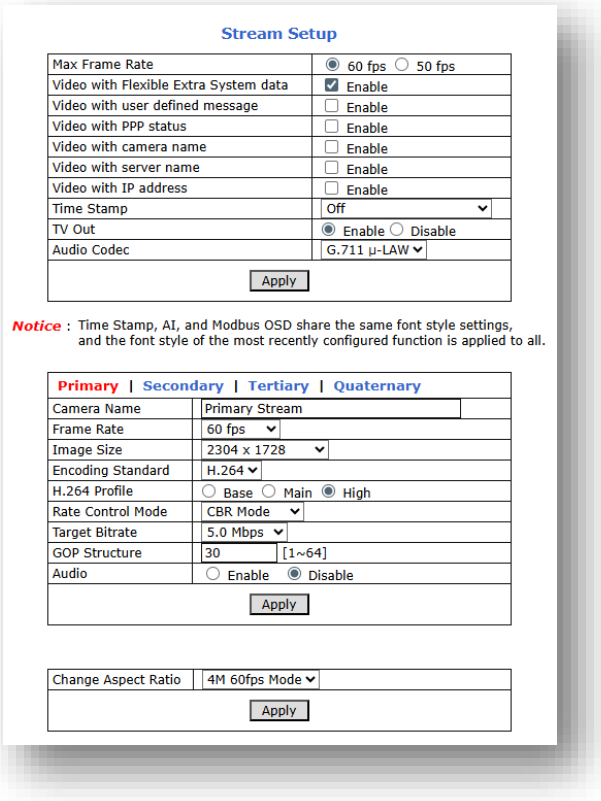
3.9 Management White List

This function gives access to the camera's administrator page (Admin). When this function is enabled, access to the admin page is only available from the PCs allowed on the list. PCs that are not in the IP List will not be able to access even if they know the administrator ID and password.
IP filtering is to allow or deny access itself, but this function works only for the authority to access the admin page.



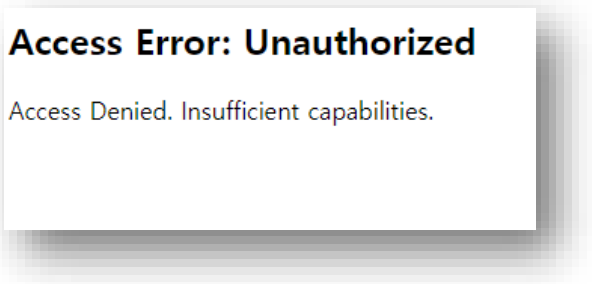
- Service : Set to Enable when using the Management White List function.
- IP : Enter the IP to allow access to the admin page
- Add : Click add then the IP will be registered in the IP List.
- Delete : Delete the selected IP from IP List.
- IP List : All lists registered in the White list are displayed.
- Click Apply button to apply the setting.
- To disable this function, Select disable and click the Apply button.

- When accessing the Admin page from the PC with access rights



Admin page is displayed normally.

- When accessing the Admin page from the PC without access rights

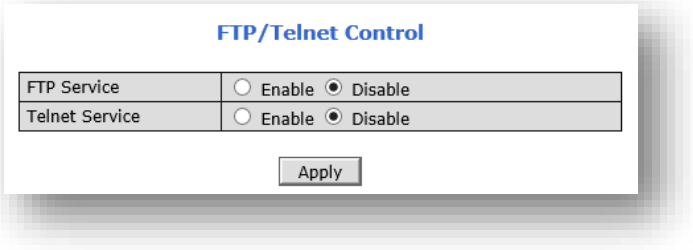


Informs you that you don't have the authority to access.

3.10 FTP/Telnet Control

This menu is to activate Telnet or FTP connection function of the camera.
If the service is enabled, you can diagnose the camera using the Telnet program or upload or download files to the camera using the FTP program..

Telnet and FTP services are security required services. Since it can be a threat of hacking, it is recommended to enable it only when the administrator uses it for special purposes, and disable it in other cases.

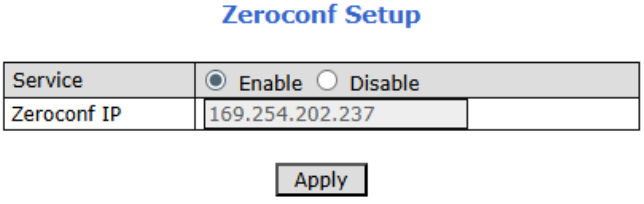


- FTP Service : Enable or Disable FTP Service.
- Telnet Service : Enable or Disable Telnet Service.

3.11 ZeroConf

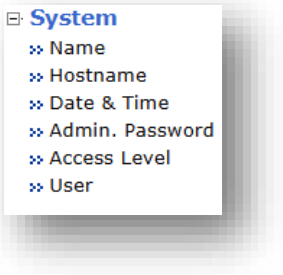
This is a function to automatically create a network without any special settings. It is a function to configure a virtual network through ZeroConf without setting up a separate IP environment. To use this function, the PC or NVR must support the ZeroConf protocol. ZeroConf IP uses 169.254.x.x range.

You can check the camera's ZeroConf IP in the Network Status menu. ZeroConf Service is enabled by default.
If you don't want to use it, you can disable it to disable it.



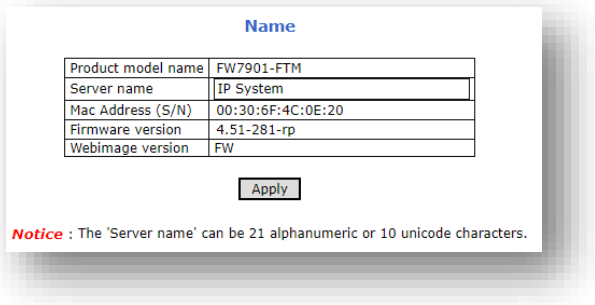
4. System

This menu supports setting / change of camera name, date and time, user addition/modification/deletion, and administrator password.

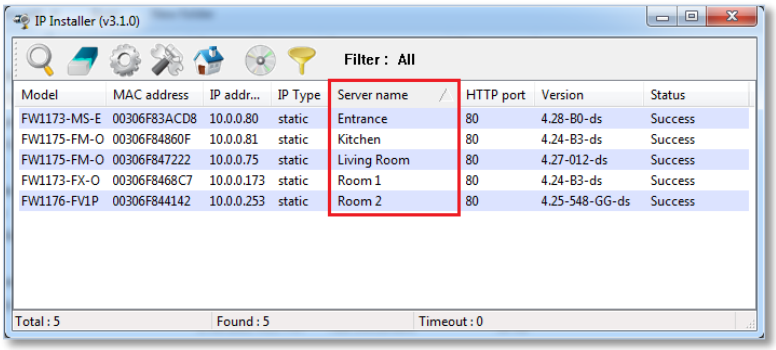


4.1 Name

You can setup the camera name, and also you can check the model name, MAC address, firmware version, etc.



The server name set here is displayed in the Server Name of IP Installer as shown in the figure below..



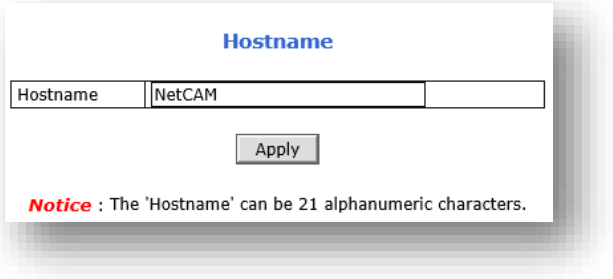
After entering the Server Name, click the Apply button to apply.

Note: Server Name can be written up to 21 digits in combination with alphanumeric characters. In case of Unicode, up to 10 digits can be used.

4.2 Hostname

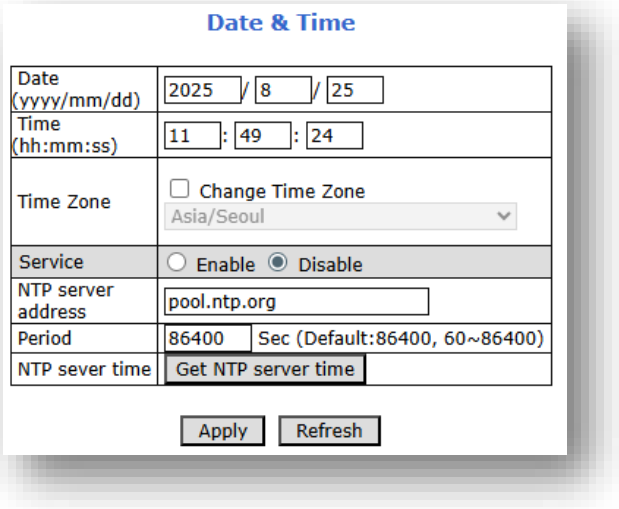
Click Hostname then Hostname Setup Menu appears as shown below. Enter the Hostname you wish to change and click the Apply button at the bottom to apply.

Note : Host name must start with an English letter and can contain up to 21 English and numeric characters.



4.3 Date & Time

Click Date & Time then Local Date & Time Configuration Menu appears as shown below. You can setup the server's Date and Time information. After changing the date and time, click the Apply button to apply it directly to the system. In addition to this method, you can also synchronize the time using t/he Internet.



If the camera is connected to the Internet, click the Get NTP server Time button to synchronize the time through the address at NTP server address. At this time, the time information to be synchronized is based on the region displayed in the Time Zone.

If the time zone setting is wrong, you must click Change Time Zone and select the time zone correctly. If the time zone setting has been changed, the camera must be rebooted.

■ **When changing Date & Time manually**

1) Date: Year / Month / Date.
2) Time: HH : MM : SS.
3) Click Apply button to save.

■ **When the time is automatically synchronized with the NTP server using the Internet (network)**

1. Click Change Time Zone and select the correct Time Zone.

   - Default setting is Asia/Seoul.

   - If the Time Zone setting has been changed, must reboot the camera.

2. Select Enable at Service after reboot

3. Enter NTP server address. (default = “pool.ntp.org”)

   * The IP address or host name must be specified on the NTP server.

4. Period is automatically synchronized with NTP after the specified time when Service is enabled..

5. Click Get NTP server time and wait for the time to change.

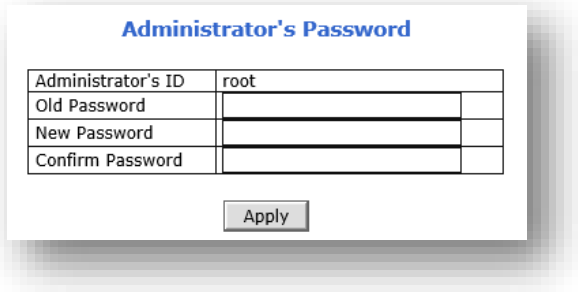
   * If “Fail to get NTP server time” error message is appear, check whether NTP server and camera communicate normally

4.4 Admin. Password

This is the menu to change the Administrator (root) password.

Administrator’s password should be changed occasionally to secure the FlexWATCH® device

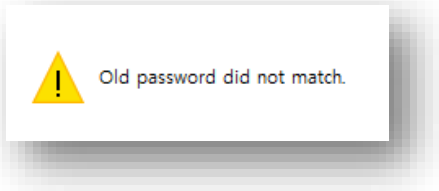
If you click Admin Password, a window to change the administrator's password appears as shown below.



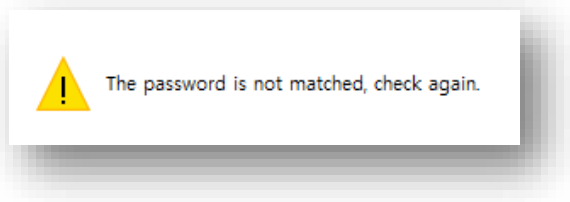
To change the password for the administrator, please follow the steps below.

1) Enter the current password in Old Password field.
2) Enter the new password in New Password and Confirm Password field.
3) Click Apply**.**

a. If the Old Password is incorrect, the following pop-up message appears.



b. If the New password and Confirm Password are different, the following pop-up message will appear.

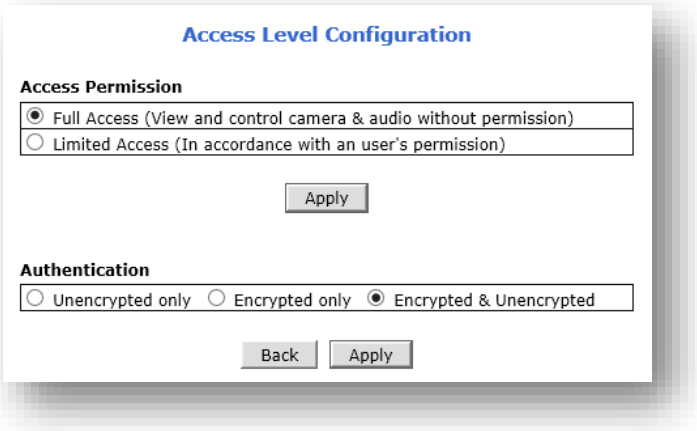


4) If the new password applied successfully, a new login window appears. Enter the new password and password changing process is complete.

Note1 : The admin password is encrypted. It is also impossible to confirm with the manufacturer. If you lose your password, you must reset the camera to use it.
Note2 : When setting password, allowable special characters is =-_. ! @#$~^&+=|.*

4.5 Access Level

This menu is to set the access permission level when viewing real-time video using a web browser or RTP/RTSP. Also, it is a menu to determine the encryption setting of the authentication procedure. When click Access Level, Access Level Configuration Menu appears as per below.



Access permission

- **Full Access:** There is no authentication procedure. If you click Live View on the web or enter the RTP/RTSP address, the video will appear immediately**.**
- **Limited Access:** When selecting Limited access, need is a certification process. You can log in to Camera by entering ID and password then use the camera based on user's permission. This is the default setting.

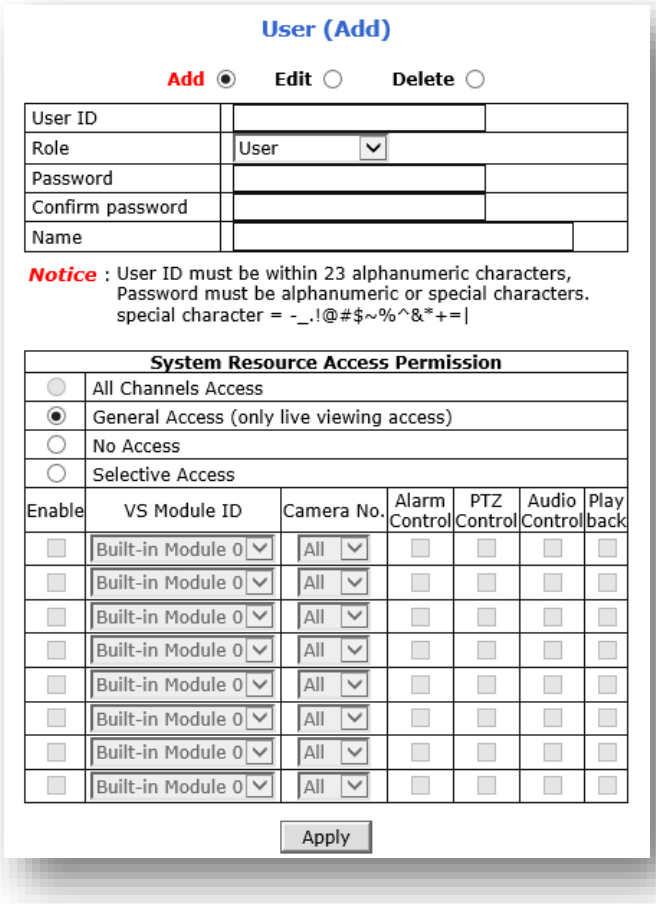
Authentication

- **Unencrypted only**: The authentication process is not encrypted.
- **Encrypted only**: The authentication process is encrypted using Digest (MD5).
- **Encrypted & Unencrypted**: The authentication process allows both encrypted and unencrypted.

4.6 User

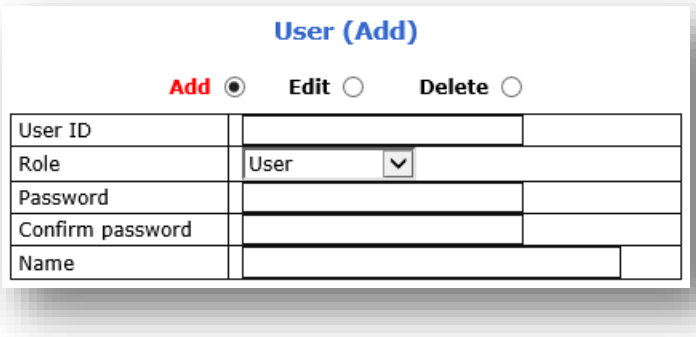
"User" is a menu for registering, modifying or deleting user accounts. When Access Level is set to Limited Access, you can use the camera with registered account.

Click the User menu and the following screen will appear..



4.6.1 Add

Proceed as follows to add a new user.

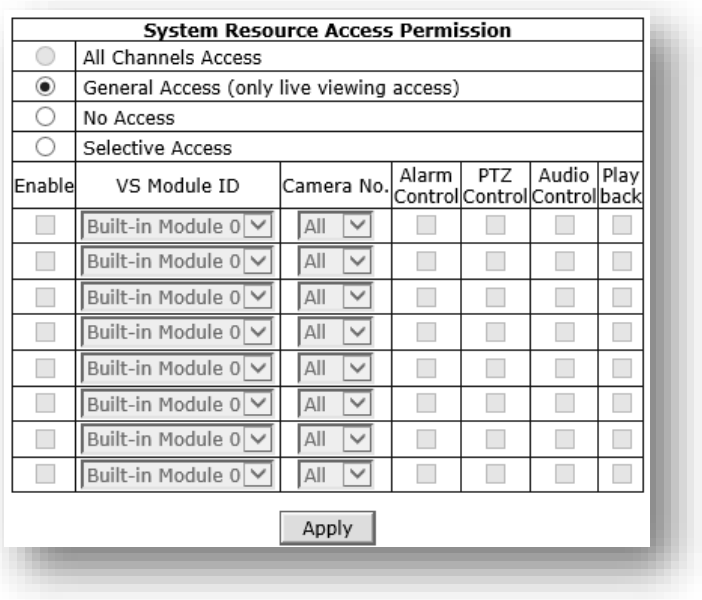


1) Select Add.
2) Enter the User name to be added in User ID field.

3) In Role you can define the role of the user account.
   - User : This is a regular user account. By default, only live view is available
     For accounts set as User, System Resource Access Permission at bottom is applied as General Access(Only live viewing access).
   - Manager : This is the manager account. All functions except admin page access are granted.
     For the account set as Manager, System Resource Access Permission at the bottom is applied as All Channel Access..
   - Administrator : This is an administrator account. You can use all functions in the same way as the root account.
     (However, when using IP Installer PLUS, setting is not possible with the account created by the user.)
4) Password & Confirm Password : Enter the password to be used for the designated account
5) Name : Enter user account name
6) Click the Apply button then the new user account will be created

◆ System Resource Access Permission

1) Even if you have applied a role to Role, you can change the permission from this menu.

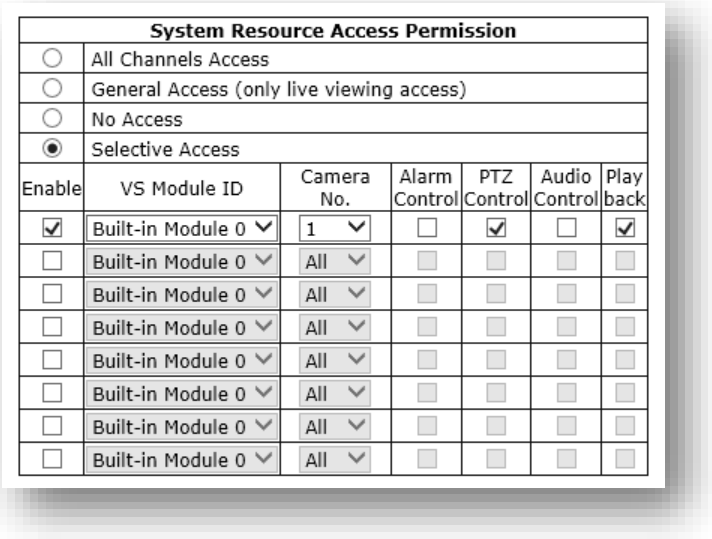


i. **All Channels Access** : Users have access to all channels and features.
ii. **General Access** (only live viewing access) : Users have access to monitor live view only
iii. **No Access**: Access allowed, but functionality not available.
iv. **Selective Access**: Only channels and functions selected by the user are allowed.

2) If Selective Access permission is selected, go to step 3).
3) Check Enable as below for camera channel and function access.

※ The selective access feature only works in Internet Explorer using Active-X.

It is not supported in browsers such as Edge and Chrome.

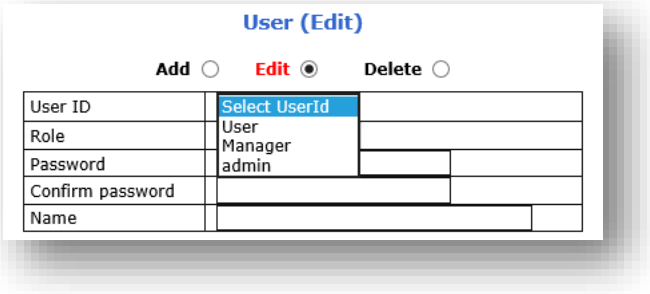


1. Select VS Module ID : The camera is fixed as Bulit-in Module 0. Change is not possible.
2. Camera No. : Select a channel to allow. Selecting All allows all channels.
3. Alarm Control: Allow DO control authority.
4. PTZ Control: Allow PTZ control authority.
5. Audio Control: Allow audio control authority.
6. Playback: Allow playback permission.

4) After the setting is complete, click the Apply button to apply.

4.6.2 Edit

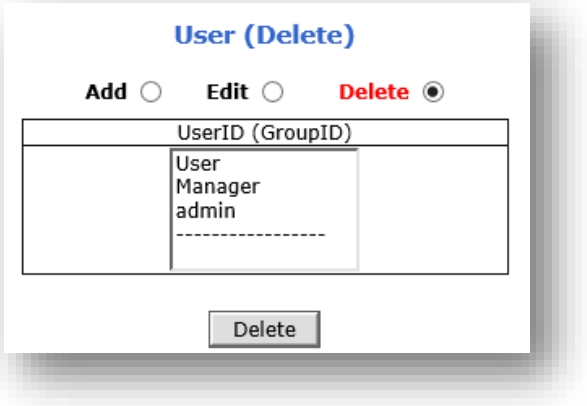
This is a menu to modify the rights and functions of the registered user account.



1) Select the User ID you want to change among the registered accounts.
2) If you select the ID, previously registered information is displayed.
3) After modifying the permission to be changed, press the Apply button to apply.

4.6.3 Delete

This function deletes registered accounts..

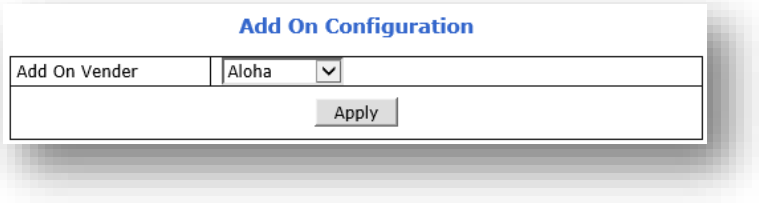


1) Select the account you want to delete.
2) Click the Delete button to delete the selected account.
3) A deleted account cannot log in with the camera.

4.7 Add On Service (Rev-u / Rev-v doesn't support)

Add on Service supports the function of displaying the inputted data on the camera or recording it to the NVR in conjunction with the POS device. Each supporting company's protocol must be followed and a separate program must be developed. Supporting companies are as follows.

Aloha / POSiToich / Radiant / RetailPro / SPPS / Squirrel / StoreNext / String / Tolload / Wand / Xpient / iOmni

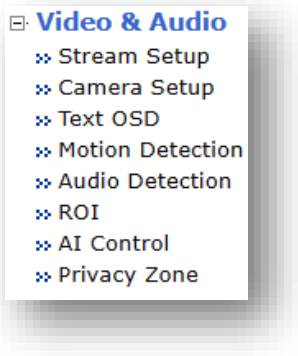


- Add on Vendor : Select Vendor to use.

- Add On Service : Enable or Disable Add on Service.

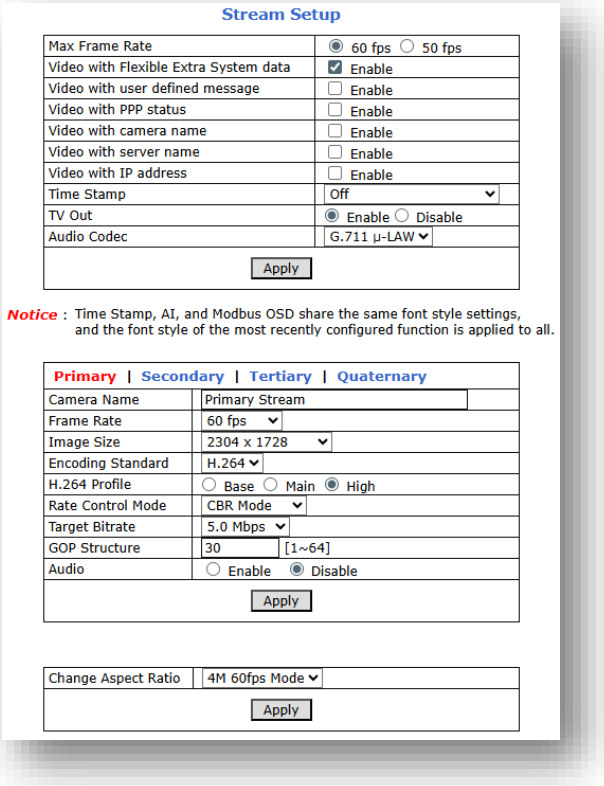
5. Video & Audio

This menu is used for settings related to the video and audio of the camera.

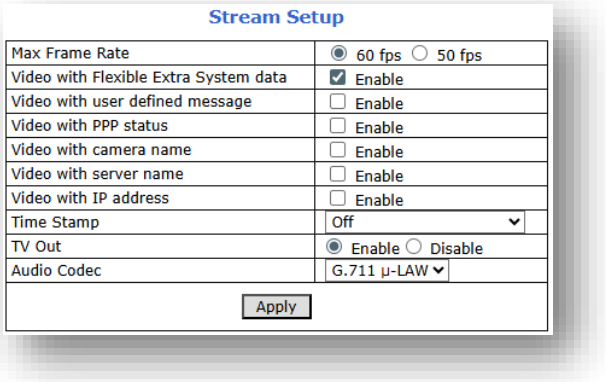


Note: Video stream settings may differ depending on the FlexWATCH model and F/W version.

5.1 Stream Setup



5.1.1 Stream Setup



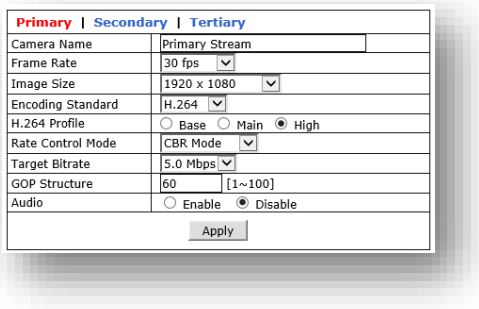
- **Max Frame Rate:** This is a menu to set the Max Frame Rate, which can be set to 60fps/50fps, 30fps/25fps, or 15fps/12.5fps depending on the product.
- **Video with Flexible Extra System Data:** When enabled, UART sensor data is included in video data and transmitted. (This menu requires program development through SDK.)
- **Video with User defined message:** Data specified by the user is included in the video image and transmitted. (This menu requires program development through SDK.)
- **Video with PPP status:** PPP connection information is included in the video image and transmitted. (This menu requires program development through SDK.)
- **Video with Camera name:** The camera name specified by the user is included in the video image and transmitted. (This menu requires program development through SDK.)
- **Video with Server name:** The Server name specified by the user is included in the video image and transmitted. (This menu requires program development through SDK.)
- **Video with IP address:** The IP address is included in the video image and transmitted. (This menu requires program development through SDK.)
- **Time Stamp:** Displays the time at the top left of the video image.

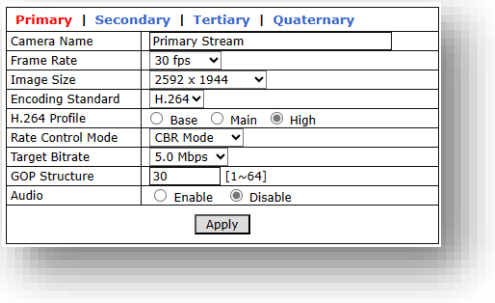
  - **ISO Standard :** 2025-09-01 09:00:00
  - **American Numeric :** 09/01/2025-09:00:00
  - **British Numeric :** 01/09/2025-09:00:00
  - **American Alphanumeric :** SEP 01st 2025-09:00:00 AM
  - **British Alphanumeric :** 01st SEP 2025-09:00:00 AM
- **TV Out :** Set whether to use CBVS output.
- **Audio Codec** : Set the audio codec to use.

  Supported audio codecs may be displayed differently for each product..
- **Aspect Ratio** : This menu sets the maximum resolution, aspect ratio, and max frame rate supported by the camera. This menu may be displayed differently or not visible depending on the model.

5.1.2 Primary / Secondary / Tertiary/ (Quaternary)

This menu supports settings related to video, such as the name of each channel, frame rate, resolution, codec, and bit rate, or the ability to turn on or off the audio function. Depending on the camera, some products support Quaternary Channel.



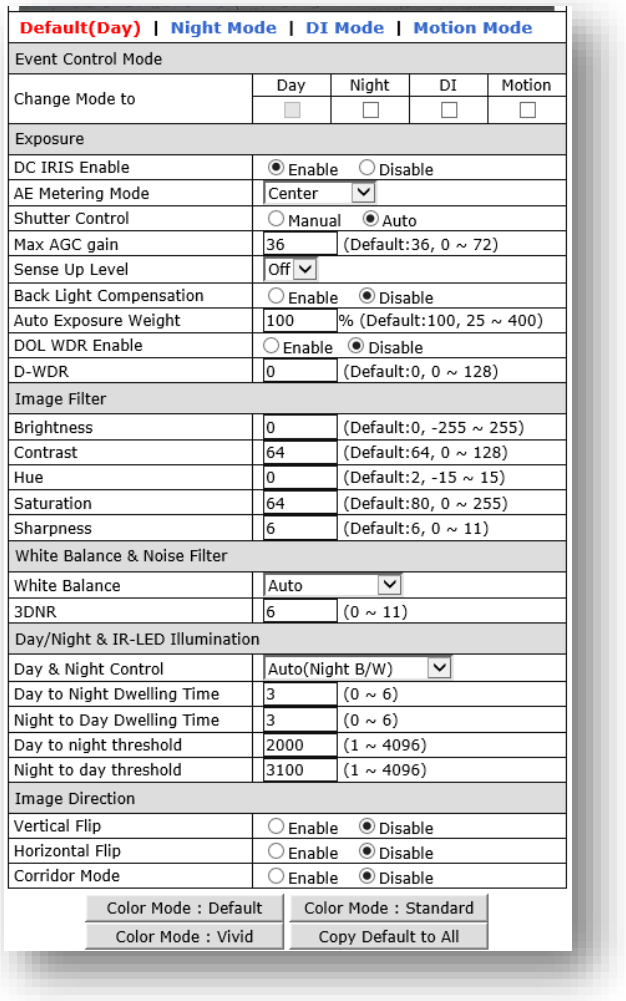


- Primary / Secondary / Tertiary / (Quaternary) : This is the menu to set each channel.
  - Operates depending on the resolution of Primary / Secondary / Tertiary..
- Camera Name : This is a menu to change the name of the selected channel..
- Frame Rate : This menu changes the frame rate of the selected channel..
  - The higher the number, the smoother the video.
- Image Size : This is a menu to change the resolution (video size) of the selected channel..
- Encoding Standard : This is a menu to change the codec of the selected channel..
  - MJPEG / H.264 / H.265 can be set (H.265 may not be supported depending on the model)
- H.264 / H.265 Profile : This menu changes the profile of the selected codec. (MJPEG codec is not supported.)
- Rate Control Mode : This menu changes the transmission mode of the channel selected as H.264 / H.265. (MJPEG codec is not supported)
  - ACBR : This mode operates with an emphasis on image quality. Frame may fall.
  - AVBR : Set the minimum bitrate / maximum bitrate to operate within the specified range.
  - ABR : Set the Bitrate to vary, focusing on picture quality.
  - CBR : Set the Bitrate to be fixed, focusing on bandwidth.
  - CVBR : Function that optimally adjusts the bitrate according to the complexity of the video.
- Image Quality : This menu appears when the codec of the selected channel is set to MJPEG or VBR in H.264 (H.265)..
  - It can be set in 6 stages (Lowest, Low, Normal, High, Highest, Low Compression), and As you select towards low compression, the image quality proves while the file size increases.
- Target Bitrate : Set Bitrate in ACBR, CBR, CVBR Mode.
  - When set to AVBR, the menu changes to Minimum Bitrate / Maximum Bitrate..
- GOP Structure : This menu sets the GOP value of the selected channel. (MJPEG codec is not supported,)
- Audio : This is a menu to set whether to use the audio of the selected channel.

5.2 Camera Setup

This menu is for setting the video related settings of the product. Depending on the model, the Camera Settings menu is displayed differently.

5.2.1 Camera models supported as per below (common for ra / rp firmware)



- **Event Control Mode**

  - **Change Mode to :** This menu is selected when making different settings according to conditions. If you want to set the day and night settings differently, check Night in Day Mode and check Day in Night Mode.
  - **Default(Day) :** This is the mode commonly used (Day time).
  - **Night Mode :** It is used when a separate setting is required at night.
  - **DI Mode :** This mode is used when sensor input is received.
  - **Motion Mode :** This mode is used when motion is detected.

- **Exposure**

  - **DC IRIS Enable:**
    - **Disable :** This function adjusts the amount of light by using the electronic shutter.

- **Enable:** This function adjusts the amount of light by using the aperture of the lens.

※ In case of a fixed lens, this menu is displayed as Indoor / Outdoor..

- **AE Metering Mode** : Set the measuring position. (Spot, Center, Average / Center Flip)
- **Shutter Control :** Set the shutter speed.
  - **Auto :** Adjust shutter speed automatically
  - **Manual :** Set the Min / Max value manually
- **Max AGC Gain:** This function brightens the screen in a low-light environment. As the sensor adjusts the gain to brighten, the noise may increase as well.
- **Sens Up Level :** Improve the image brightness by lowering the frame in low light by adjusting from Off, 1, and 2 values.
- **Back Light Compensation :** Set whether or not to use the backlight compensation function.
  - **Disable** : Disable compensation.
  - **Enable** : Enable compensation.
- **Auto Exposure Weight :** Set the auto exposure weight
- **DOL WDR Enable:** Set whether to use the WDR function.
  - **Disable** : Disable WDR.
  - **Enable** : Enable WDR.
- **D-WDR :** Set the WDR sensitivity from a value between 0 and 128.

- Image Filter

- **Brightness:** Set the brightness of the image between 0 and 255.
- **Contrast:** Set the Contrast of the image between 0 and 128.
- **Hue:** Changes the color tone of an image. (-15 to 15 setting)
- **Saturation:** Changes the saturation of the image. (0 to 255 setting)
- **Sharpness:** Set the sharpness of the image between 0 and 11.

- White Balance & Noise Filter

- **White Balance:**
  - **Auto**: Automatically set according to the user's environment.
  - **Manual Temp. Mode**: User specifies a specific environment. Incandescent, D4000, D5000, Sunny, Cloudy, Flash, Fluorescent, Fluorescent_H, Underwater.
  - **Custom**: Manually specified by the user.
- **3DNR**: Turn on / off the 3DNR (noise reduction) function.

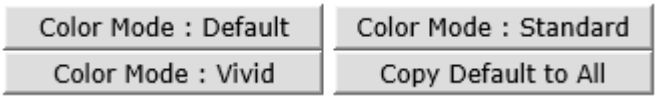
- Day/Night & IR-LED Illumination

- **Day & Night Control:**
  - **Color:** Always display images in color.
  - **Black & White:** Always display images in Black and White.
  - **Auto:** Images are displayed in color during the day and in black and white at night..
  - **Auto(Night Color10 ~ 50) :** This is the night color mode. The higher the number, the darker the color
- **Day to Night Dwelling Time:** When converting from color to black and white, this function waits for the set time before converting..
- **Night to Day Dwelling Time:** When converting from black and white to color, this function waits for the set time before converting..
- **Day to night threshold:** It refers to the point of transition from color to black and white. It is set in a value between 1 and 4096. The higher the value, the faster the transition from Day to Night, and the smaller the value, the slower the transition..
- **Night to day threshold :** It refers to the point of transition from black and white to color. It is set in a value between 1 and 4096. The larger the value, the slower the night to day transition point, and the smaller the value, the faster the transition point. (Night to day threshold cannot be set higher than Day to night threshold.)

- **Image Direction**

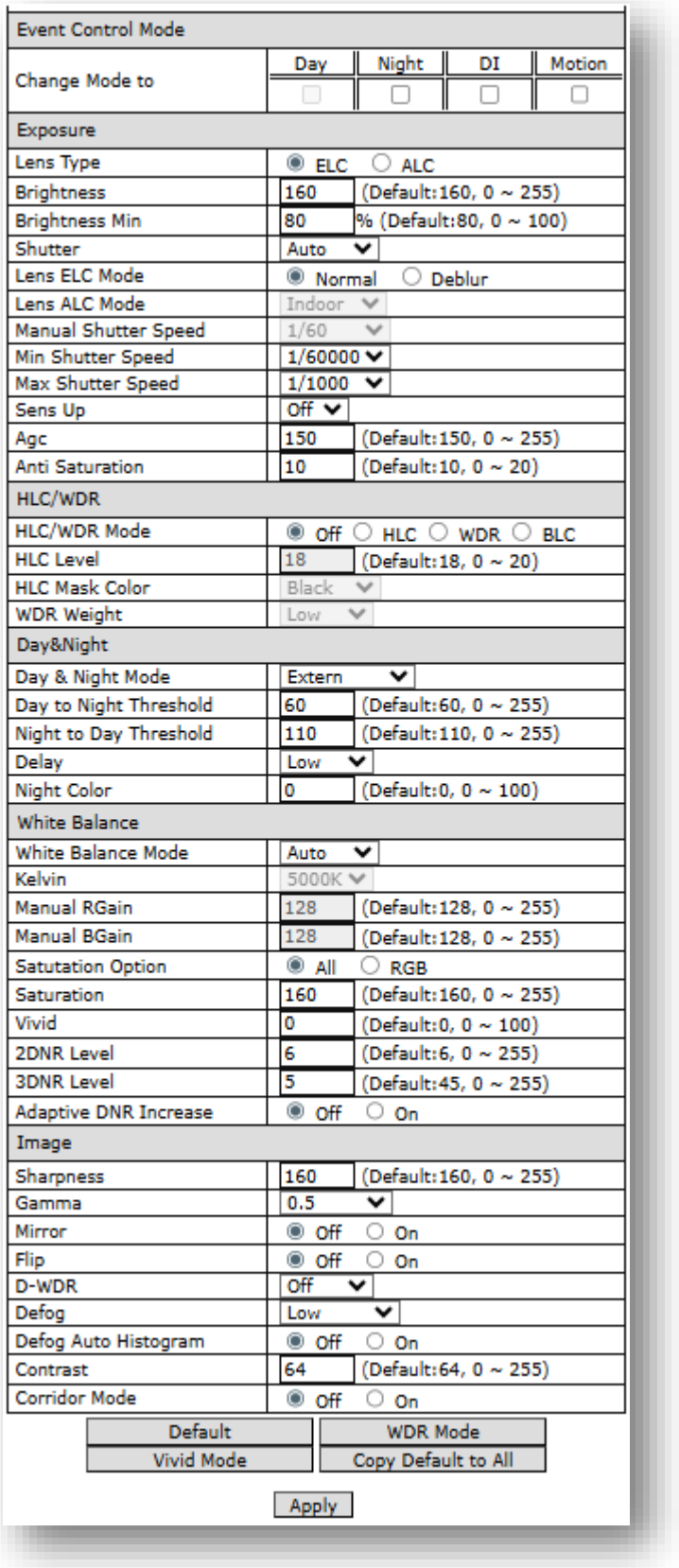
- **Vertical Flip:** Invert the image up/down.
- **Horizontal Flip:** Invert the image Left/Right.
- **Corridor Mode :** Converts the video vertically.

- **Buttons**



- **Color Mode : Default –** Initializes the value set by the user and changes to the basic color mode**.**
- **Color Mode : Standard –** Initializes the value set by the user and changes to normal color mode**.**
- **Color Mode : Vivid -** Initializes the value set by the user and changes to vivid color mode..
- **Copy Default to All –** The value set in Day Mode is equally applied to Night Mode, DI Mode, and Motion Mode.

5.2.2 Camera models supported as per below (common for ru / rv firmware)



Event Control Mode				
Change Mode to	Day	Night	DI	Motion
	☐	☐	☐	☐
Exposure				
Lens Type	◉ ELC ○ ALC			
Brightness	160 (Default:160, 0 ~ 255)			
Brightness Min	80 % (Default:80, 0 ~ 100)			
Shutter	Auto			
Lens ELC Mode	◉ Normal ○ Deblur			
Lens ALC Mode	Indoor			
Manual Shutter Speed	1/60			
Min Shutter Speed	1/60000			
Max Shutter Speed	1/1000			
Sens Up	Off			
Agc	150 (Default:150, 0 ~ 255)			
Anti Saturation	10 (Default:10, 0 ~ 20)			
HLC/WDR				
HLC/WDR Mode	◉ Off ○ HLC ○ WDR ○ BLC			
HLC Level	18 (Default:18, 0 ~ 20)			
HLC Mask Color	Black			
WDR Weight	Low			
Day&Night				
Day & Night Mode	Extern			
Day to Night Threshold	60 (Default:60, 0 ~ 255)			
Night to Day Threshold	110 (Default:110, 0 ~ 255)			
Delay	Low			
Night Color	0 (Default:0, 0 ~ 100)			
White Balance				
White Balance Mode	Auto			
Kelvin	5000K			
Manual RGain	128 (Default:128, 0 ~ 255)			
Manual BGain	128 (Default:128, 0 ~ 255)			
Satutation Option	◉ All ○ RGB			
Saturation	160 (Default:160, 0 ~ 255)			
Vivid	0 (Default:0, 0 ~ 100)			
2DNR Level	6 (Default:6, 0 ~ 255)			
3DNR Level	5 (Default:45, 0 ~ 255)			
Adaptive DNR Increase	◉ Off ○ On			
Image				
Sharpness	160 (Default:160, 0 ~ 255)			
Gamma	0.5			
Mirror	◉ Off ○ On			
Flip	◉ Off ○ On			
D-WDR	Off			
Defog	Low			
Defog Auto Histogram	◉ Off ○ On			
Contrast	64 (Default:64, 0 ~ 255)			
Corridor Mode	◉ Off ○ On			

Default | WDR Mode
Vivid Mode | Copy Default to All

Apply

- **Event Control Mode**

  - **Change Mode to** : This menu is for setting different settings depending on conditions. Check the appropriate mode in each mode tab you wish to change. For example, if you want different day and night settings, check Night Mode in the default (day) mode and Day Mode in the night mode.
  - **Day** : This is the mode generally use.
  - **Night** : Use when separate settings are needed at night.
  - **DI** : This is the mode that operates when sensor input is received.
  - **Motion :** : This is the mode that operates when movement is detected.

- **Exposure**

  - **Lens Type:**
    - **ELC :** This function adjusts the amount of light by using the electronic shutter.
    - **ALC:** This function adjusts the amount of light by using the aperture of the lens.
  - **Brightness** : Adjust the brightness of the camera.
  - **Brightness Min:** Set the minimum value for camera brightness.
  - **Shutter : Set the shutter speed.**
    - Auto : Set the shutter speed automatically.
    - Manual : Set the shutter speed manually.
    - Flicker : Eliminate Flicker.
  - **Lens ELC Mode :** Activated when Lens Type is ELC.
    - Normal : works in normal mode.
    - Deblur : remove blur.
  - **Lens ALC Mode :** Activated when Lens Type is ALC.
    - Indoor : Set when installed indoors.
    - Outdoor : Set when installed outdoors .
    - Deblur : remove blur.
  - **Manual Shutter Speed :** Activated when the shutter is set to Manual. It is fixed at the set Shutter Speed.
  - **Min Speed :** This value operates as the minimum value when Shutter is set to Auto..
  - **Max Speed :** This value operates as the maximum value when Shutter is set to Auto.
  - **Sens Up :** When the light is low, lower the frame to brighten the image.
  - **Agc :** Set the image bright when in low light. Noise may also increase at this time..
  - **Anti Saturation :** Improves the symptom of the picture being saturated with white. If there is a large difference in brightness on one screen, adjust the brightness based on the saturated side.

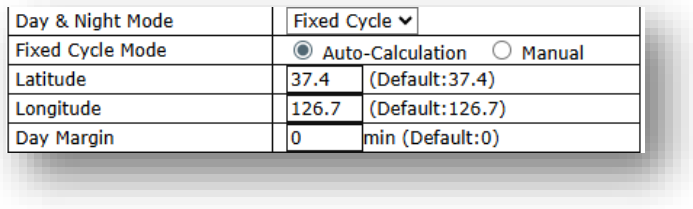
- **HLC/WDR**

  - **HLC/WDR/BLC Mode :** This is the menu to set the backlight compensation function.
    - Off : Backlight compensation is not used.
    - HLC : Use the HLC function. This is a function to mask with the set color when an area with higher light intensity than the standard value (Level) is identified.
    - WDR : WDR function is used. Color may change depending on weight.
    - BLC : BLC function is used.
  - **HLC Level :** Enabled when set to HLC. If it is judged that the brightness is higher than the level, it is displayed in the color set in Mask Color.
  - **HLC Mask Color :** Enabled when set to HLC. Display in the color selected by the user.
  - **WDR Weight :** It is activated when set to WDR. To Low, Middle, High Weight can be set. As the weight increases, the colorchange can happen.

- **Day & Night**

  - **Day & Night Mode**
    - **Auto**: This is a function that the image sensor judges the intensity of illumination and adjusts it day/night.
    - **Color** : Always display in color regardless of illumination.
    - **B&W** : Always display in Black / White regardless of illumination.
    - **Extern** : This is a function that adjusts day/night using IR instead of an image sensor.
    - **Fixed Cycle** : This function allows you to switch between day and night by inputting the latitude and longitude of the camera installation area, calculating the sunrise/sunset times, or by directly inputting the sunrise and sunset times

    - Fixed Cycle : Auto-Calculation

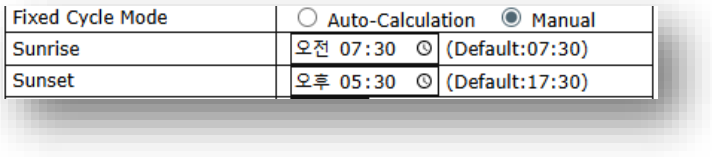


Latitude : Enter the latitude

Longitude : Enter the longitude

Day Margin : Set the day/night transition delay time

- Fixed Cycle : Manual



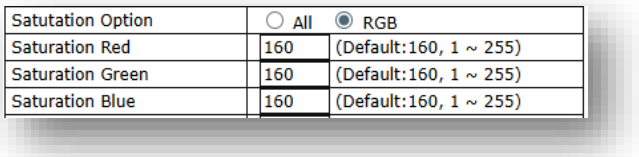
Sunrise : Set the sunrise time (when it transitions to daytime).

Sunset : Set the sunset time (when it transitions to night)

- **AGC Threshold :** Activated when Day & Night is set to Auto. This is the menu to set the threshold to switch to day/night.
- **AGC Margin :** Activated when Day & Night is set to Auto. This is a menu to set the difference between the threshold for day/night switching.
- **Delay :** Adjust the time to switch between day and night. In the case of Low, the conversion speed from day to night or from night to day is fast, and the conversion speed becomes slower as you go to Middle and High
- **Day to Night Threshold :** Activated when extern. You can adjust the threshold for switching from day to night.
- **Night to Day Threshold :** Activated when extern. You can adjust the threshold for switching from night to day.

- **White Balance**

  - **White Balance Mode :**
    - **Auto :** Set the white balance automatically.
    - **Manual :** The user directly inputs the Rgain and Bgain values to set the white balance.
  - **Kelvin :** It is activated when Manual. This function adjusts the color temperature.
  - **Manual RGain :** It is activated when White balance is in Manual mode. Used to set the red color.
  - **Manual BGain :** It is activated when White balance is in Manual mode. Used to set the Blue color.
  - **Saturation Option**
    - All : Sets the overall saturation value.
    - RGB : If you set it to RGB, a separate menu will appear.

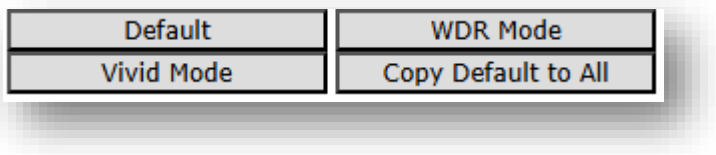


Red, green, and blue colors can be set respectively

- **Vivid :** This function adds color vibrancy to the video.
- **2DNR Level :** This function removes the noise of still images.
- **3DNR Level :** This is a function to remove noise for moving objects. Ghosting may occur if the setting is too high.
- **Adaptive DNR Increase :** This function adjusts the noise adaptively according to the gain of the video. Operates separately from 2DNR and 3DNR.

- **Image**

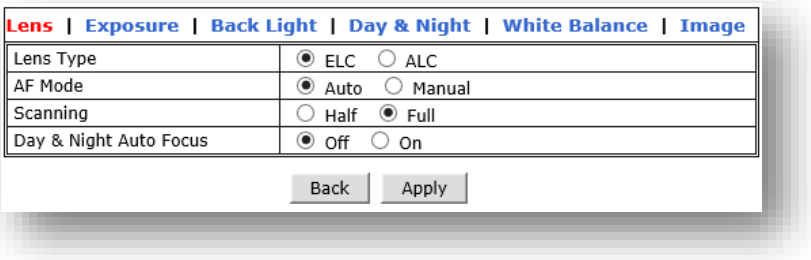
- **Sharpness :** Set image sharpness.
- **Gamma :** set gamma.
- **Mirror :** Switch the video image left/right.
- **Flip :** Switch the video image up/down.
- **D-WDR :** Enable digital WDR function.
- **Defog :** Sets the defog function. The correction function becomes stronger as you go from Low to High.
- **Defog Auto Histogram :** When using the defog function, the histogram is automatically measured and corrected.
- **Contrast :** Set the contrast of the image
- **Corridor Mode :** Rotates the camera image 90 degrees to display it vertically. In this case, the camera must be rotated 90 degrees to fit the setup. When using corridor mode, AI, text OSD, ROI, and privacy zone features will not function properly.
- **Button**



- **Default :** Camera settings will be reset to default.
- **WDR Mode :** Set WDR mode.
- **Vivid Mode** : Set Vivid Mode.
- **Copy Default to All** : The values set in Default (Day) are applied equally to Night Mode, DI Mode, and Motion Mode

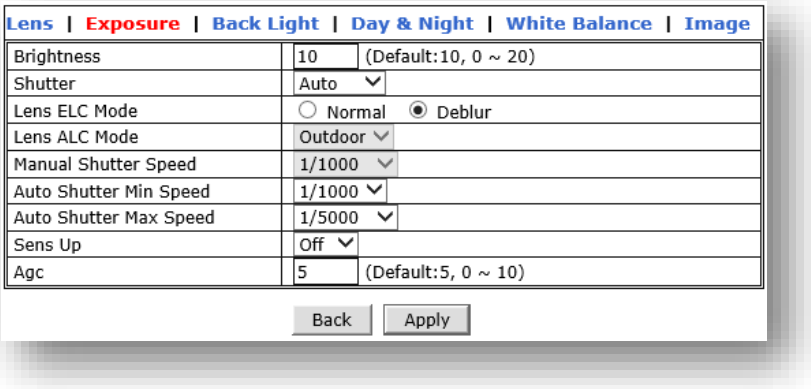
5.2.3 Camera models supported as per below (HSM / GSM etc.)

- **Lens**



- **Lens Type**:
  - **ELC**: This function adjusts the amount of light by using the electronic shutter.
  - **ALC**: This function adjusts the amount of light by using the aperture of the lens.
- **AF Mode**: Select whether or not to use the auto focus function.
- **Scanning** : Set the scan area when focusing automatically.
- **Day & Night Auto Focus**: Automatically adjusts focus when Day & Night mode is changed.

- **Exposure**

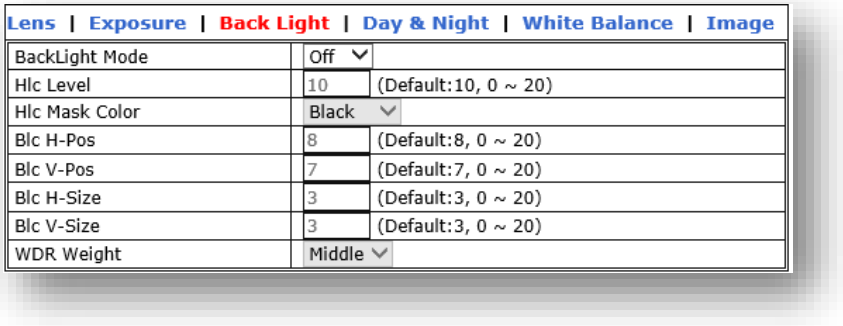


- **Brightness**: Set the brightness of the image between 0 and 20.
- **Shutter**: Choose a shutter mode.
  - **Auto** : Set the shutter speed automatically.
  - **Manual**: Set the shutter speed manually. Manual Shutter Speed is activated.
  - **Flicker**: Removes flickering on the screen.
- **Lens ELC Mode**:
  - **Normal**: ELC mode is used by default.
  - **Deblur:** Increases sharpness in the image.
- **Lens ALC Mode**:
  - **Indoor** : Select when the camera is installed indoors.
  - **Outdoor** : Select when the camera is installed outdoors.
  - **Deblur** : Increase image sharpness.
- **Manual Shutter Speed :** Select shutter speed.
- **Sens Up:** Level can be adjusted from values between x2, x4, x8, x16 and x32 to improve the

image by lowering the frame rate in low light..

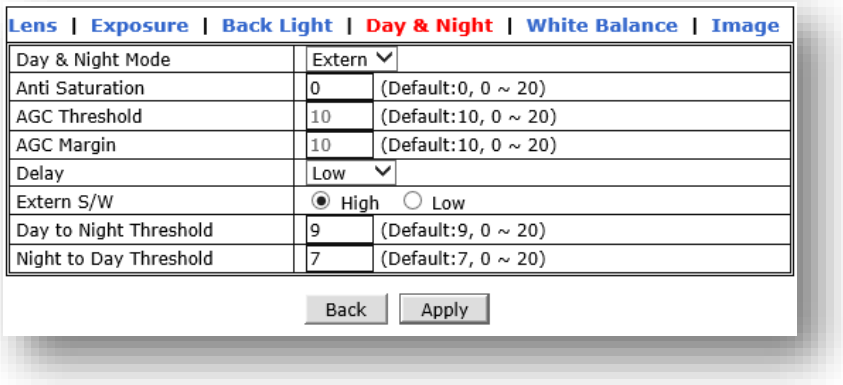
- **AGC (Auto Gain Control):** Abbreviation for Auto Gain Control, you can improve low-light images by adjusting the gain of the sensor from a value between 0 and 16.

- **Back Light**



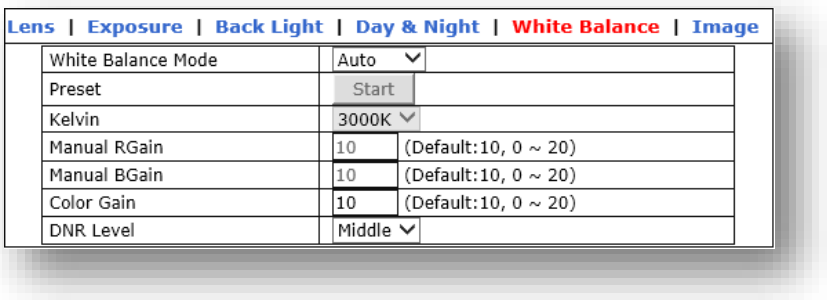
- **Back Light Mode**:
  - **OFF**: Disable Backlight Mode. (Backlight compensation is not available.)
  - **HLC (Highlight Compensation):** When strong light enters the designated area, it is masked with the color specified by the user and ignored.
  - **BLC (Backlight Compensation)**: A function that compensates for the surrounding objects appearing black when strong light enters the camera
  - **WDR (Wide Dynamic Range)**: A function that detects bright and dark areas to make bright areas dark and dark areas bright
- **HLC Level**: Select the HSBLC sensitivity from 0 to 20.
- **HLC Mask Color**: Select the color to display for the HLC masking area.
- **BLC H-Pos:** Set the horizontal at the beginning of the BLC area.
- **BLC V-Pos:** Set the vertical to the start point of the BLC region.
- **BLC H-size:** Set the width of the BLC area.
- **BLC V-Size:** Set the height of the BLC area.
- **WDR Weight:** Select sensitivity in WDR mode.

- **Day & Night**



- **Day & Night Mode:**
  - **Auto**: Switches between color and black /white according to the light intensity.
  - **Color**: Images are always displayed in color.
  - **B/W**: Images are always displayed in Black/White.
  - **EXT**: The CdS sensor detects the intensity of illumination and converts it into color and Black/White.
- **Anti-Saturation** : This is a function to adjust the appropriate value when the Smart IR function is On.
- **AGC Threshold** : Set the threshold at which color and black-and-white are switched. Can be set when Day & Night mode is set to Auto.
- **AGC Margin**: he hunting phenomenon is prevented by leaving a margin in the threshold value. Can be set when Day & Night mode is set to Auto.
- **Delay**: This is a function that waits for the amount of time specified by the user when conditions change between day and night, and then switches..
- **Extern S/W**: This is the CDS conversion method setting.
  - **Low**: This method is used when the voltage value goes down when the CDS voltage value covers CDS in the high state..
  - **High**: This method is used when the voltage value rises when the CDS voltage value covers CDS in the Low state.
- **Day to Night Threshold :** Set the time to switch from day (color) to night (black and white).
- **Night to Day Threshold :** Set the timing to switch from night (black and white) to day (color).

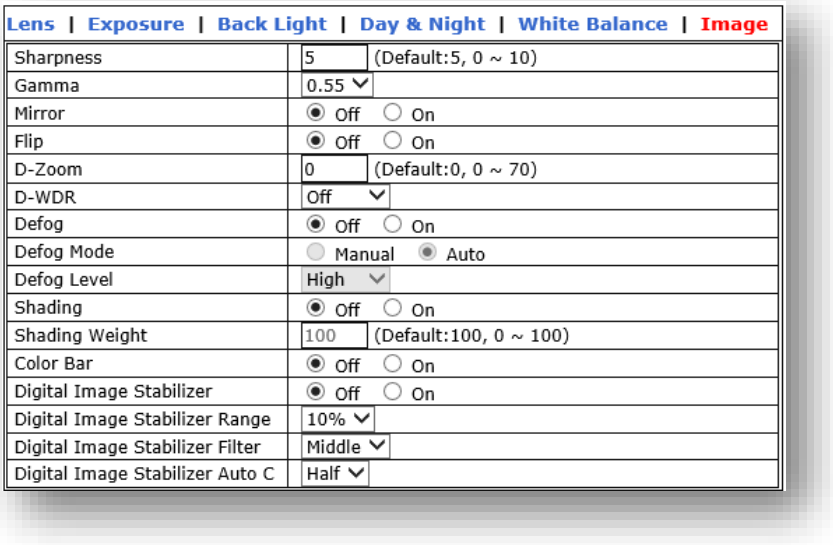
- **White Balance**



- **White Balance Mode:**
  - **Auto**: A function that automatically tracks and adjusts the white balance according to the environment.
  - **Preset**: Point the camera at a white piece of paper and press the Set button to get the best fit for the current lighting environment. It needs to be readjusted when the environment changes.

- **Manual**: Set White Balance to Manual.
- **Preset:** This is a function that allows the user to adjust the level directly.
- **Kelvin:** This function allows the user to set the color temperature.
- **Manual RGain:** This is a function to manually adjust the red color.
- **Manual BGain:** This is a function to manually adjust the blue color.
- **Color Gain:** Adjust the color gain value. Saturation is adjusted.
- **DNR Level**: Select the level of the noise reduction function.

- **Image**

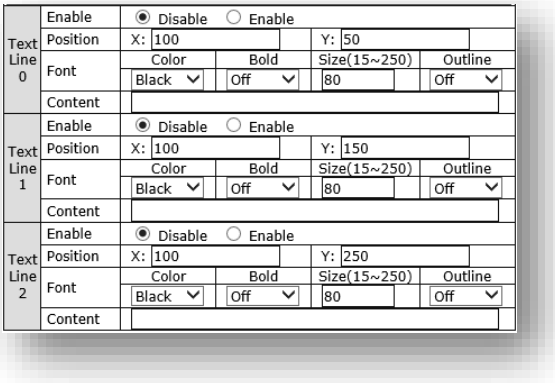


- **Sharpness:** Set the sharpness of the image between 0 and 10.
- **Gamma:** Balances the input brightness signal and the output signal**.**
- **Mirror:** Switches the video image left/right**.**
- **Flip:** Flip the video image up/down**.**
- **D-Zoom:** Select whether or not to use the function for digital zoom**.**
- **D-WDR:** Select whether or not to use digital WDR
- **Defog Mode:** Turns on/off Defog (fog compensation) function.
- **Defog Level:** When set to Manual, the fog correction function operates according to the user's Defog Level. If set to Auto, fog compensation is performed automatically.
- **Defog Level:** If the Defog Mode is Manual, the user can designate the level.
- **Shading:** Choose whether or not to use the shading function.
- **Shading Weight:** This function adjusts the level of the contrast processing function.
- **Color Bar:** Displays a color bar on the screen.
- **Digital Image Stabilizer:** Set whether to use the digital image stabilization function**.**
- **Digital Image Stabilizer** Range: Set the range of image stabilization. (10%, 20%, 30%)

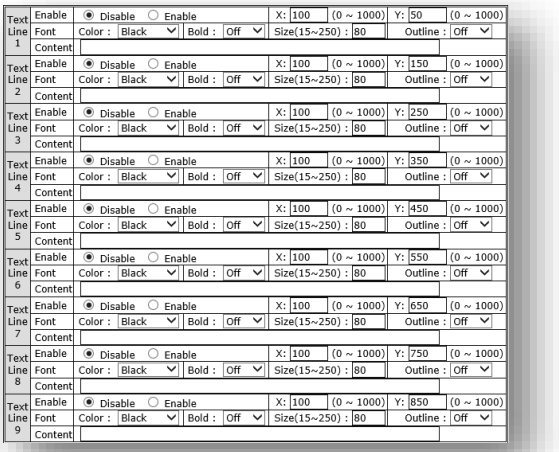
- **Digital Image Stabilizer Filter:** Apply a shake correction filter. (High, Normal, Low)
- **Digital Image Stabilizer Auto C:** Specifies the image stabilization area. (Half/Full))

5.3 Text OSD

You can enter a message to display on the camera image, The “ra” firmware supports up to 3 messages, while the “rp”, “ru”, and “rv” firmware supports up to 9 messages



Menu for ra firmware



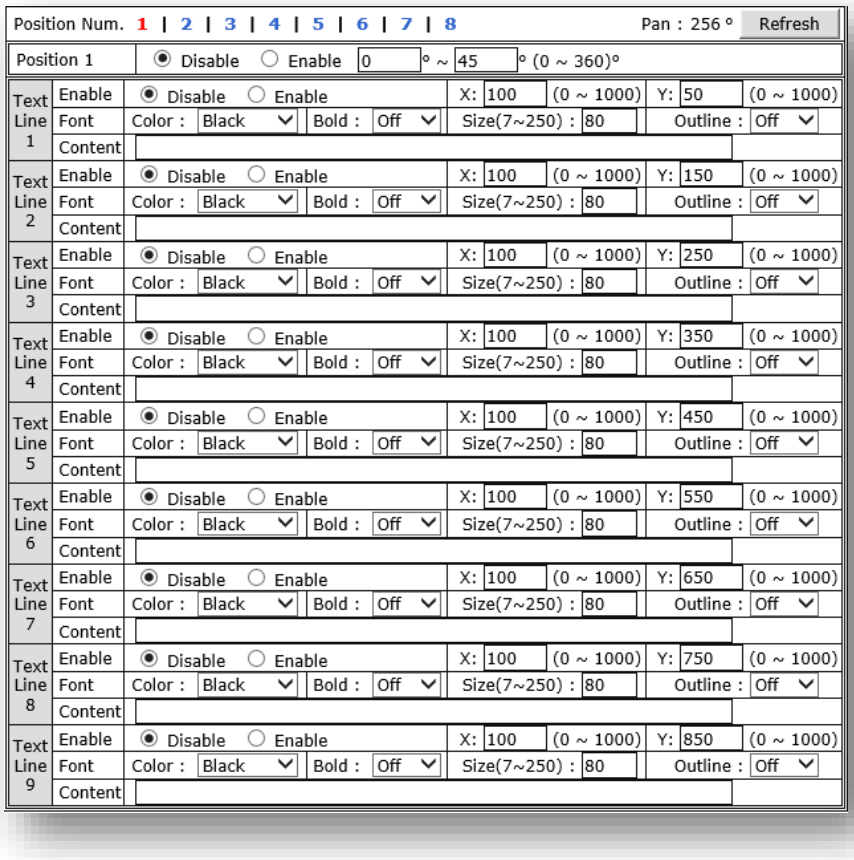
Menu for rp/ ru/ rv firmware

- Enable: Enables or disables the Text OSD function.
- Position (X,Y): Specifies the horizontal and vertical coordinates to display the OSD.
- Color: Sets the color of the OSD to be displayed.
- Bold: Sets the thickness of the OSD to be displayed.
- Size: Sets the size of the OSD to be displayed.
- Outline: Sets the outline of the OSD to be displayed.
- Content: Enter the string to be displayed as OSD.

※ *Note : OSD may not be displayed on the screen depending on settings such as coordinates and size. Please set it appropriately and use it.*

5.4 PTZ Text OSD (FW7707 / FW7709 / FW8707 / FW8709 / FW9707 / FW9709)

In the case of a PTZ camera, OSD can be displayed according to the PAN coordinate value.
Basically, 8 areas can be set based on a 45 ° angle, and 9 OSDs can be displayed per area. PAN angle can be modified by the user.

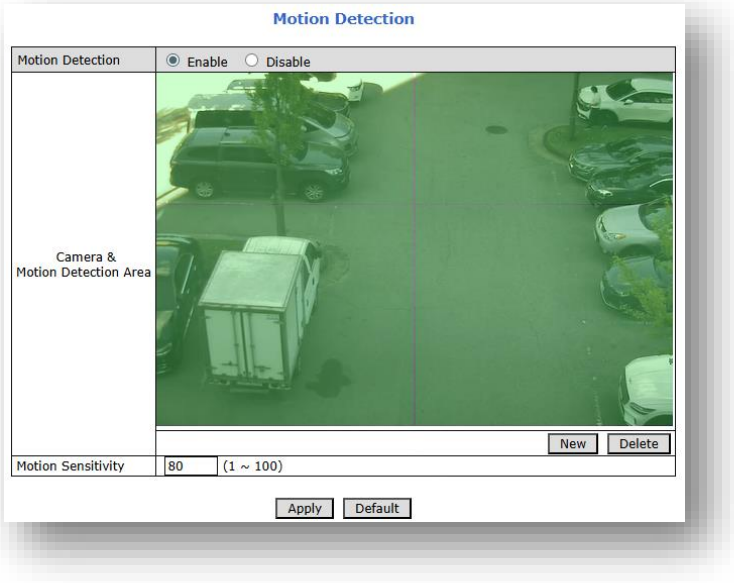


- Position Num: This is the PAN area. Up to 8 locations can be specified.
- Refresh: Displays the current PAN angle.
- Position 1~8 : Activate each area. PAN positioning is possible in this menu.
- Enable: Enables or disables the Text OSD function.
- Position (X,Y): Specifies the horizontal and vertical coordinates to display the OSD.
- Color: Sets the color of the OSD to be displayed.
- Bold: Sets the thickness of the OSD to be displayed.
- Size: Sets the size of the OSD to be displayed.
- Outline: Sets the outline of the OSD to be displayed.
- Content: Enter the string to be displayed as OSD.

5.5 Motion Detection

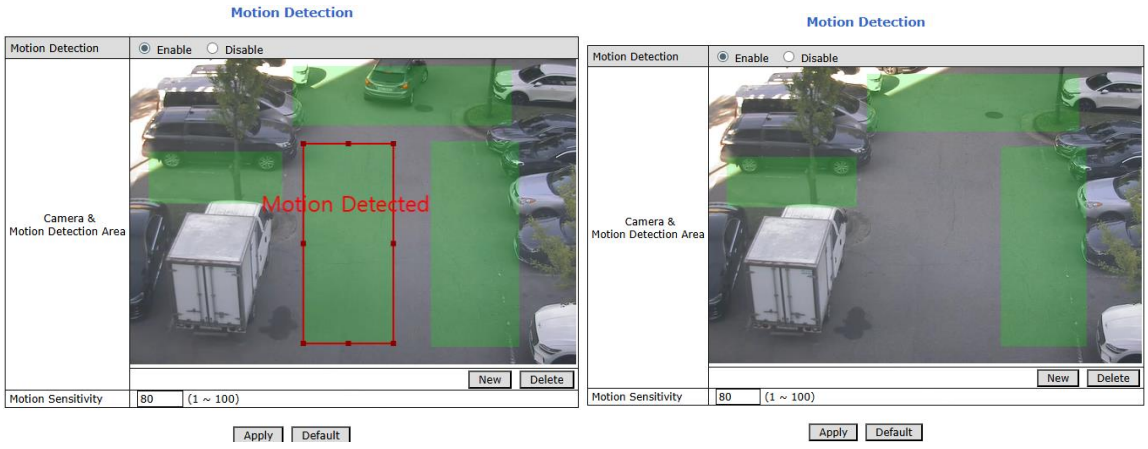
This is the menu to set the motion detection area. By default, it is set to detect motion based on the entire screen. Users can select and set the desired area from this menu.

5.5.1 Motion Detection



If you want to modify the motion detection area, set as below.

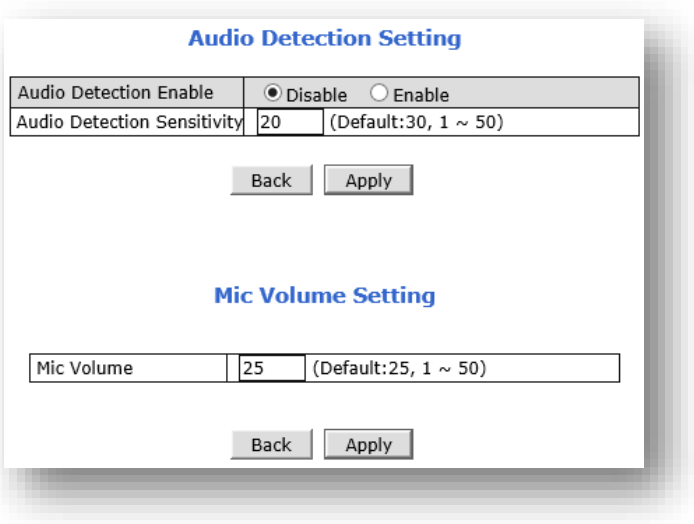
1) Motion detection can be set up to 4 areas.
2) You can adjust the size using the vertex part, and you can also adjust the position by clicking the area.
3) A new area can be set using the New button, and a set area can be deleted using the Delete button.



4) Motion sensitivity can be adjusted from 0 to 100, and 100 is the most sensitive.
5) When the settings are complete, click Apply to apply.

5.6 Audio Detection

This function detects audio through the microphone connected to the camera.
Using this function, you can record using the VMS or Micro SD provided by the company. (It is saved for 20 seconds after audio detection is finished.)
To use the Audio Detection function, Audio must be enabled in the Video Stream menu for normal operation. Below is the description of the Audio Detection menu.



- Audio Detection Enable : This menu enables or disables the audio detection function..
  - Disable / Enable
- Audio Detection Sensitivity : Set the sensitivity of the audio detection function.
  - The lower the number, the slower it is, and the higher the number, the more sensitive it is.
- Mic Volume : This function adjusts the volume of the microphone connected to the camera..
  - Lower numbers make the volume smaller, higher numbers make it louder.
  - Please note that this setting may cause howling depending on the angle or position of the speaker.

The buttons to set Audio Detection and Mic Volume are seperated.
For normal operation, you must click the appropriate button for setting.

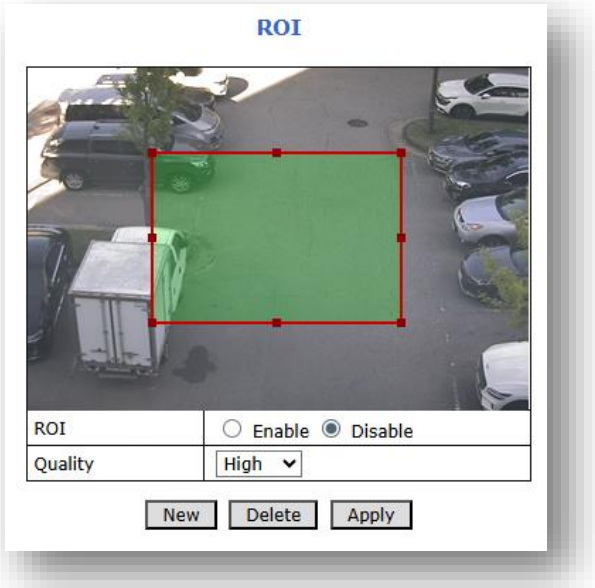
5.7 ROI (Region of Interest)

This is a function to set a specific area of the camera image as the area of interest. It is possible to set different image quality for each region by dividing the region of interest and the region of non-interest. Utilizing this function, high quality is set for the region of interest and low quality is set for the region of non-interest to provide high quality to the region of interest without increasing the overall amount of data. ROI can set up to 8 areas.

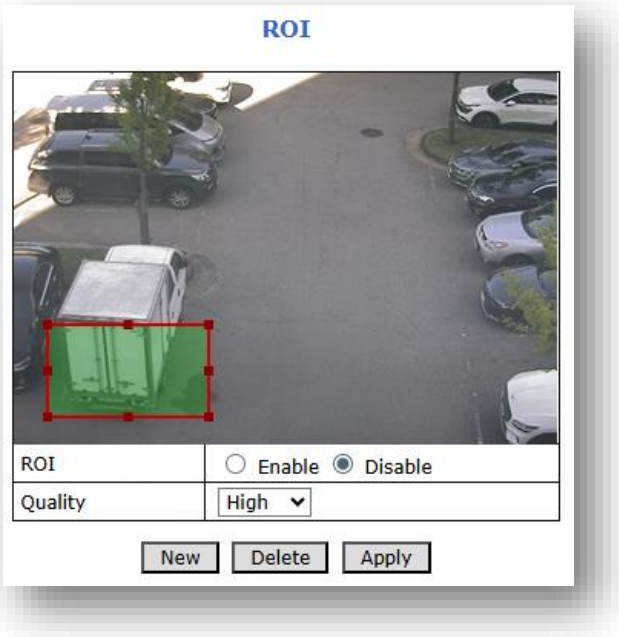
To add ROI, execute as follows.

1) Select Enable for ROI function setup.
2) Click New button.

3) ROI region box in Green is appeared.



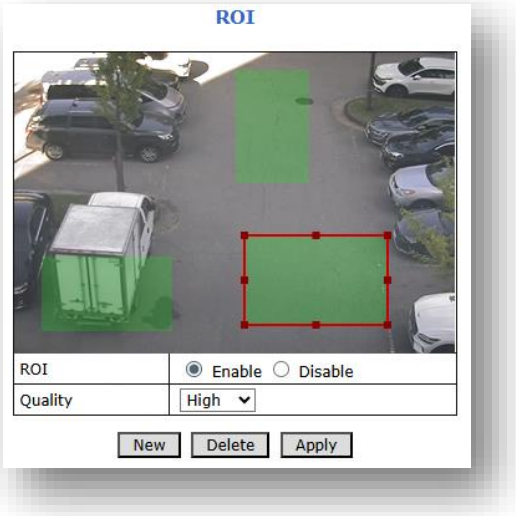
4) Click the Green box, place it where you want it and resize it.



5) Select Video quality for ROI area.

6) Click Apply button.

When deleting an ROI, select the desired ROI area, press the Delete button, and click the Apply button to apply.



5.8 AI Control (Only for ru / rv firmware)

A manual related to AI Control is provided separately. Refer to 'AI Control User Manual' please.

(You can download it from the website.)

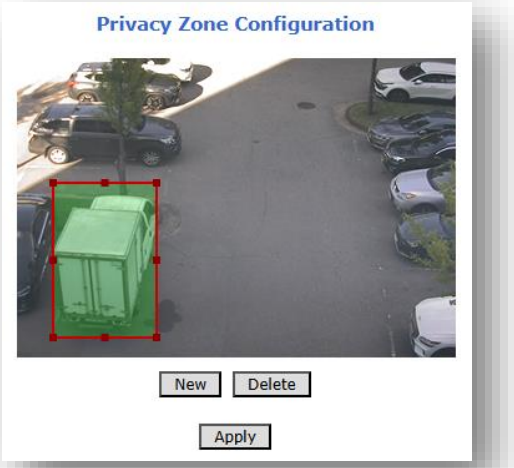
5.9 Privacy Zone (PTZ camera is NOT supported)

This function allows the user to cover the camera area. It is designated as a square block and can be set up to 8 zones. The Privacy zone area is displayed in Gray

When adding a new privacy area, set as follows.

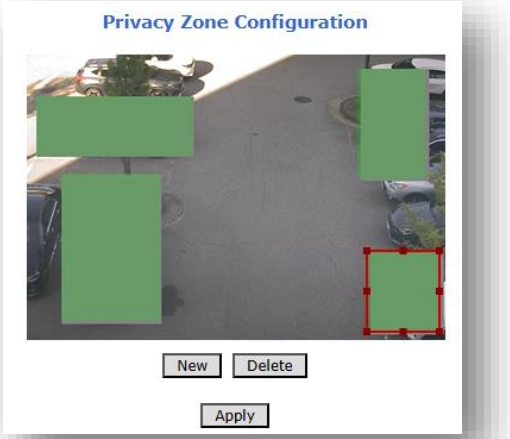
1) Click New button.
2) Click the green box as shown below.

3) Move it to the desired location and adjust the size.



4) Click Apply.

To delete the Privacy Zone, select the setting area, press the Delete button, and click the Apply button.



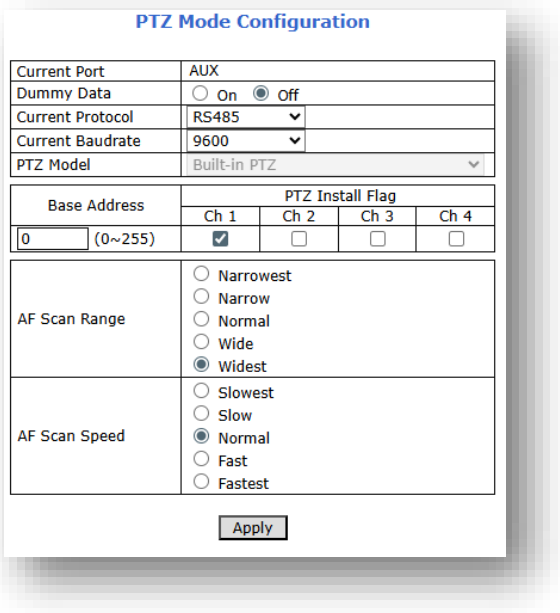
6. Device

The product has two ports, COM and AUX. Basically, the COM port is for console and AUX is for PTZ control, but it can be selected to perform other functions according to the situation.

Generally, the COM port is used for console access, and the AUX port is used for PTZ connection.

6.1 PTZ Mode

To use a PTZ camera or receiver, connect the RS-485 cable to the camera's AUX port.



To set the PTZ Mode, set as follows.

1) Dummy Data: Set On when using dummy data.
2) Current Protocol: Set the PTZ camera connection method.
3) Current Baudrate: Sets the Baudrate of the PTZ camera.
4) PTZ Model: Select the manufacturer or model name to be connected.
   - If PTZ Model is set to Built-in PTZ, it is a PTZ integrated camera. This model cannot be changed.
5) Base Address: Match the address of the PTZ camera. In general, enter the value -1 of the PTZ Address. If the PTZ Address is 1, enter 0 for the Base Address.
6) AF Scan Rage : Set the autofocus scan range. You can choose from Narrowest, Narrow, Normal, Wide, Widest. The closer to Widest, the more accurate the focusing.
7) AF Scan Speed : Set the autofocus scan speed. You can choose from Slowest, Slow, Normal, Fast, and Fastest. The closer to Slowest, the more accurate the focusing

Note: Protocol (PTZ model), Baudrate, ID number must match both PTZ and FlexWATCH® products.

FlexWATCH® supports 58 PTZ protocols and products are as follows.

Pelco-D-AUX : Spectra Dome	FINE : CPR-1600I
Pelco-P-AUX : Spectra Dome	Dongyang : DY-xxxx
Seyeon Tech : SRX-500/SPT-102	Bosch : Auto Dome
Seyeon Tech : FSD-230/270	Sungjin : SJ2000/SJ3000RX
Seyeon Tech : FSD-301	Honeywell : HRX-2000
ELMO : ELDOME	Inter-M : VRX2201
SANTEC : Santec Dome	LG : Speed Dome
Honeywell : HSDN-230/251(H)	LILLIN : PIH7000
Honeywell : HSDN-230/251(P)	Yujin : YRX-5000S
SAMSUNG : SCC641/643A	INTPLUS : Pelco-P PTZ1
SAMSUNG : SCC641/643A(RS422)	VICON : V-1311RB-600
SAMSUNG : MRX-1000	Pelco-D : SK-D106
VICON : V-1311RB	Pelco-D : Yujin
VICON : Surveyor-1000/2000	Pelco-D :-AUX : HUVIRON
SAMSUNG Techwin : SPD1600	Pelco-P-AUX : ONE KING
SAMSUNG Techwin : SRX-100B	Pelco-D-AUX : Probe
SAMSUNG Techwin : SRX-100-R	Honeywell : HSDN-P 251(H)
American Dynamics : DELTA DOME	Dong Yang : DMax Series
KALATEL : CYBER DOME(KTA-xxxx)	Pelco-D-AUX : Neo IR Dome
Panasonic : WV-CS854	RVT : EX Series
SONY : EVI-D30	Panasonic : WV-CW864A
CANON : VC-C4	E-ronix : Pelco-D
RNK : RNK-DOME	SONY : VISCA
ERNITEC : BDR-510	Pelco-D-WW-MD : Spectra Dome
Inter-M : VSD-640/625L	Sungjin : SJ2819RX3
Seyeon Tech : SMP001	Convex : CXD Series
GPI360 : VISCA	Pelco-D-AUX : Convex
Pelco-D-AUX : YOUGUAN CCTV	Pelco-D-AUX : HANKOOK CTEC
Pelco-D-Wonwoo IR : Sprectra Dome	Pelco-D-AUX : Cynix

6.2 Relative Zoom/Focus

This feature allows you to precisely adjust zoom/focus

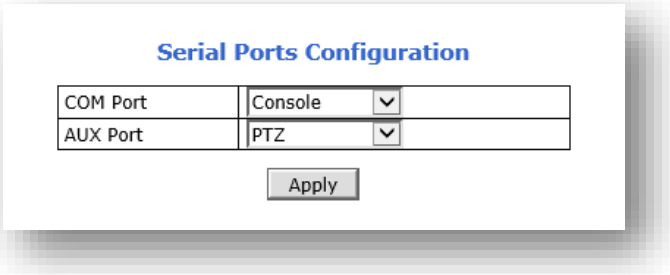
finely zoom or focus using preset values without pressing the Zoom +, - or Focus +, - buttons.

Autofocus does not work when zooming. Zoom and focus must be set manually.

If the preset value is too small, subtle changes may not be detected.

The minimum value is 0 and the maximum is 10000.

6.3 Serial Port

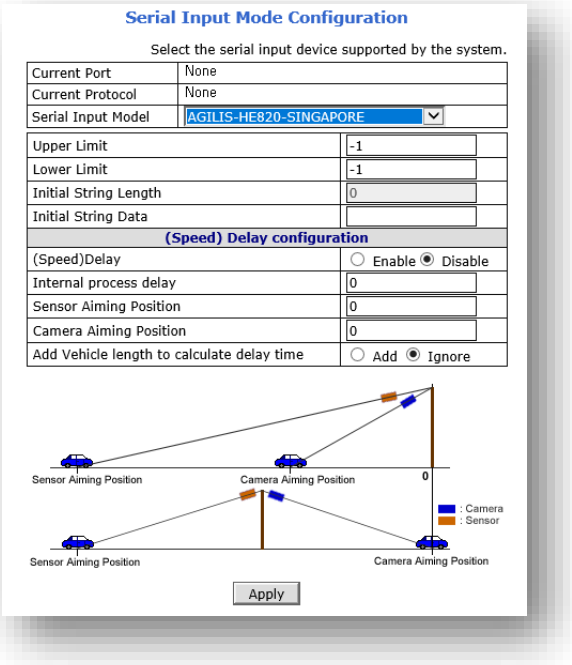


This is a menu to set COM Port and AUX Port. If there is a change in each port, it is applied only after rebooting.
Each port supports Serial Input Mode, Serial Output Mode, Transparent Mode and PTZ. (PTZ can only be set in AUX.)

6.4 Serial Input Port

When the COM or AUX port is set to Serial Input Mode, the camera can receive data using an external device. For example, if a speed detection device is connected and used, when a speeding car is detected, data received from this device and an image can be set to be sent by e-mail or FTP.

In order to use this function, a protocol must be developed in cooperation with the manufacturer.

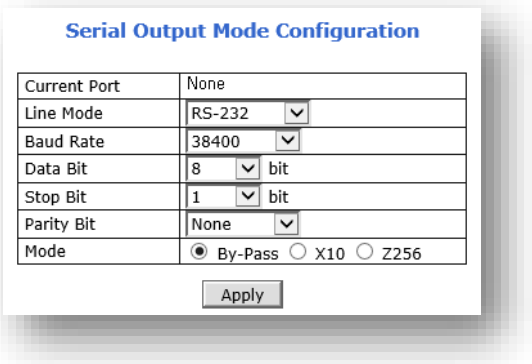


6.5 Serial Output Mode

Using the Serial Output Mode, you can send commands to the UART (Universal Asynchronous Receipt and Transmission) device connected to the camera.

Using this function, you can control equipment such as multiplexer, access control device, X10 Protocol, z256 protocol using RS-232 or RS-485/422 method.

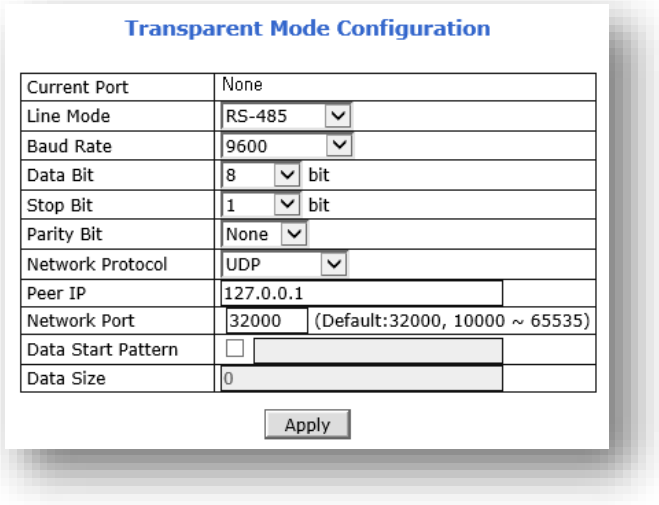
As shown in the figure below, the Serial Output Mode settings can be selected from By-Pass, X10, and Z256.



For Serial Output Mode control, select the correct value and click Apply.

6.6 Transparent Mode

Transparent is a function that By-Passes data received from devices connected through RS485 (RS232,422) to other clients using the network. Contrary to this, data received from other servers (clients) can be used to control devices connected to the camera through RS485 (RS232,422).

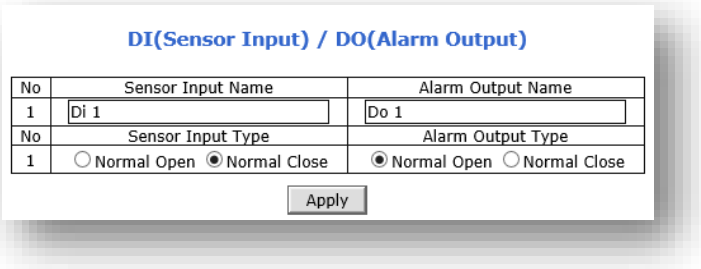


Set as below for Transparent Mode control.

1) **Line Mode:** Communication protocol method.
2) **Baud Rate:** Communication speed.
3) **Data Bit:** Size of data bit when transmitting.
4) **Stop Bit:** The size of Stop Bit when transmitting.
5) **Parity Bit:** Type of parity bit.
6) **Network Protocol:** A type of protocol used to transmit data.
7) **Peer IP:** Another client IP address connected on the network.
8) **Network Port:** Network Port number to use as Transparent
9) **Data Start Pattern:** Start pattern of communication data. (Do not check when not in use)
10) **Data Size:** The size of data transmitted at one time. (Do not enter a value when not in use)

6.7 DI (Sensor Input) / DO (Alarm Output)

This is the menu to set the names of DI and DO and the sensor type.



1) **Sensor Input Name, Alarm Output Name :** Set the name of DI and DO.

(You can use 31 alphabetic characters or 15 Unicode characters for the server name.)

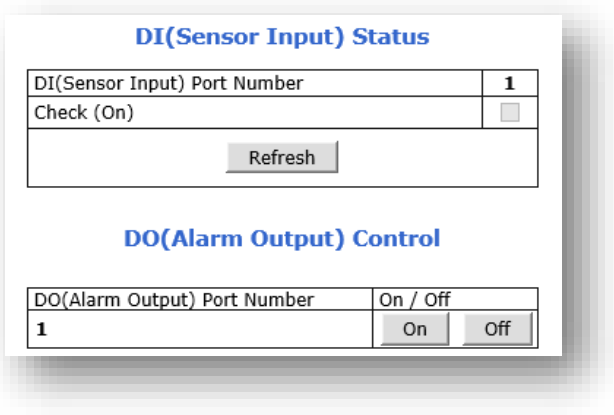
2) **Set Sensor Input Type, Alarm Output Type.**

- **Normal Open** : Normally, the contact is released and then operated when it is connected..
  - Normal Open (NO) Type is commonly used for buttons.
- **Normal Close** : This is a method that operates when the contact is normally connected and then released.
  - Normal Close (NC) Type is commonly used for door sensors.

3) When the settings are complete, click the Apply button to apply**.**

Note: It must be set according to the sensor type for normal operation.

6.8 DI Status / DO Control



DI (Sensor Input) Status shows whether DI is operating or not. If the checkbox is checked, it is in operation, and if it is unchecked, it is not in operation.

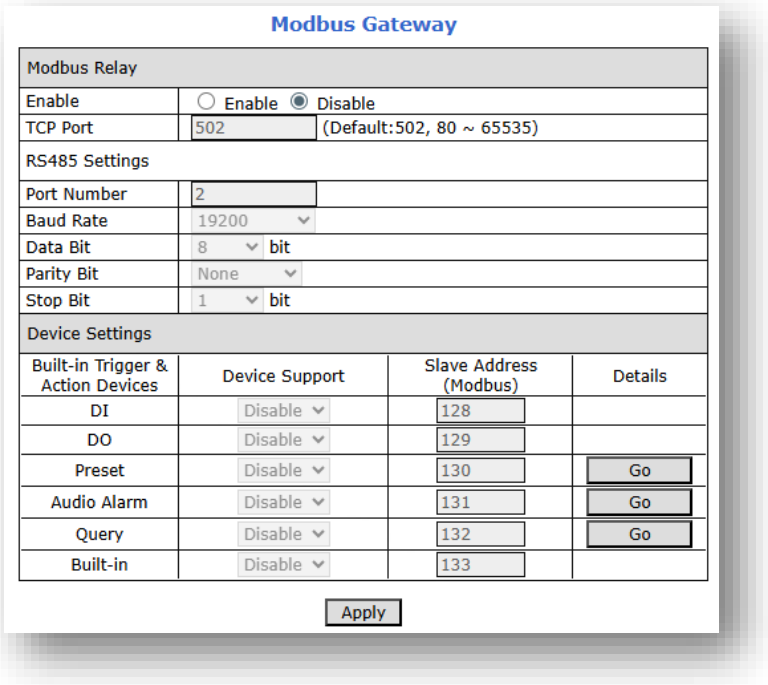
DO (Alarm Output) Control is a function to check whether the device connected to DO operates. DO works when you click the On button, and stops when you click Off.

6.9 Modbus Gateway

Modbus is a protocol developed to interconnect manufacturing plants and industrial electronic devices using RS485 or Ethernet. To use Modbus, you must refer to the specifications and manuals of each device and configure them accordingly. A thorough understanding of Modbus is essential.

Modbus functionality requires the integration and application of numerous devices, so this manual explains the functions of each menu.

Modbus also allows for integration using camera DIs, DOs, presets, audio alarms, and queries.

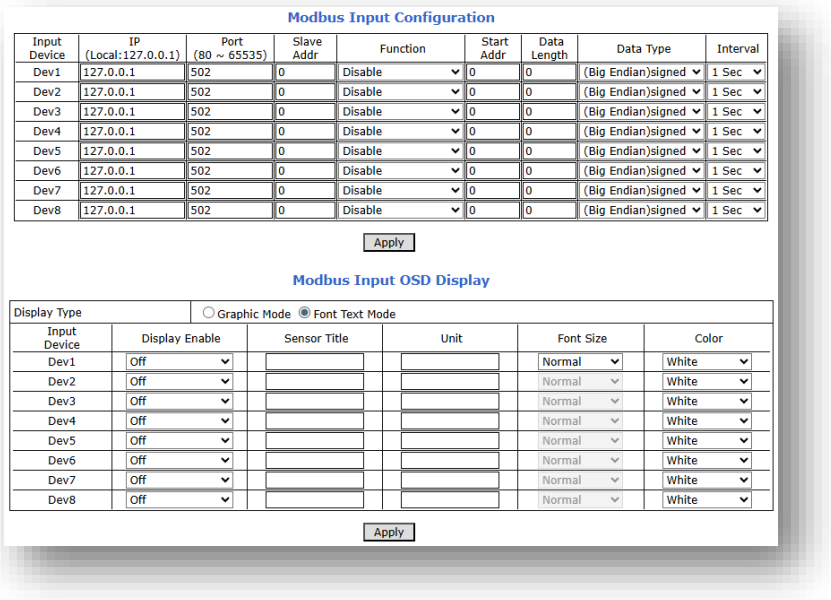


- Modbus Relay
  - Enable: Sets whether to use Modbus.
  - TCP Port: Sets the port to use in Ethernet Modbus.
  - Port Number: Sets the port number to use in RS485 Modbus.
  - Baud Rate: Sets the baud rate to use in RS485 Modbus.
  - Stop Bit : Sets the Stop Bit to be used in RS485.
  - Data Bit: Sets the data bits to use in RS485 Modbus..
  - Parity Bits: Sets the parity bits to use in RS485 Modbus.
  - Stop Bits: Sets the stop bits to use in RS485 Modbus.

- Device Settings
  - DI : Get the camera's DI status. The address is set to 128, but can be changed.
  - DO : Links to the camera's DO. The address is set to 129, but can be changed.
  - Preset : Links to the camera's preset. The address is set to 130, but can be changed.
  - Audio Alarm : Link to the camera's audio output using preferred audio source. The address is set to 131, but can be changed.

- Query : It integrates with other services using HTTP/HTTPS CGI. The default address is 132, but can be changed.
- Built-in : It can be connected to Modbus equipment installed inside the camera. Currently, it is available for thermal imaging cameras. The address is set to 133, but can be changed.

6.10 Modbus Input



If you have a Modbus device connected, please refer to the manual for each device.

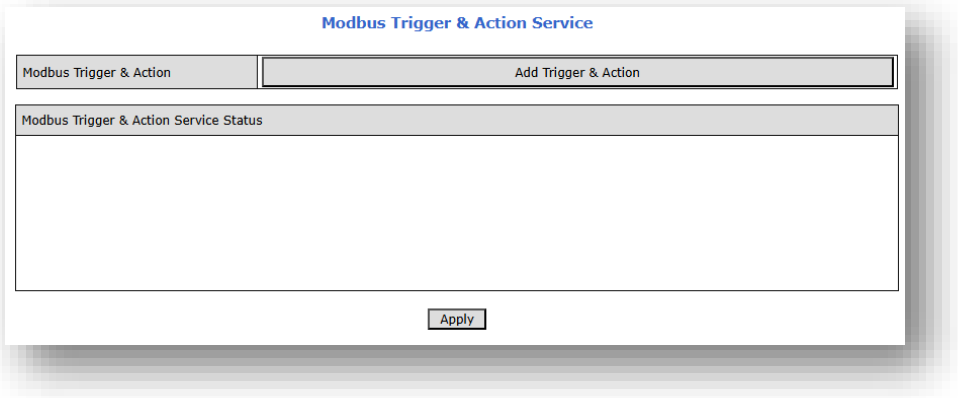
Simply set the values supported by your device in the menu above.

- Modbus Input Configuration
  - IP : Set the device's IP address. For RS-485 equipment, use the IP of the connected device or camera.
  - Port : Enter the port. (The default port is 502, but can be changed)
  - Slave Addr : Enter the device's address.
  - Function : Select the function to link with device.
  - Start Addr : Enter the start address of data that link to the device.
  - Data Length : Enter the data length that link to the device device.
  - Data Type : Enter the packet type of data that link to the device.
  - Interval : Sets the communication interval when linking with a device.

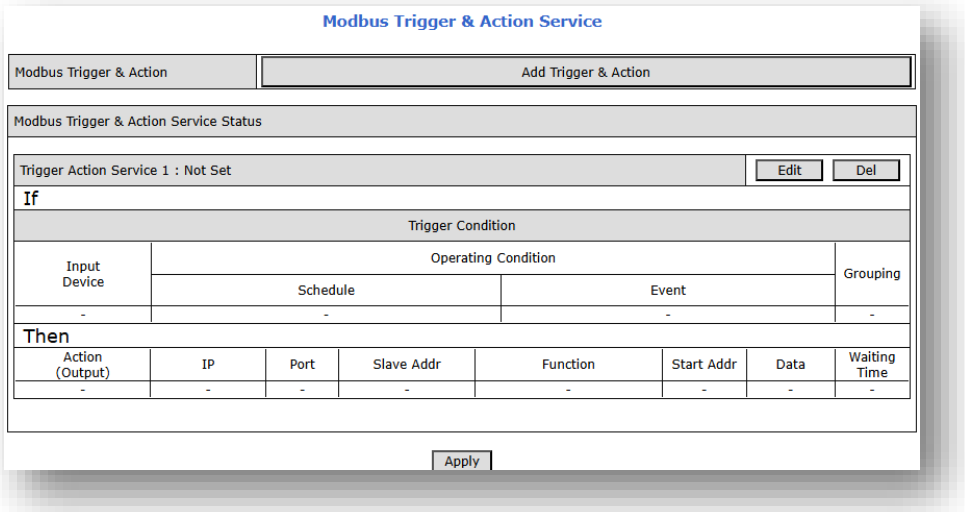
- Modbus Input OSD Display
  - Display Type : Select either graphic mode or text mode for the displayed OSD text. Graphic mode prioritizes quality, while text mode prioritizes speed. Text mode should be used for real-time display.
  - Display Enable : Sets whether to display data entered in Modbus input settings.
  - Set the sensor title, unit, font size, coordinates, color, etc. as text mode or graphic mode.

6.11 Modbus Trigger & Action

This function triggers events based on IF and Then conditions, using the camera's DI/DO functions or linking with a Modbus device. To use the Modbus Trigger & Action function, a Modbus gateway and Modbus input must be configured.



You can add multiple conditions or even results.



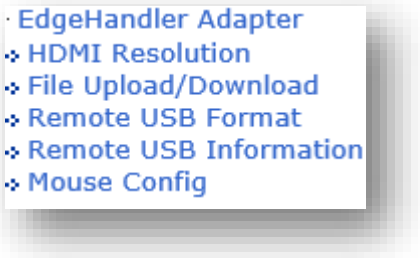
6.12 EdgeHandler Adpater (EHA200 / EHA300)

This menu is displayed only for EdgeHandler Adapter products. You can set/check the HDMI resolution input to the adapter or set the mouse operation.

In the case of the EHA300 model, you can upload or download files to the device by connecting Micro SD.

The menu appears differently depending on the EHA200 / EHA300 model.

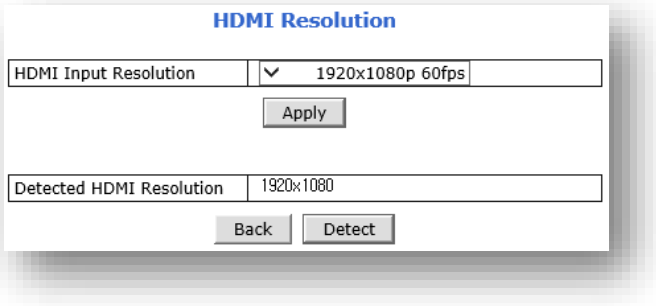
EHA200 Menu



EHA300 Menu

6.12.1 HDMI Resolution (EHA200 / EHA300)

This menu allows you to check the HDMI resolution input to the adapter. By default, it is set to 1920x1080p 60fps, and if another resolution supported by the adapter is entered, it is automatically recognized and restarted. Users can also manually change the resolution.



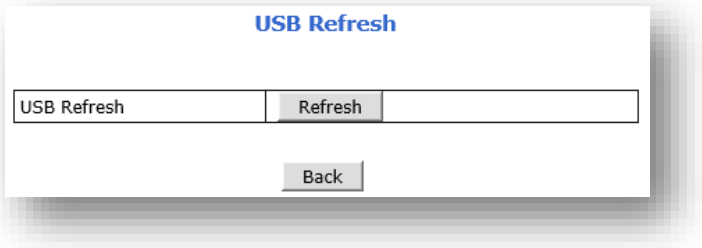
1) HDMI Input Resolution : You can view the list of resolutions supported by the adapter or set them manually.

The resolutions supported by the adapter are as follows :
1920x1080p 60fps / 1920x1080i 60fps / 1280x1024p 60fps
1280x720p 60fps / 1024x768p 60fps / 800x600p 60fps

2) Detected HDMI Resolution : You can check the resolution information input to the adapter by using the Detect button. If the result value is 0x00 or an unsupported resolution is displayed, no video is displayed. If you use a converter, etc., check if the connected converter works normally and if there is no problem with the HDMI cable.

6.12.2 USB Refresh (EHA200)

When an error occurs even though the USB cable is normally connected due to a temporary port error on the PC or NVR, software refresh can be performed without removing and reconnecting the USB cable. If you click the Refresh button, the USB connection is disconnected and restored again.

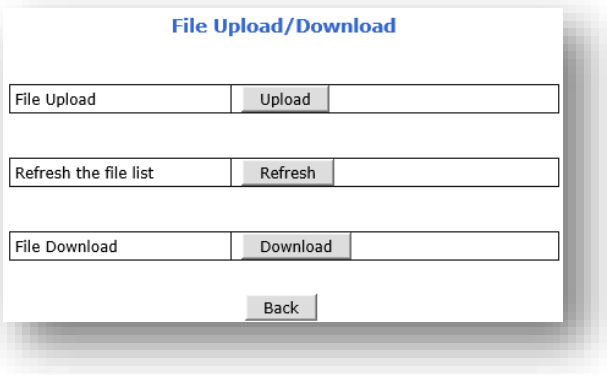


6.12.3 File Upload / Download (EHA300)

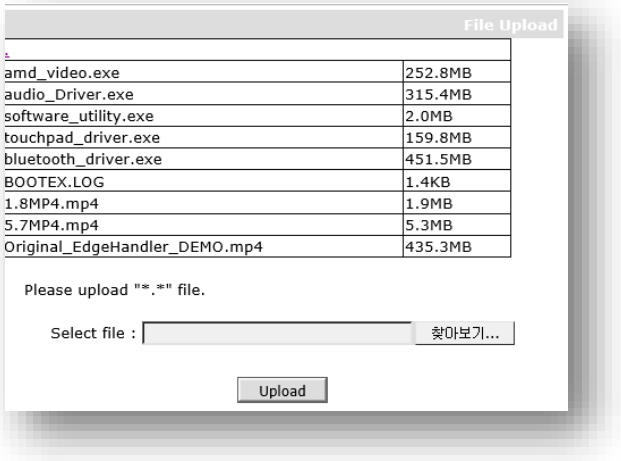
This menu allows you to upload or download files using Micro SD inserted into the adapter.

Only English file names are supported, and one file can be upload/download up to 2GB.

In the case of a PC connected to the adapter, you can view the file contents of the Micro SD using File Explorer. You can check the Remote USB drive.



1) File Upload : Upload files from PC (NVR) to adapter.

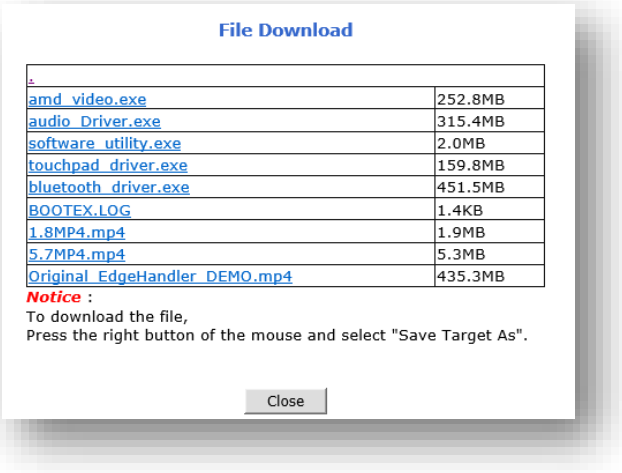


If there is a file that has been uploaded in advance, it will be displayed. After selecting the desired file using the browse button, click the Upload button to complete the upload.

2) Refresh the file list : Refresh for synchronization of uploaded files.

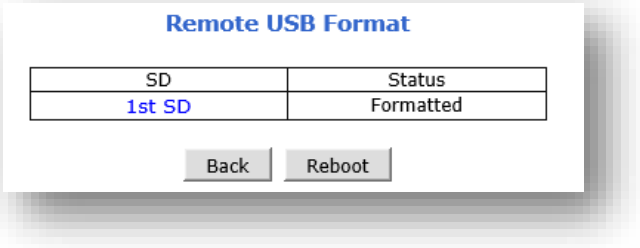
If the uploaded file is not visible, you can view it by using the Refresh button..

3) File Download : Download files stored in Micro SD to PC (NVR).
Click the Download button to see a list of saved files. Click on the file to download.

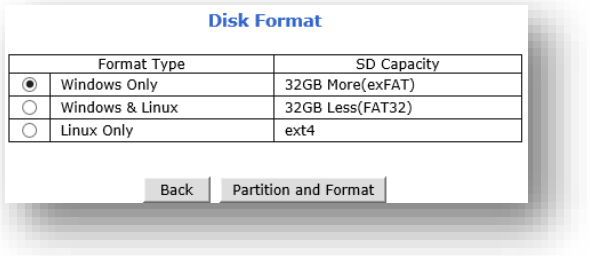


6.12.4 Remote USB Format (EHA300)

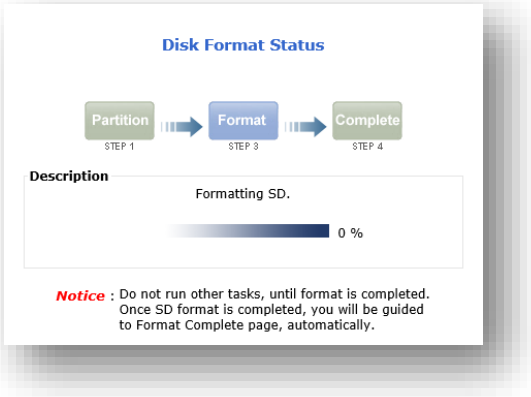
This is the menu to format the Micro SD memory inserted into the adapter. Formatting time may vary depending on adapter usage rate, Micro SD capacity and class.

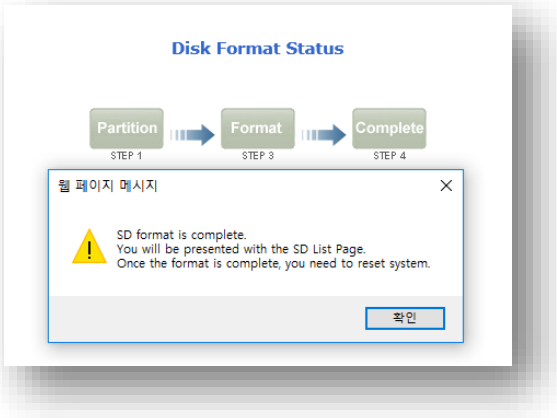


1) Click the 1st SD menu to enter the format menu.



2) Specify the file system to format.
   - exFAT: This is a file system available only for Windows.
   - FAT32: A file system available on Windows and Linux.
   - ext4 : A file system only available on Linux.



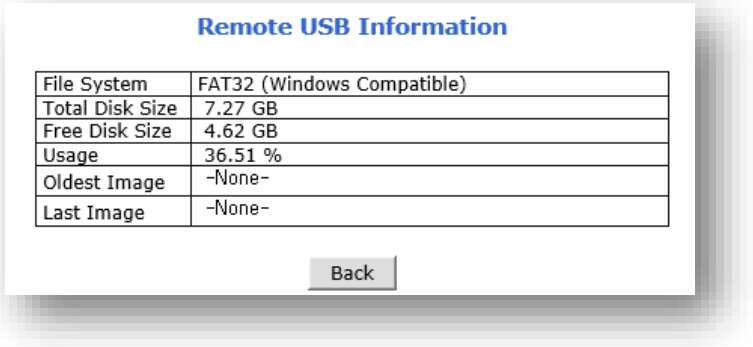


→

3) Click the Partition and Format button to start Micro SD formatting.
   The formatting progress is displayed, and when completed, a pop-up message appears as shown in the image on the right.

6.12.5 Remote USB Information (EHA300)

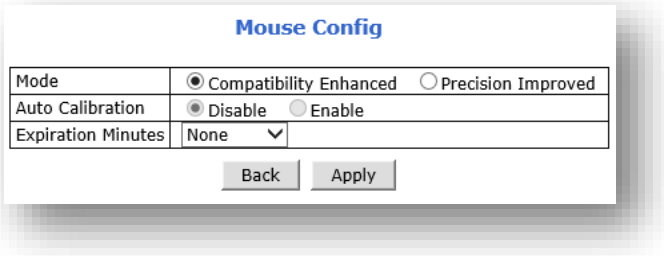
It shows the information of Micro SD inserted into the adapter. Here, the file system, total memory capacity, currently used capacity, and remaining capacity are displayed. (Oldest, Last Image is not shown.)



6.12.6 USB Config (EHA200 / EHA300)

This is a menu that can control mouse movement when remote control is used using the EdgeHandler Adapter.

(Based on Windows 10) Use the remote control after disabling the Windows Control Panel → Mouse → Pointer Options → Improve Pointer Accuracy option.



- Mode
  - Compatibility Enhanced Mode : This is a mode to directly control the remote mouse. A delay of at least 150 ms and at most 250 ms may occur.
  - Precision Improved Mode: This mode is available when the resolution of the remote site and the local resolution are the same. The local mouse and the remote mouse are expressed simultaneously (two), and the remote mouse follows after the local movement. It can be used almost without delay.
- Auto Calibration : It is an automatic synchronization function. This function is available when in Precision Improved mode. During remote control, the locations of the local mouse and remote mouse are synchronized each time a mouse button is clicked. Auto Calibration function is not available if the mouse position is not synchronized in Precision Improved mode.
- Expiration Minute : This is a function that automatically disconnects the connection if there is no control for a certain period of time when using the remote control mode.

7. Recording

When Micro SD is installed in the camera, camera images can be saved or saved data can be retrieved and played back. In this menu, you can set all the settings necessary for saving (Micro SD format, information check, save settings and save mode, status report, etc.).

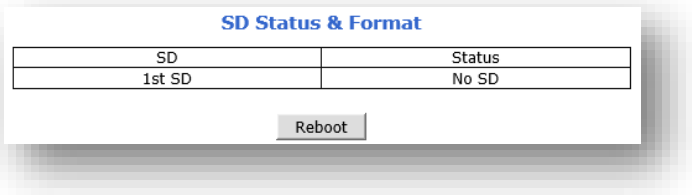
7.1 SD Status & Format

This is the menu to manage the Micro SD mounted on the camera. In this menu, you can set functions such as SD format, information check, recording rotation setting, and status report.

Note: The Micro SD card newly installed in the camera must be formatted in the Disk Setting Menu before use. Data will be deleted after formatting.

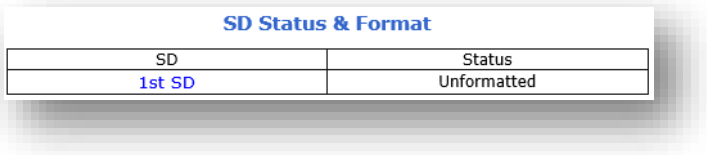
Depending on the current disk status, the SD Status & Format menu will be displayed as below.

- No SD : The message below is when the Micro SD card is not inserted or the SD card is not recognized due to a defect. Please check if there are any problems with the card and if it is inserted correctly.



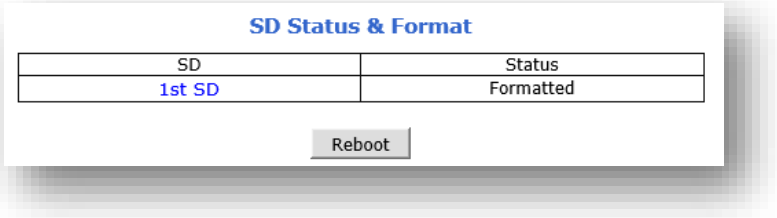
No SD

- Unformatted : The message below indicates that the Micro SD card has been recognized normally but is not formatted.



Unformatted

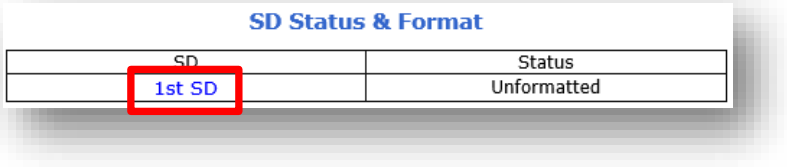
- Formatted : The message below is when the Micro SD card has been recognized/formatted normally.



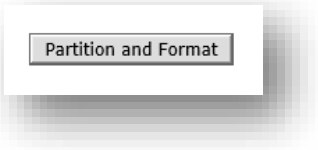
Formatted

To format the Micro SD card, follow the below steps.

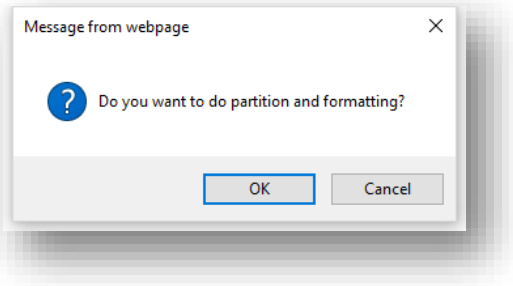
1) Select the Micro SD card you want to format.



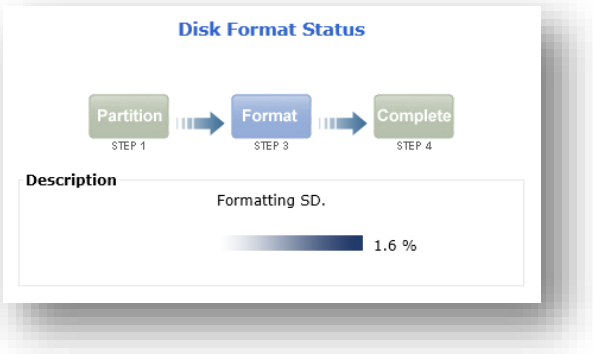
2) Click Partition and Formatbutton.



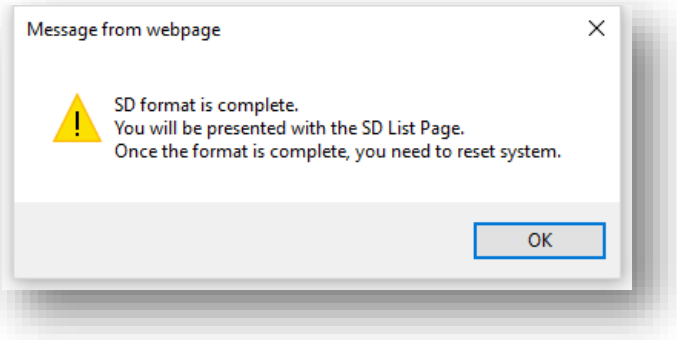
3) When the confirmation window appears, click the OK button to proceed.



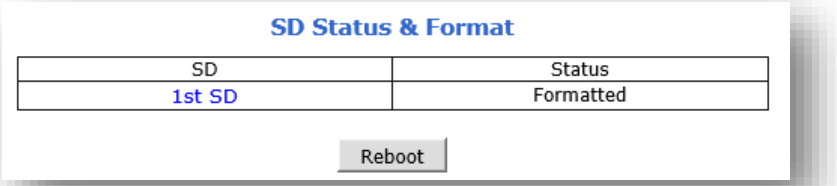
Note: Please do not close the page until formatting is complete.



4) After completing the process, click OK to end formatting.



5) If formatting is completed normally, the Formatted will be displayed.



6) After restarting the system by clicking the Reboot button, you can use it normally.

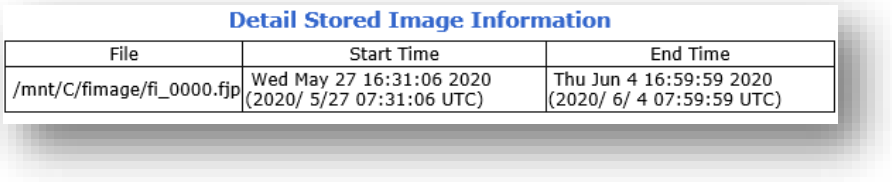
Note: If the Status is not displayed as "Formatted", there is a possibility that the Micro SD card is defective. Please check the Micro SD card.

7.2 SD Information

For detailed information and installation information on the Micro SD card, check the SD Information shown below.

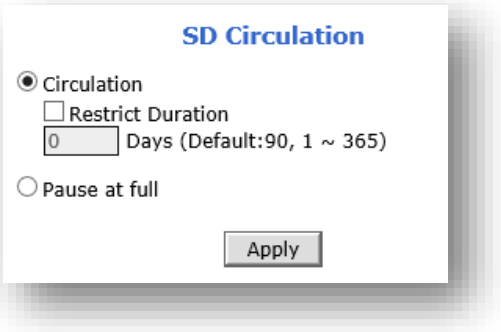
- **File System**: Displays the current file system. (It uses the ext4 file system.)
- **Total Disk Size**: Displays the total storage capacity..

- **Free Disk Size**: Displays the remaining capacity.
- **Usage**: Displays the capacity currently being used as a percentage.
- **Oldest Image**: Displays the oldest recorded data time.
- **Last Image**: Displays the most recently recorded data time.
- **Detail Stored Image Information** : Displays data recorded in Micro SD as below.



7.3 SD Circulation

This is a menu to set the storage circulation function in the installed Micro SD card.

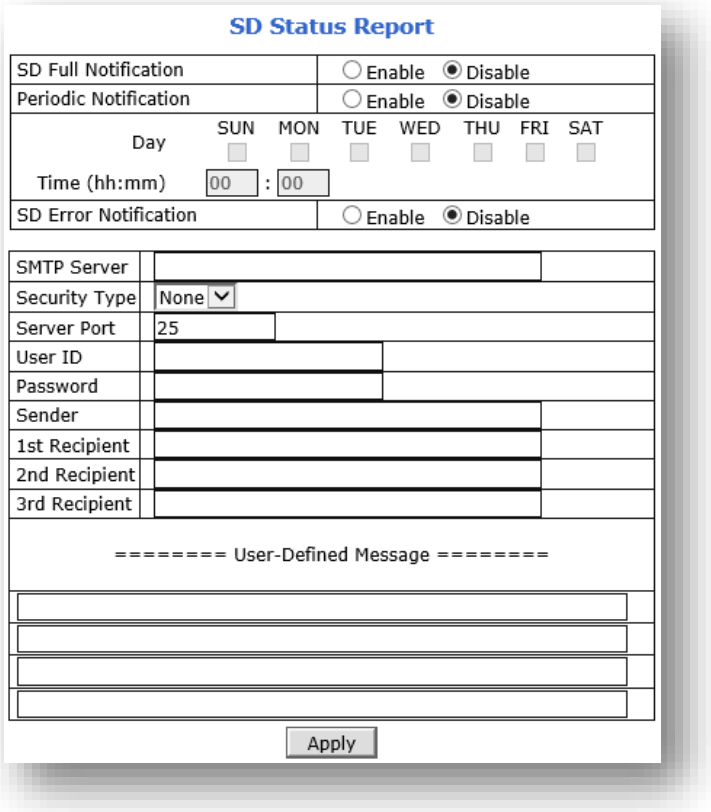


- Circulation: When the installed Micro SD card is full, it deletes old data and saves it again.
  - Restriction Duration: Set the rotation period.
  - If the capacity of the SD card is insufficient, this setting is ignored and proceeds according to the capacity.
- Pause at full: When the storage space is full, recording stops and a STOP message is displayed.

7.4 SD Status Report

You can receive periodic reports of the current storage situation by e-mail.

■ Set Report conditions as described below.



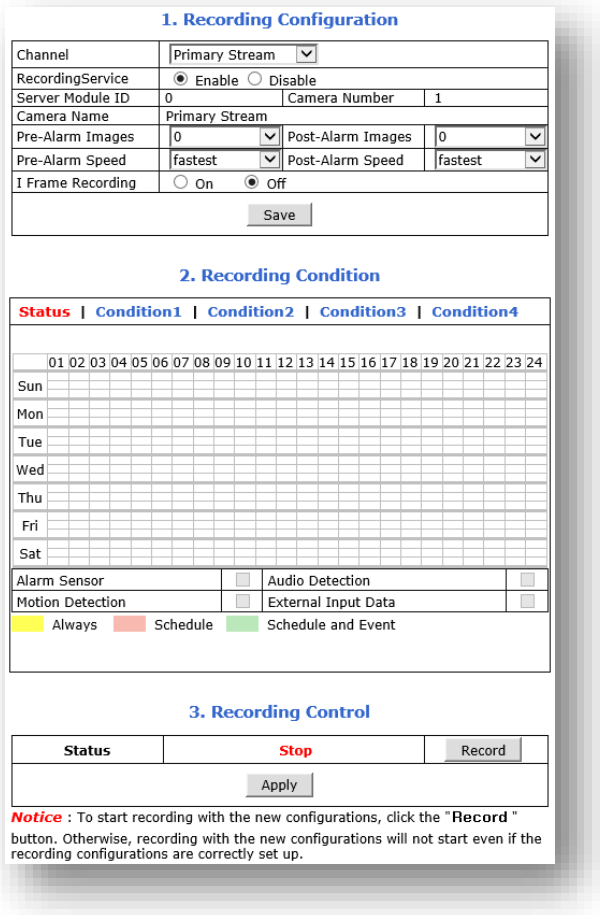
1) **SD Full Notification**: When the disk capacity is full, you will be notified by e-mail..
   - This function works only when Pause at full.
2) **Periodic Notification**: The storage status is notified by e-mail at the time set by the user..
   - When this function is enabled, the bottom menu is activated.
   - You can specify the day/time, etc..
3) **SD Error Notification**: In case of a disk error, you will be notified by email.
4) **SMTP Server** : Enter the server address to send mail to.
5) **Security Type** : Set the security type. You can select one of the types None / SSL / TLS supported by the SMTP server.
6) **Server Port** : Enter the port used by the SMTP server..
7) **User ID** : Enter the user ID to log in to SMTP.
8) **Password** : Enter the password to log in to SMTP.
9) **Sender**: Enter the sender's e-mail address. The email entered here must be an email belonging to SMTP.
10) **1st Recipient** : Enter the first e-mail address. (must be entered)
11) **2nd Recipient** : Enter the second email address. (option)
12) **3rd Recipient** : Enter the third email address. (option)

13) **User-Defined Message box**: This is the text that is sent together when sending mail..

14) When the settings are complete, click the Apply button.

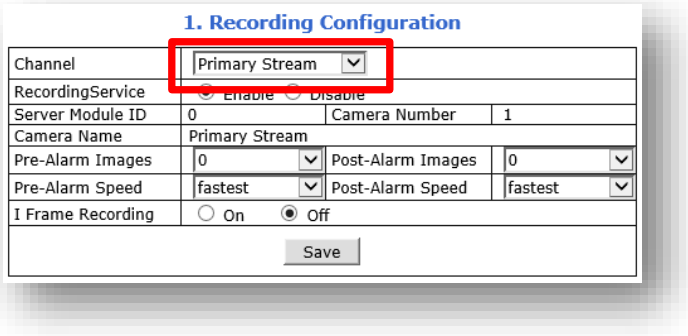
Note: Recording settings can be set for each channel (stream). If the recording conditions are changed, you must click the Apply button at the bottom of the Recording Setup menu to reflect the changed conditions.

7.5 Recording Setup



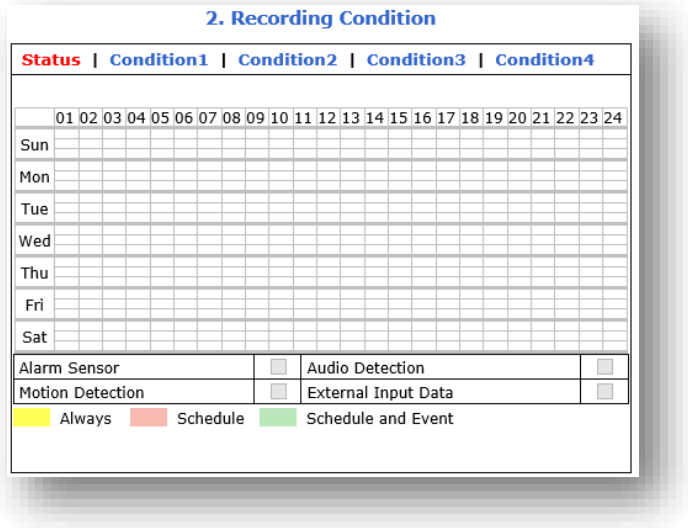
Recording settings are described below.

7.5.1 Recording Configuration



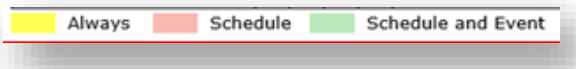
- **Channel** : Select the channel you want to record.
- **Recording Service** : Set the recording service. Even if conditions are set, Recording Service If disabled, it will not be saved. (The default setting is Enable.)
- **Server Module ID, Camera Number** (Displays module ID and camera number. Change is not possible.)
- **Camera Name** : Displays the camera name. (The camera name cannot be changed in this menu.)
- **Pre-Alarm Images / Post-Alarm Images** : This is a menu to select how many more images to record before/after an event occurs when saving by event is set.
- **Pre-Alarm Speed / Post-Alarm Speed** : Operates only when the codec type is MJPEG. For Pre-Alarm It is reflected when saving by Always, Schedule, and in case of Post-Alarm Speed, it is reflected when saving by Event, Schedule and Event.
- **I Frame Recording** : Operates only when the codec type is H.264 or H.265. When setting Event or Schedule and Event, even if no event occurs, I Frame is stored continuously. Data display does not appear on the Player when only I Frames are saved without events.

7.5.2 Recording Condition



i. This is the menu to set the storage conditions. Up to 4 storage conditions can be set per channel.

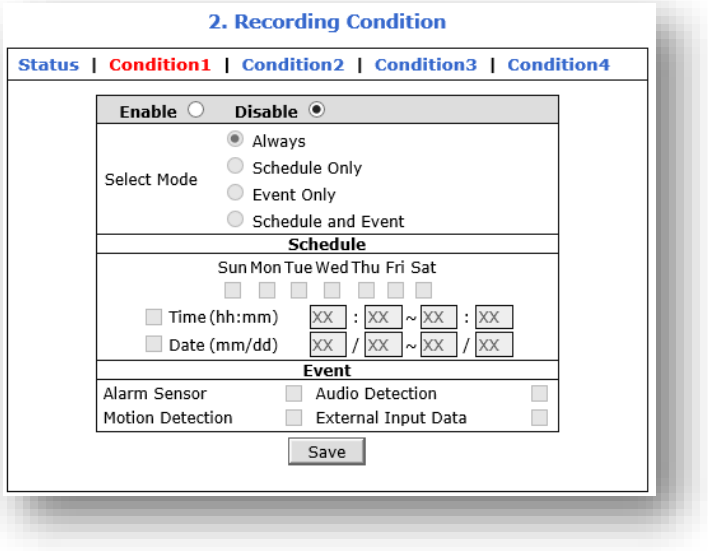
ii. When set by Always, Schedule Only, (Schedule and Event), the color that matches the condition is displayed.



iii. If recording by event is set, it is displayed as a check box.

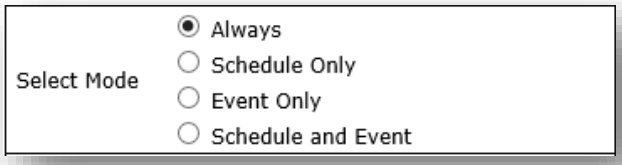
7.5.2.1 Condition setting.

> ※*Notice*
> *- Each condition operates in OR method.*
> *(Recording proceeds even if only one condition is satisfied.)*
> *- When several conditions are set in one condition, it operates in AND method*
> *(Recording proceeds only when all conditions set in condition are satisfied.)*



1) Enable / Disable : This is the menu to enable or disable recording..

2) Select Mode : This is the menu to select the recording mode.



a. Always: Always record regardless of conditions.

b. Schedule Only: Records on the day and time specified by the user.

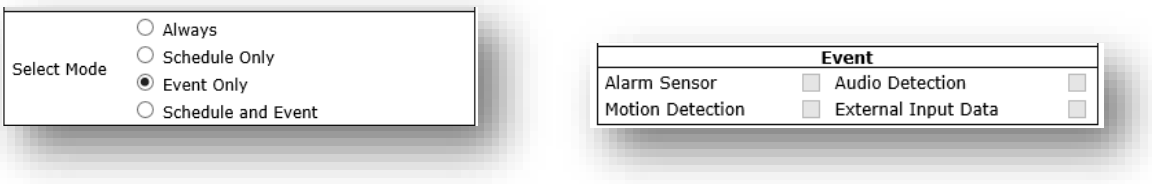
c. Event Only: Record by events such as alarm sensor, audio detection, and motion detection.

d. Schedule and Event: Records the day, time and event combination specified by the user.

3) Select Schedule Only if you want to save by schedule. If Schedule Only is selected, the Schedule menu at the bottom is activated. It is recommended to set by day, time, or a combination of time and date.

(If you specify the day, time, and date, it may not be recorded if the conditions are not met.)

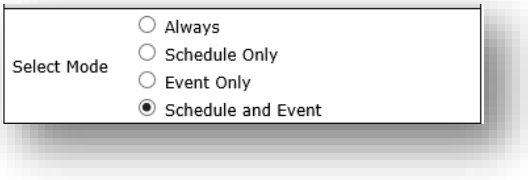
4) Select Event Only if you want to set the recording by event. If Event Only is selected, the Event window at the bottom is activated..

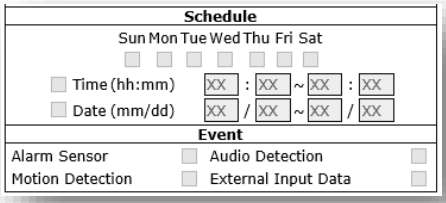


■ Event conditions are as follows.

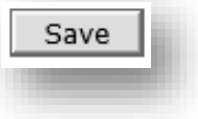
- Alarm Sensor : Record by DI sensor.
- Audio Detection: Record by audio detection.
- Motion Detection: Record by motion detection.
- External Input Data : Recording is performed using external inputs such as FES/POS or AI/VA. Depending on the environment, separate development may be required to utilize these conditions.

5) It is used when setting recording by combination of schedule and event. If you select the Schedule and Event menu, the Schedule and Event menus are activated together. You can set the desired schedule and event combination.



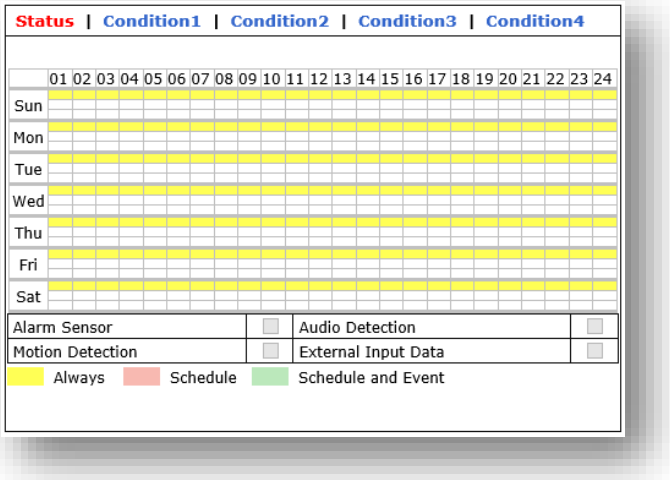


6) When the condition setting is complete, click the Save button at the bottom of the window.

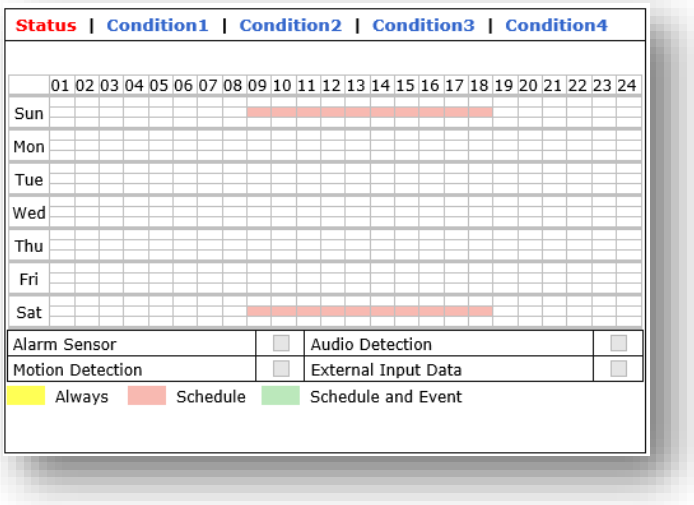


7) Display details of each condition

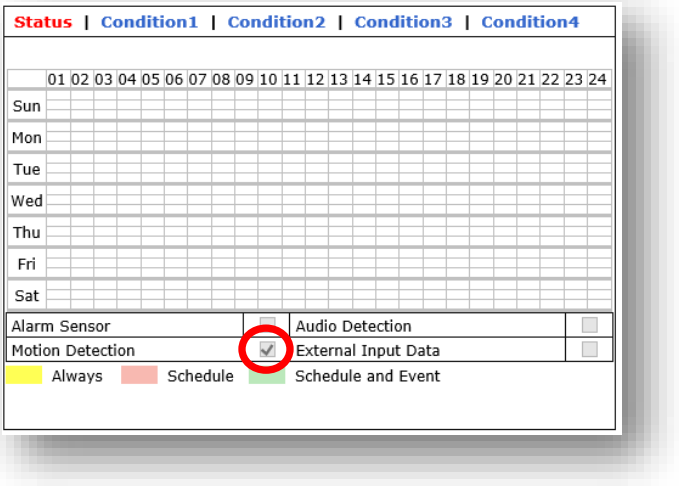
- When set to Always: Always is displayed in Condition, and yellow bars are displayed on the calendar at the bottom.



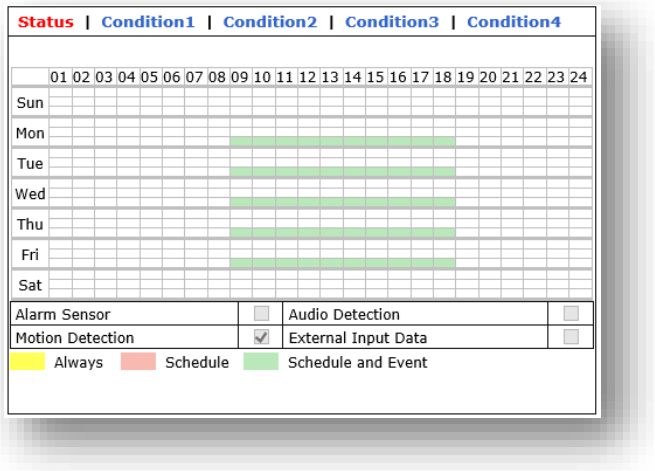
- When set to Schedule : For example, if the condition is set from 9:00 am to 6:00 pm on Saturday and Sunday, it is displayed in pink on the timetable.



- When set to Event: Event settings are displayed in the checkbox at the bottom. For example, if you set to save when there is motion detection, Motion Detection is checked..

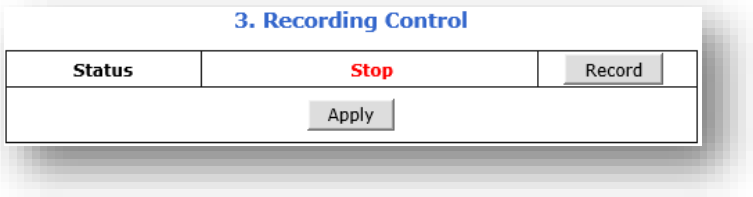


- When set to Schedule and Event: The setting information is displayed in the same way as when Schedule and Event are set. The calendar is marked in light green. For example, if you set to save only when there is movement from Monday to Friday, 9:00 am to 6:00 pm, it will appear as shown in the figure below.



8) If you want to record other channels, change the Chanel item, press the Save button, and set it in the same way.

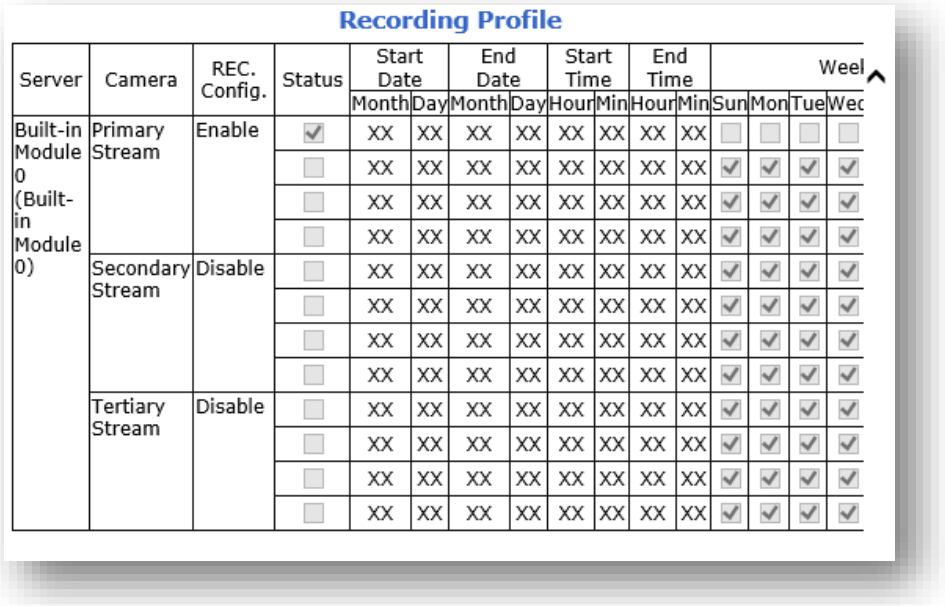
7.5.3 Recording Control



Click the Apply button to save the recording conditions and to start recording. If there is a change in the recording condition, it will be applied only when you click the Apply button in this menu. If you want to temporarily stop recording or start recording again, just click the Record / stop button. You can see the current storage status by looking at Recording Status.

7.6 Recording Profile

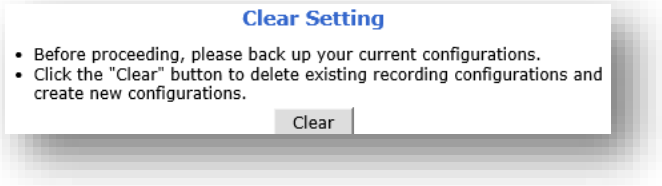
Recording Profile is a menu that allows you to see the recording settings of each channel at a glance.



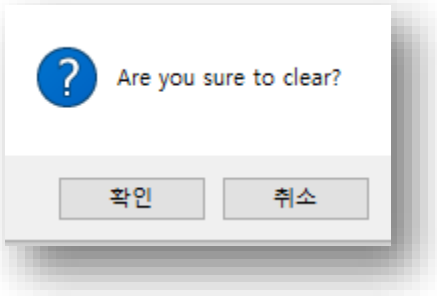
7.7 Clear Setup

Clear Setup is a menu to initialize recording settings. The recorded data is not affected.

1) Click the clear button to initialize the recording settings.



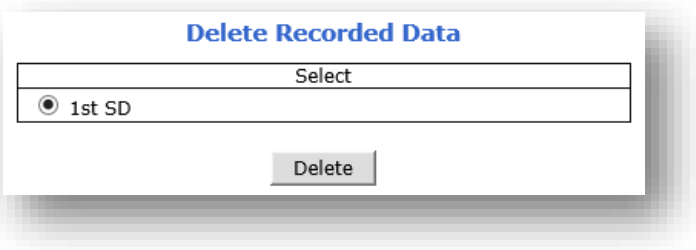
2) When the following message appears, click the OK button.



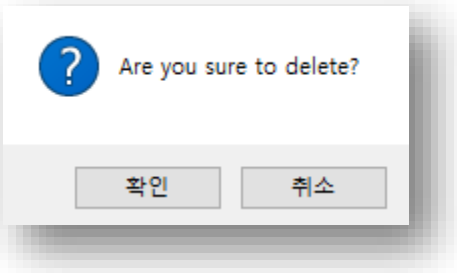
7.8 Delete Recorded Data

This menu is used to delete recorded data. If recorded data size on the SD card is not large, this function allows you to delete the recorded data more quickly.

1) Select the SD card you want to delete.



2) Click the Delete button to delete the recorded data.
3) When the following message appears, click OK button.

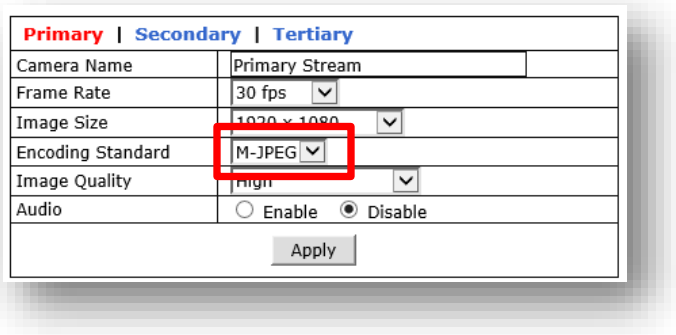


8. Advanced

This is a menu to set up advanced functions such as E-mail notification service, FTP, Sensor Notification, and Alarm Out.

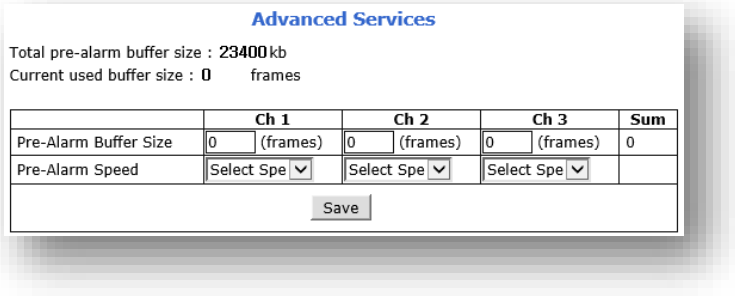
To use the image transmission function via Email, FTP, etc., the codec of the corresponding channel must be set to MJEPG as shown in the figure below.

(Products using ru, rv firmware can only be linked with Quaternary channels.)



8.1 Advanced Services

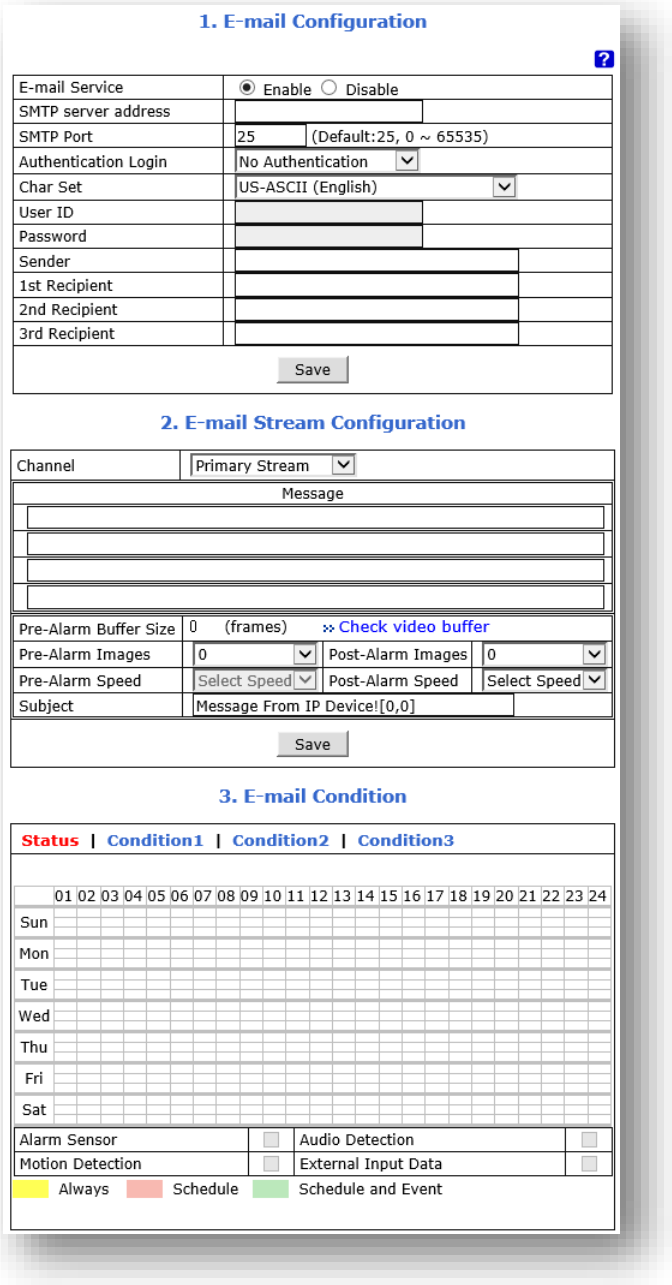
Pre-Alarm buffer size and speed can be checked in the menu below.



- **Pre-Alarm Buffer Size**: You can set the buffer size for the image before the event. The unit is frame, and each channel can be set to a different value.
- **Pre-Alarm Speed:** You can set the buffering speed. If set to Fastest, the server will save the image the fastest. Each channel can be set to a different value.

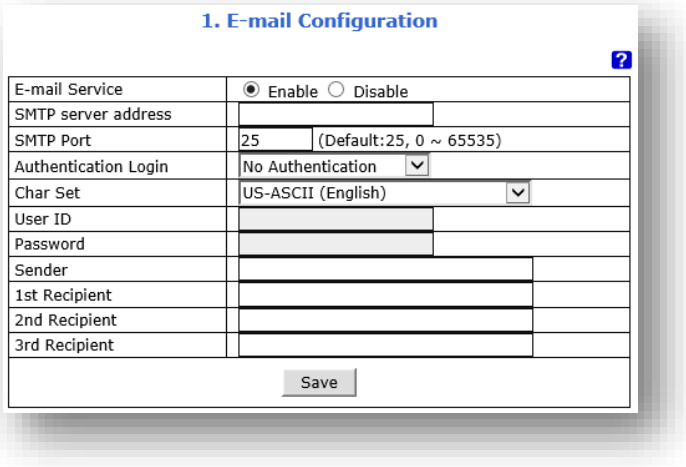
8.2 E-mail

When an event occurs, you can be notified via e-mail with a message along with an image.
To receive images, the codec of the selected channel must be set to MJPEG.



8.2.1 E-mail Configuration

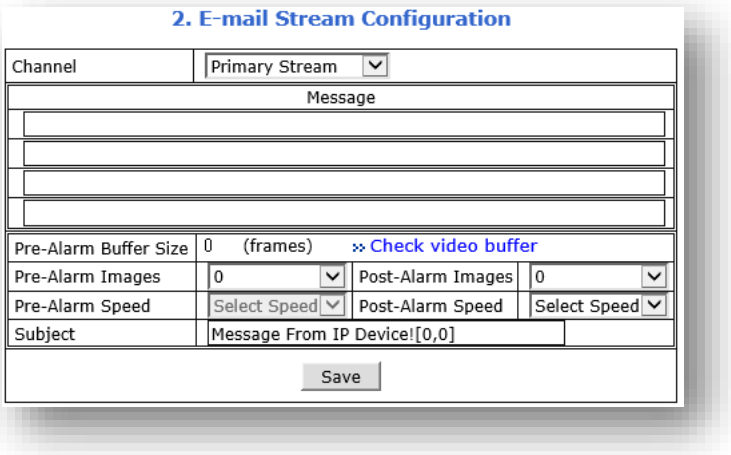
Settings required for mail transmission are performed in the menu below. Enter the SMTP, sending address, and receiving address.



- E-mail Service : Set whether to use the service
- SMTP server address: Enter the SMTP Server address.
- SMTP Port: Enter the port information used by the SMTP server.
- Authentication Login : Select the authentication type of the SMTP server.
- Character sets : Select the language of the message.
  - If you want to send a message in Korean, you can set it to EUC-KR (Korean).
- User ID: Enter the user ID. It must be an account belonging to SMTP.
- Password: Enter a password. It must be an account belonging to SMTP.
- Sender: Enter the sender's E-mail address. It must be an account belonging to SMTP.
- 1st, 2nd, 3rd Recipients : Enter the recipient's e-mail address.
- When the setting is complete, click the Save button.

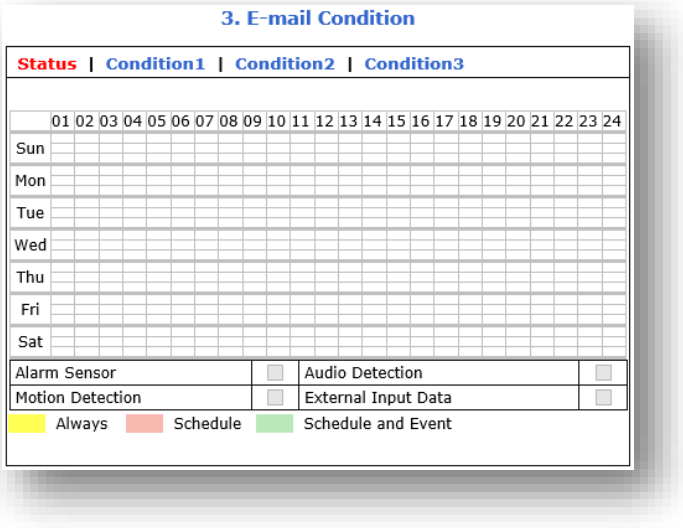
8.2.2 E-mail Stream Configuration

This is the menu to set the subject, channel, message, etc. to be sent by e-mail.



- Channel : Select the channel to select the event.
- Message: Enter the message to be included in the mail content. You can send up to 4 columns.
- Pre-Alarm Image / Speed: This is the image and speed before the event occurred.
- Post-Alarm Image / Speed: Image and speed after event occurs.
- Subject: The subject of the email.
- When the setting is complete, click the Save button.

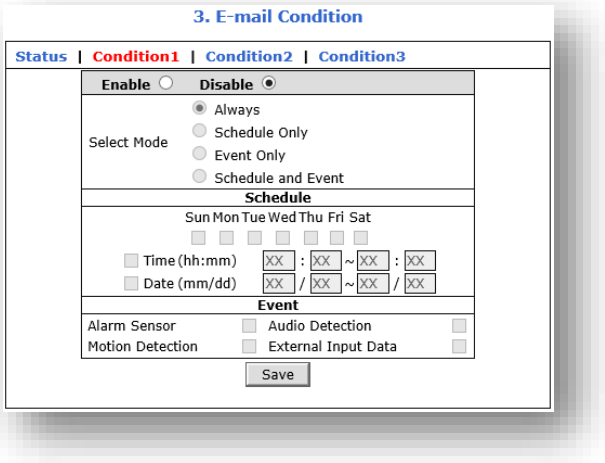
8.2.3 E-mail Condition



This is the menu to set the conditions for sending to e-mail.

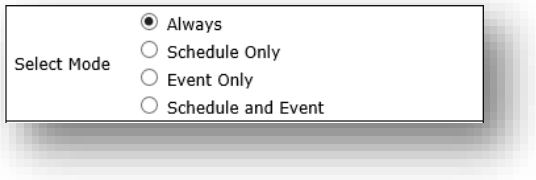
Mail service is suitable for use as an event or schedule & event condition..

Always or scheduled conditions are not used.



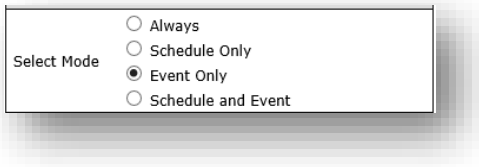
1) Enable / Disable : This is the menu for enabling or disabling each Condition..

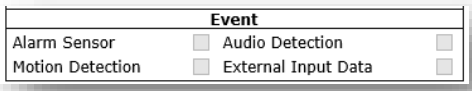
2) Select Mode : This is the menu to select the mail transmission mode..



- Always: Not used for E-mail Service.
- Schedule Only: Not used for E-mail Service.
- Event Only: Operates when events such as alarm sensor, audio detection, and motion detection occur.
- Schedule and Event: It operates on the specified day, time and when an event occurs.

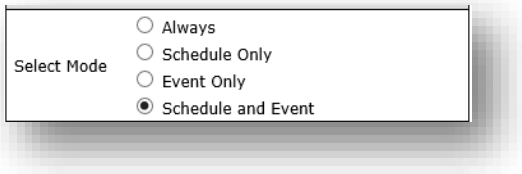
3) Select Event Only if you want operation by event. If Event Only is selected, the Event window at the bottom is activated.

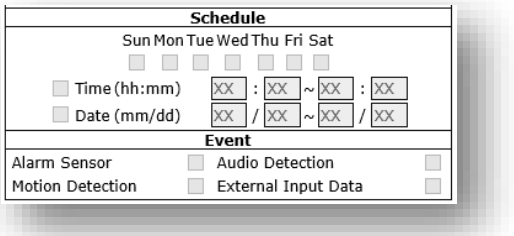




- Event conditions are as follows.
  - Alarm Sensor : Operates by DI Sensor.
  - Audio Detection : Operates by Audio detection.
  - Motion Detection : Operates by Motion detection.
  - External Input Data :. Operations are triggered by external inputs such as FES/POS or by AI/VA. Depending on the environment, separate development may be required to utilize these conditions.

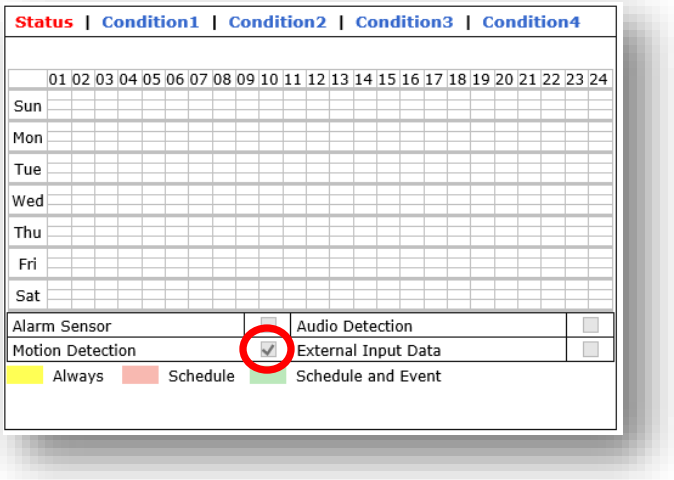
4) It is used when operating in combination by schedule and event. If you select the Schedule and Event menu, the Schedule and Event menus are activated together. You can set the desired schedule and event combination.



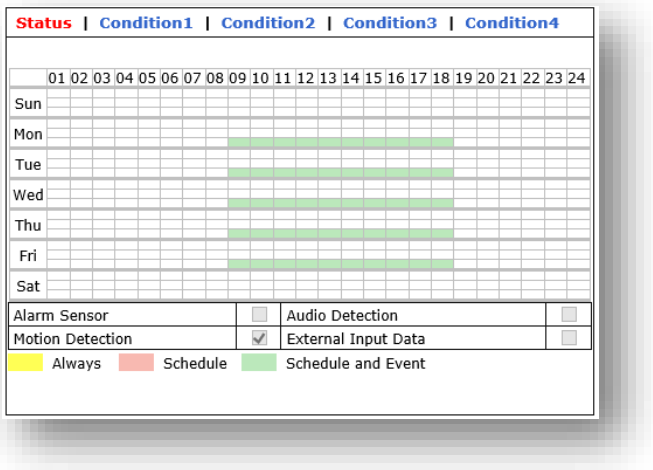


5) When the condition setting is complete, click the Save button at the bottom of the window.

A. When set to Event : Event settings are displayed in the checkbox at the bottom. For example, if you set it to operate when there is motion detection, Motion Detection is checked.



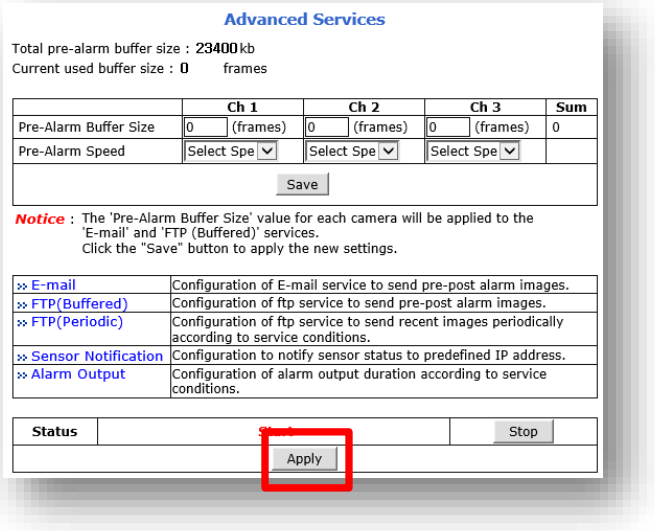
B. When set to Schedule and Event : The setting information is displayed the same as when Schedule and Event are set. The calendar is marked in light green. For example, if you set to save only when there is movement from Monday to Friday, 9:00 am to 6:00 pm, it will appear as shown in the figure below.



6) When the setting is complete, move to the Advanced Service menu as shown in the figure below and click Apply.

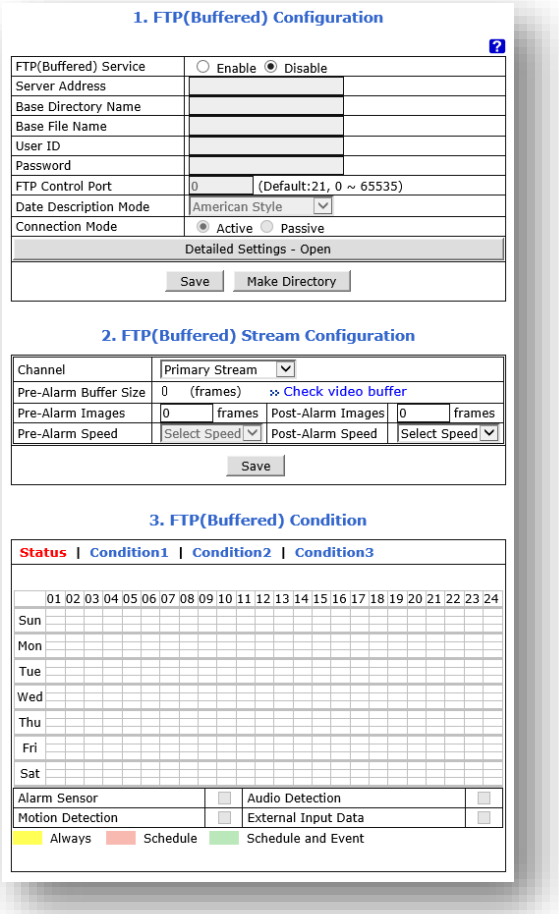
After clicking the Apply button, the set conditions are reflected and the service starts.

If the condition settings are changed, you must click the Apply button in this menu to reflect them.



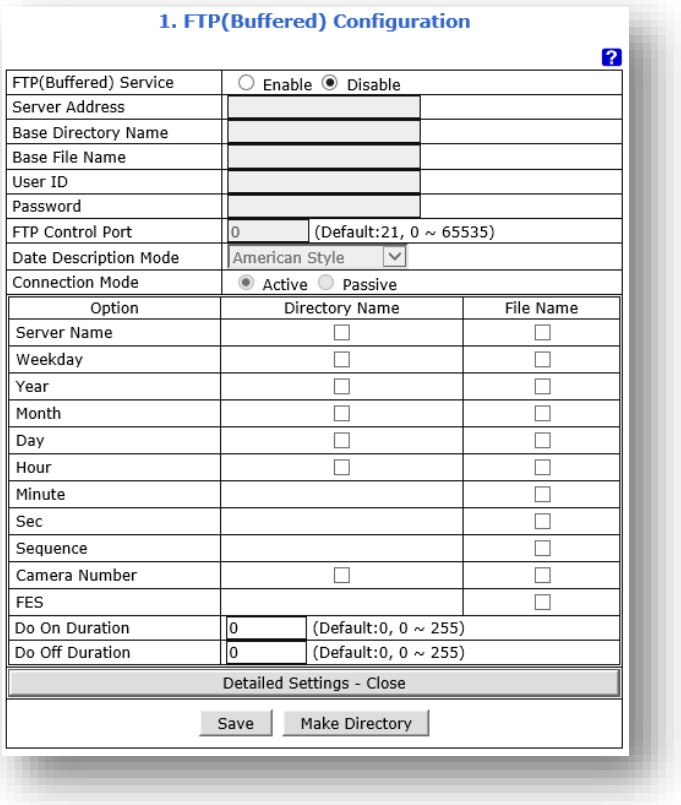
8.3 FTP (Buffered)

This is a function to transmit images to the designated FTP server when an event occurs. To use this function, the channel to transmit must be set to MJPEG.



8.3.1 FTP(Buffered) Configuration

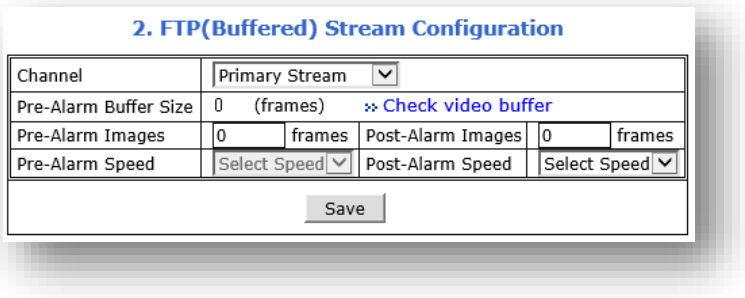
This is a menu to designate the FTP server to transfer images to.



- FTP(Buffered) Service: This menu enables or disables the FTP Service.
- Server Address: This is a menu to enter the FTP server address.
- Base Directory Name: This menu specifies the path (absolute path) to transfer the image.
- Base File Name: Attaches a fixed name to the front of the file.
- User ID: Enter an ID that allows you to log in to the FTP server.
- Password: Enter the password that allows you to log in to the FTP server.
- FTP Control Port: Enter the FTP server port. (The default value is 21, and 0 works as 21.)
- Date Description Mode: Set the style to mark the date.
- Connection Mode: Active / Passive - Select according to FTP server connection method
- Detailed Setting – Open / Close: Used to set rules for directories or files to be created on the FTP server
- DO On Duration: Activates DO after a certain period of time after an event occurs.
- DO Off Duration: After DO is activated, it is deactivated after a certain period of time.
- Save: Save the currently specified settings.
- Make Directory: Create a directory on the FTP server with Directory Name checked (set).

8.3.2 FTP(Buffered) Channel Configuration

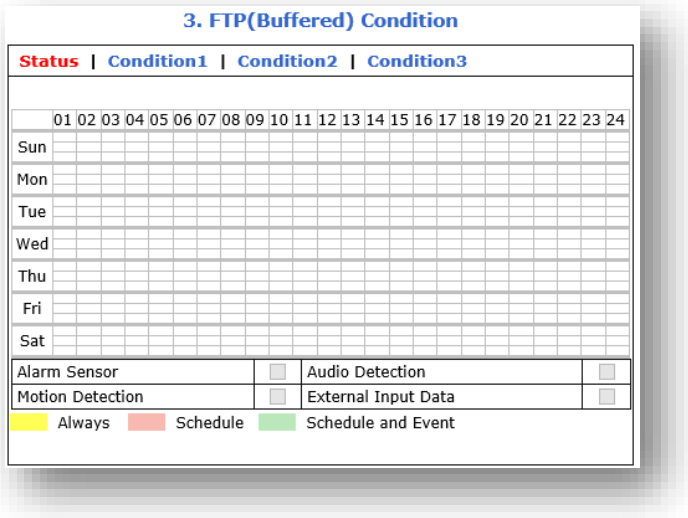
Set the number of channels and images to transfer to the FTP server.



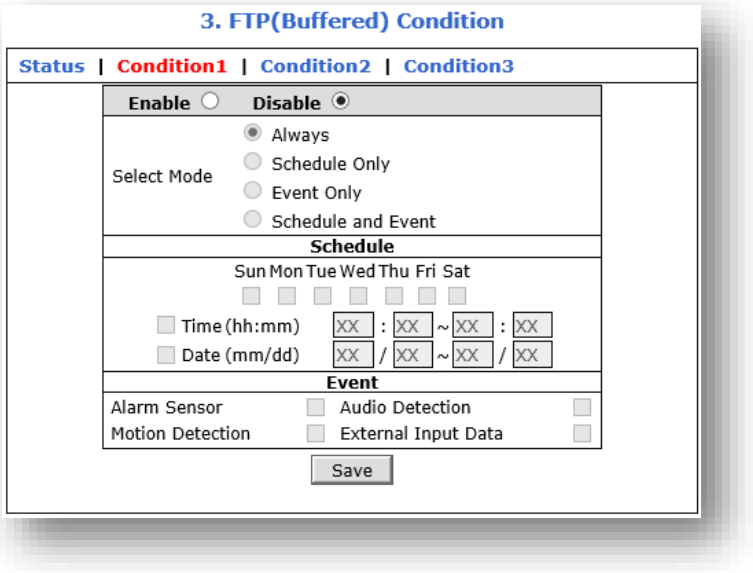
- Channel: Select the camera channel to be transmitted to the FTP server. (Codec must be MJPEG.)
- Pre-Alarm Buffer Size: The number of frames set in Advanced Service is displayed.
- Pre-Alarm Images / Speed: Set the number of images and speed before the event occurs.
- Post-Alarm Images / Speed: Set the number of images and speed after the event ends.
- Save: Save the current settings.

8.3.3 FTP(Buffered) Condition

Set the conditions for sending to the FTP server. FTP(Buffered) is suitable for event or schedule & event operation.

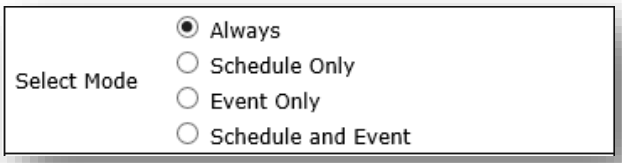


Details on condition settings are as follows:



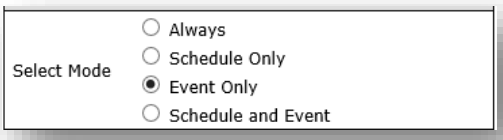
1) Enable / Disable : This is the menu for enabling or disabling each Condition.

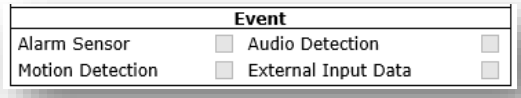
2) Select Mode : This is the menu to select the FTP transfer mode.



- Always: Not used for FTP(Buffered) Service.
- Schedule Only: Not used for FTP(Buffered) Service.
- Event Only: Operates when events such as alarm sensor, audio detection, and motion detection occur.
- Schedule and Event: It operates on the specified day, time and when an event occurs.

3) Select Event Only if you want operation by event. If Event Only is selected, the Event window at the bottom is activated.



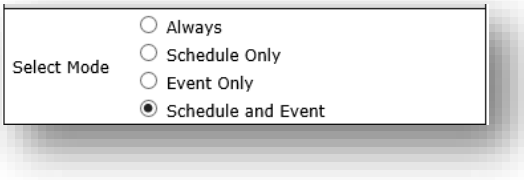


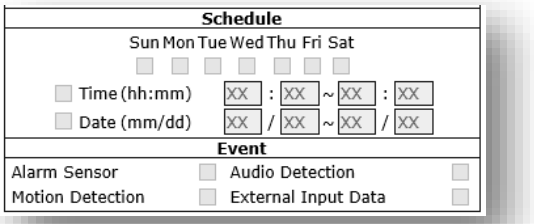
■ Event conditions are as follows.

- Alarm Sensor : Operates by DI Sensor.

- Audio Detection : Operates by Audio detection.
- Motion Detection : Operates by Motion detection.
- External Input Data : Operations are triggered by external inputs such as FES/POS or by AI/VA. Depending on the environment, separate development may be required to utilize these conditions.

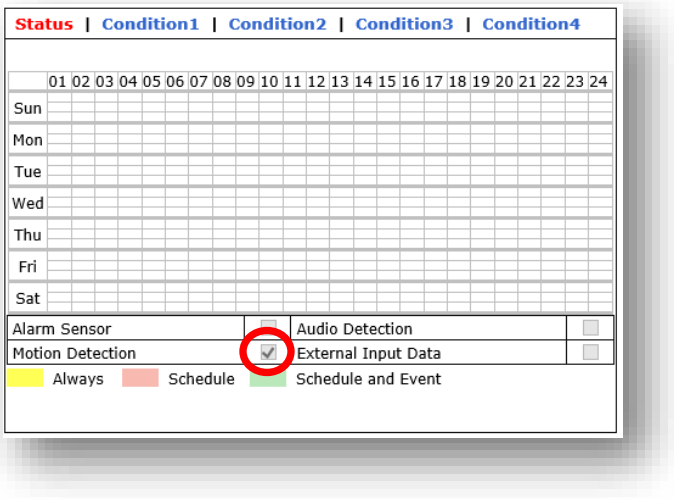
4) It is used when operating in combination by schedule and event. If you select the Schedule and Event menu, the Schedule and Event menus are activated together. You can set the desired schedule and event combination.



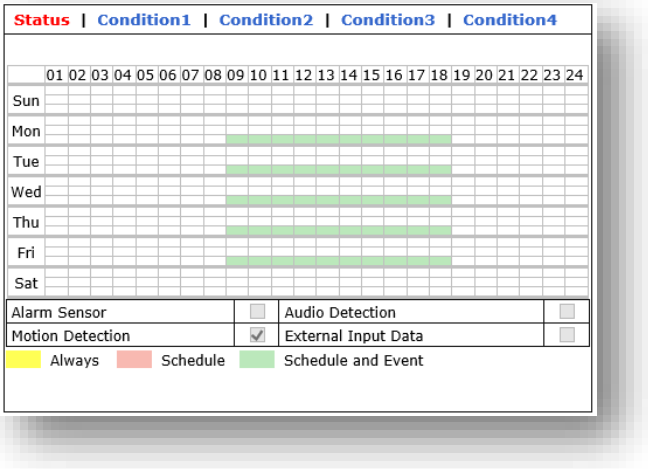


5) When the condition setting is complete, click the Save button at the bottom of the window.

A. When set to Event : Event settings are displayed in the checkbox at the bottom. For example, if you set it to operate when there is motion detection, Motion Detection is checked.



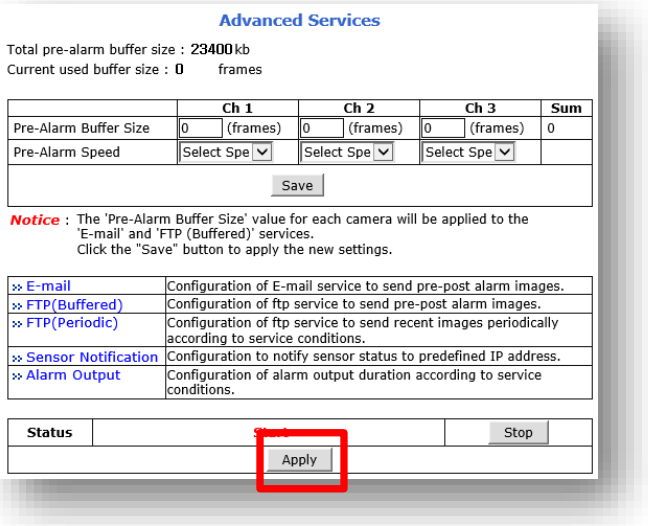
B. When set to Schedule and Event : The setting information is displayed the same as when Schedule and Event are set. The calendar is marked in light green. For example, if you set to save only when there is movement from Monday to Friday, 9:00 am to 6:00 pm, it will appear as shown in the figure below.



6) When the setting is complete, move to the Advanced Service menu as shown in the figure below and click Apply.

After clicking the Apply button, the set conditions are reflected and the service starts.

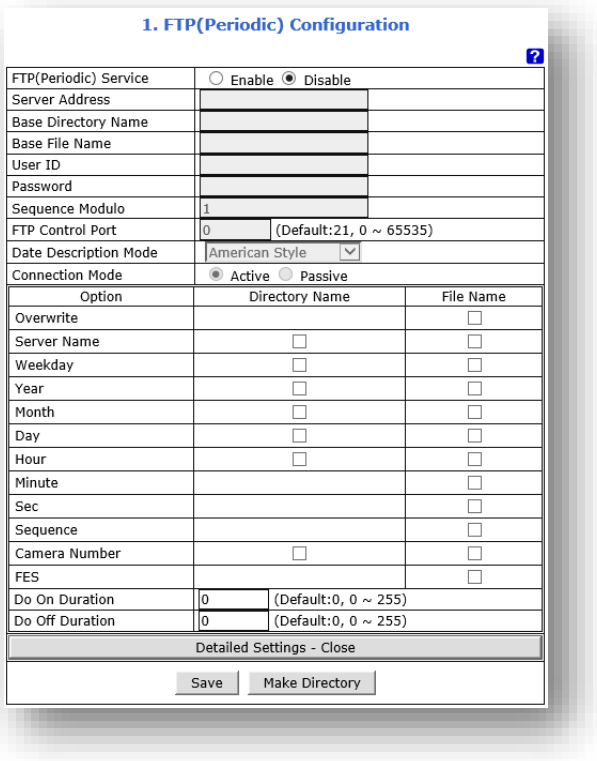
If the condition settings are changed, you must click the Apply button in this menu to reflect them.



8.4 FTP (Periodic)

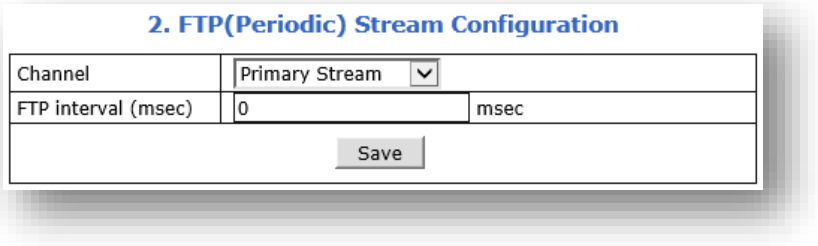
The FTP (Periodic) service is a function used to periodically transfer image data one by one to the FTP server. This function is always suitable for operation by schedule rather than by event. To use this function, the channel to be transmitted must be set to MJPEG.

8.4.1 FTP(Periodic) Configuration



- FTP(Periodic) Service: This menu enables or disables FTP Service.
- Server Address: This is a menu to enter the FTP server address.
- Base Directory Name: This menu specifies the path (absolute path) to transfer the image.
- Base File Name: Attaches a fixed name to the front of the file.
- User ID: Enter an ID that allows you to log in to the FTP server.
- Password: Enter the password that allows you to log in to the FTP server.
- FTP Control Port: Enter the FTP server port. (The default value is 21, and 0 works as 21.)
- Date Description Mode: Set the style to mark the date.
- Connection Mode: Active / Passive - Select according to FTP server connection method
- Detailed Setting – Open / Close: Used to set rules for directories or files to be created on the FTP server
- DO On Duration: Activates DO after a certain period of time after an event occurs. (Periodic is not used.)
- DO Off Duration: After DO is activated, it is deactivated after a certain period of time. . (Periodic is not used.)
- Save: Save the currently specified settings.
- Make Directory: Create a directory on the FTP server with Directory Name checked (set).

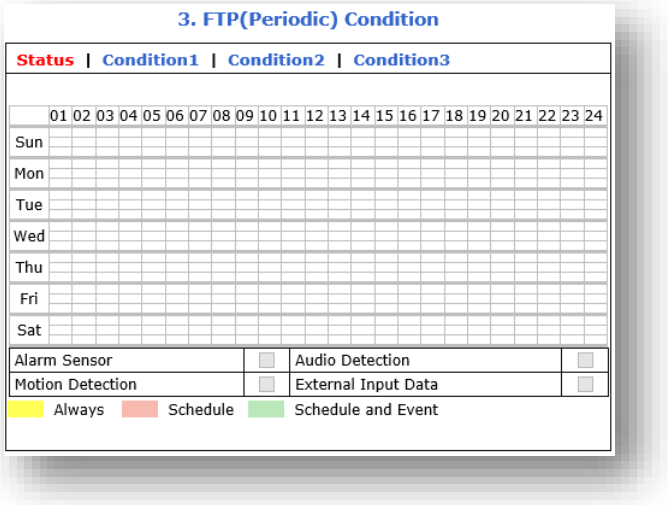
8.4.2 FTP(Periodic) Channel Configuration



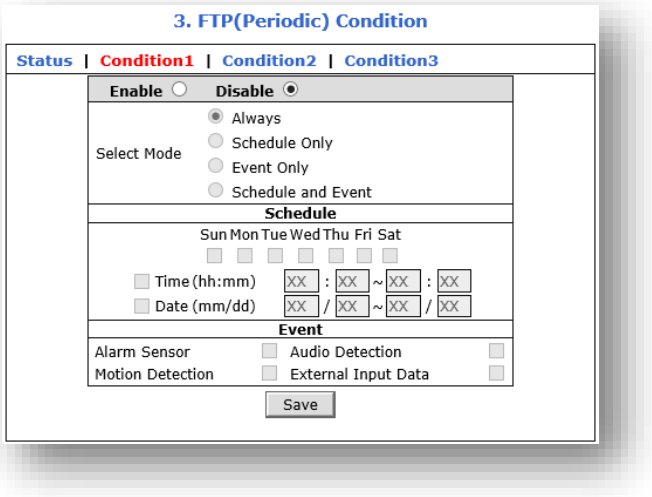
- Channel: Select the camera channel to be transmitted to the FTP server. (Codec must be MJPEG.)
- FTP interval (msec): Set the interval to transfer files via FTP.
- The unit is msec, which is 1/1000 of a second.
  - If sent every minute: 60000
  - If sent every 5 minutes: 300000
  - If sending every 10 minutes: 600000
  - If sending every 30 minutes: 1800000
  - If sent every hour: 3600000
- Save: Save the current set value.

8.4.3 FTP(Periodic) Condition

Set the conditions for sending to the FTP server. FTP(Periodic) Service is suitable for always recording or schedule recording .



Details on condition settings are as follows.



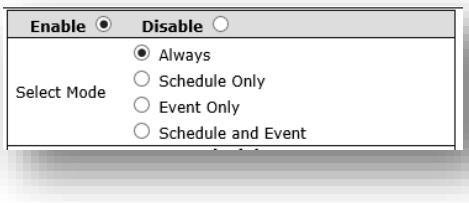
1) Enable / Disable : This menu enables or disables FTP (Periodic) Condition.

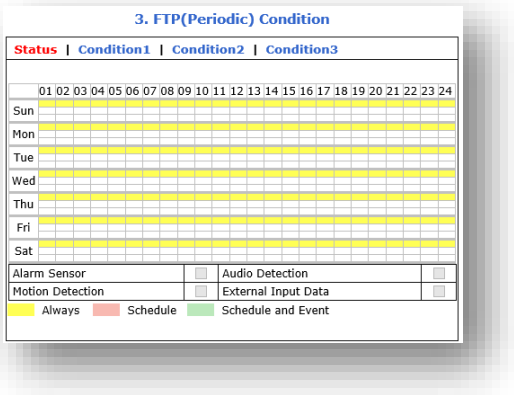
2) Select Mode : This is the menu to select FTP (Periodic) transfer mode.

- Always: Always transfer files according to Interval time.
- Schedule Only: If the schedule is applicable, the file will be transferred according to the Interval time.
- Event Only: Not used for FTP(Periodic).
- Schedule and Event: Not used for FTP(Periodic).

3) If you want to always transmit data according to the Interval time, set as follows..

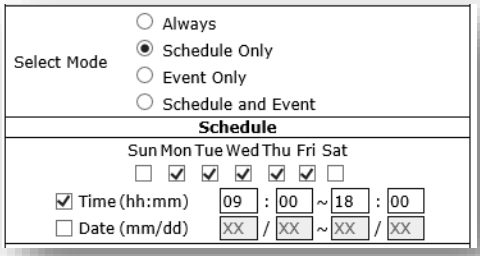
- When set to Always, the timetable is displayed in yellow.

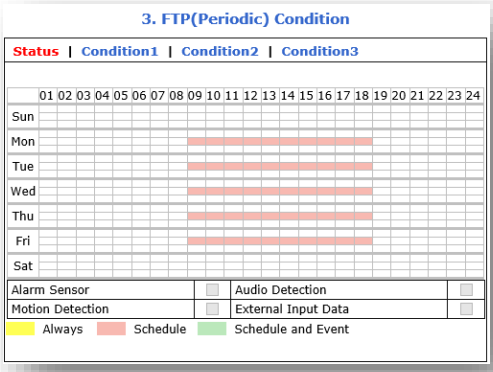




4) If you want to set a schedule and transmit data according to the interval time, set as follows. The example below is a setting to transmit data from Monday to Friday, from 9:00 AM to 6:00 PM

- When set to Schedule, it is displayed in pink according to the corresponding day and time.



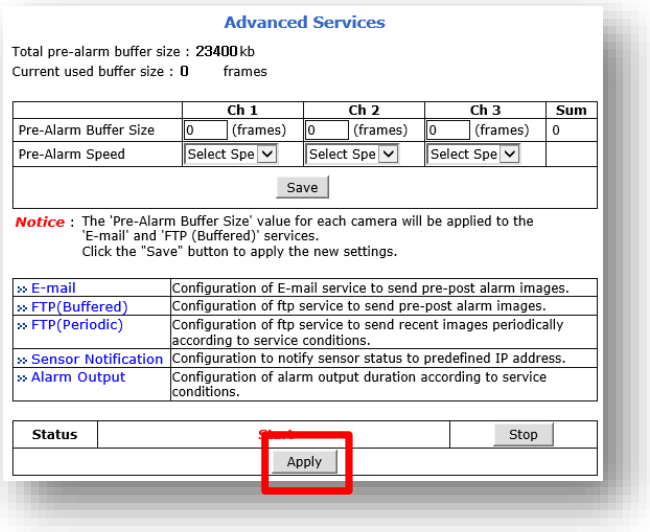


5) When the condition setting is complete, click the Save button at the bottom of the window.

6) When the settings are complete, move to the Advanced Service menu as shown in the figure below and click Apply.

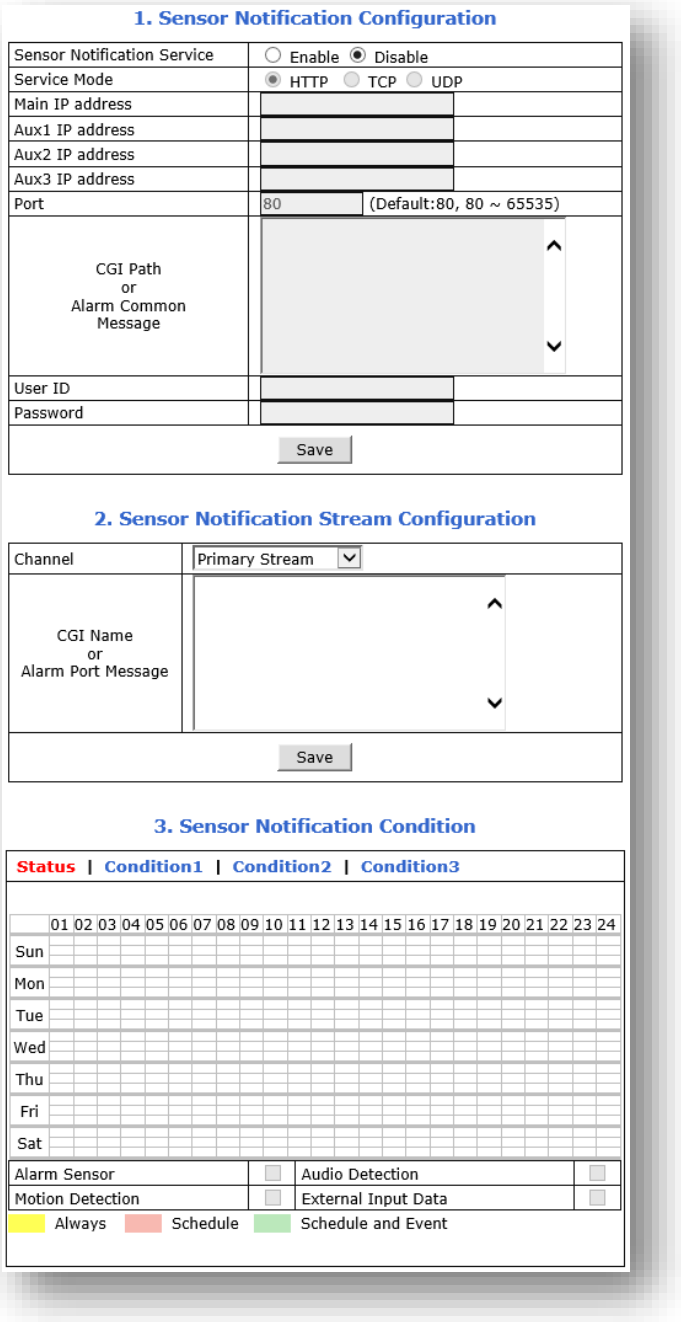
After clicking the Apply button, the set conditions are applied and the service starts.

If the condition settings are changed, you must click the Apply button in this menu to apply them.



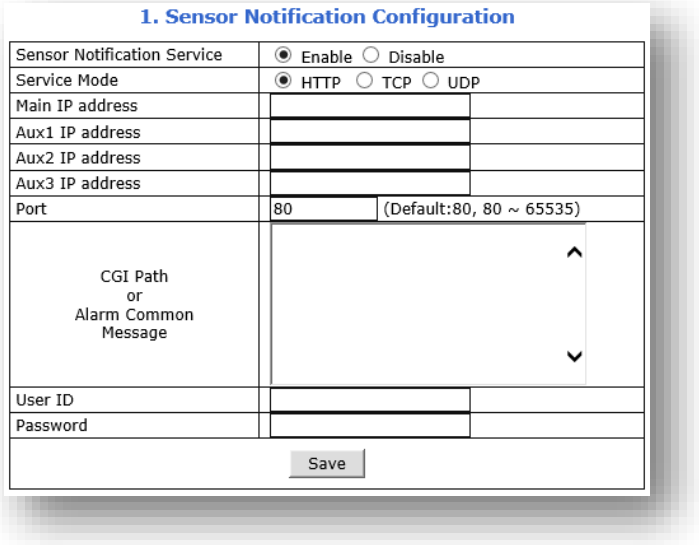
8.5 Sensor Notification

This function sends prepared CGI or specific commands to the target server when an event occurs in the camera. Suitable for event or schedule & event operation.



8.5.1 Sensor Notification Configuration

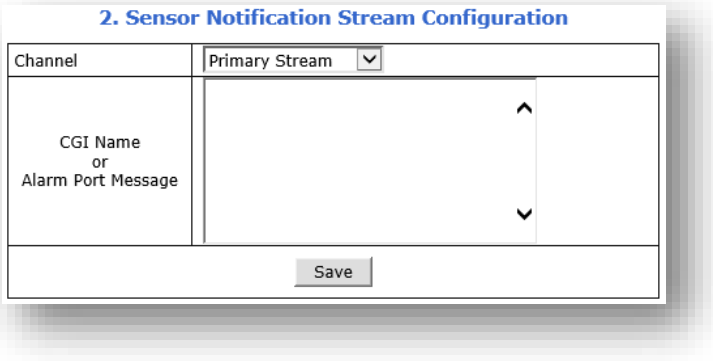
This is the menu to set the basic contents to use Sensor Notification.



- Sensor Notification Service: Set whether to use this function.
- Service Mode: Select the service mode. (You can choose HTTP/TCP/UDP.)
- Main IP address ~ Aux3 IP address: Enter the target IP to send a specific message to.
- Port: Enter the port number.
- CGI Path or Alarm Common Message : Enter CGI or specific message. (up to 255 characters)
- User ID: Enter an ID that allows you to log in to the target server.
- Password: Enter the password to log in to the target server.
- Save: Save the entered information.

8.5.2 Sensor Notification Stream Configuration

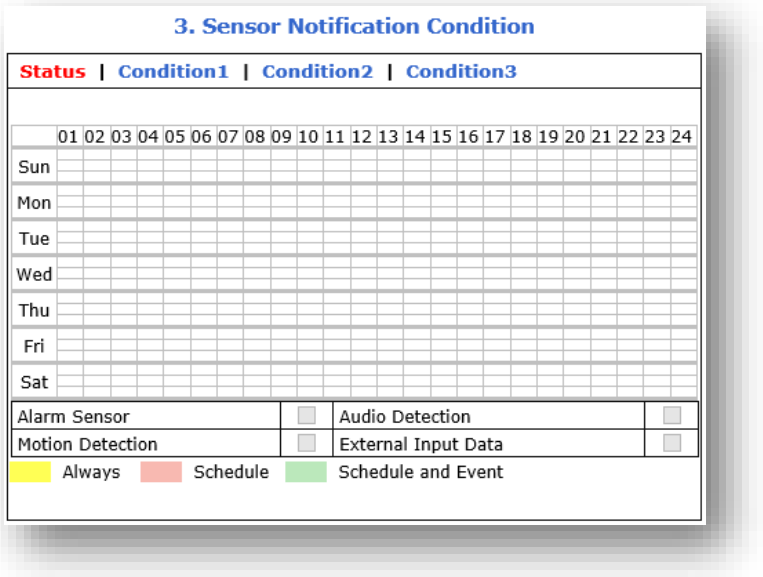
This is a menu where you can add the corresponding channel and CGI..



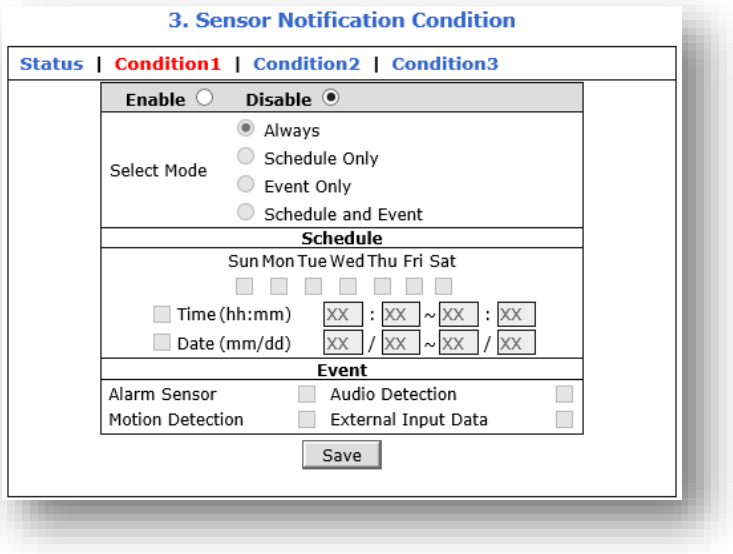
- Channel: Select a channel.
- CGI Path or Alarm Common Message: If the first input window exceeds 255 characters or is cut off, you can additionally enter it in this window.
- Save: Save the entered information.

8.5.3 Sensor Notification Condition

This is a menu to set conditions for using Sensor Notification.

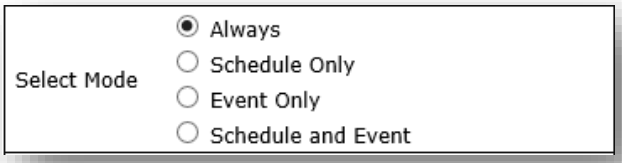


Details on condition settings are as follows:



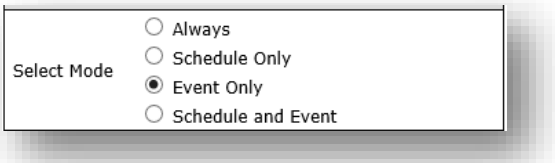
1) Enable / Disable : This menu enables or disables Sensor Notification Condition .

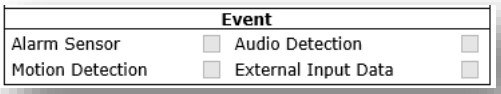
2) Select Mode : This is the menu to select the command transmission mode..



- Always: Not used for Sensor Notification Service.
- Schedule Only: Not used for Sensor Notification Service.
- Event Only: Operates when events such as alarm sensor, audio detection, and motion detection occur.
- Schedule and Event: Operates on the specified day, time and event occurrence.

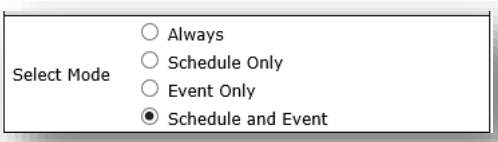
3) Select Event Only if you want operation by event. If Event Only is selected, the Event window at the bottom is activated..

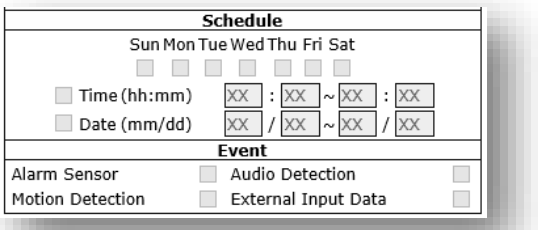




- Event conditions are as follows.
  - Alarm Sensor : It proceeds the operation by DI sensor.
  - Audio Detection: Proceeds with the operation by audio detection.
  - Motion Detection: Proceeds with motion detection.
  - External Input Data : Operations are triggered by external inputs such as FES/POS or by AI/VA. Depending on the environment, separate development may be required to utilize these conditions..

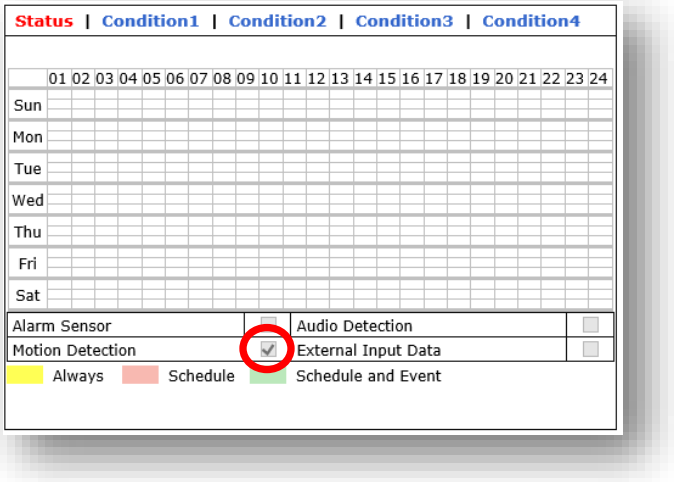
4) It is used when operating in combination by schedule and event. If you select the Schedule and Event menu, the Schedule and Event menus are activated together. You can set the desired schedule and event combination.



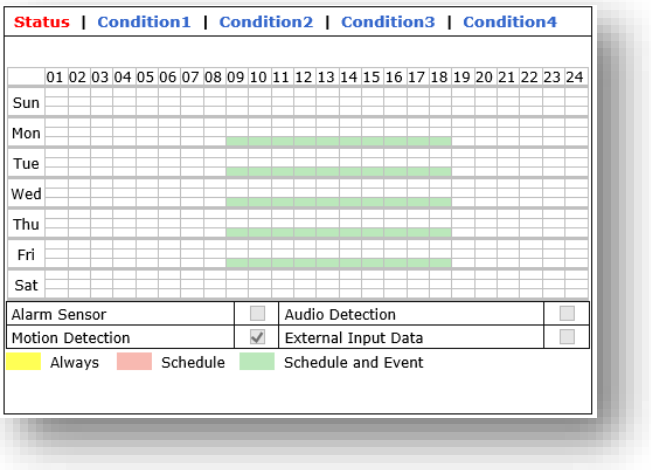


5) When the condition setting is complete, click the Save button at the bottom of the window.

A. When set to Event: Event settings are displayed in the checkbox at the bottom. For example, if you set it to operate when there is motion detection, Motion Detection is checked.



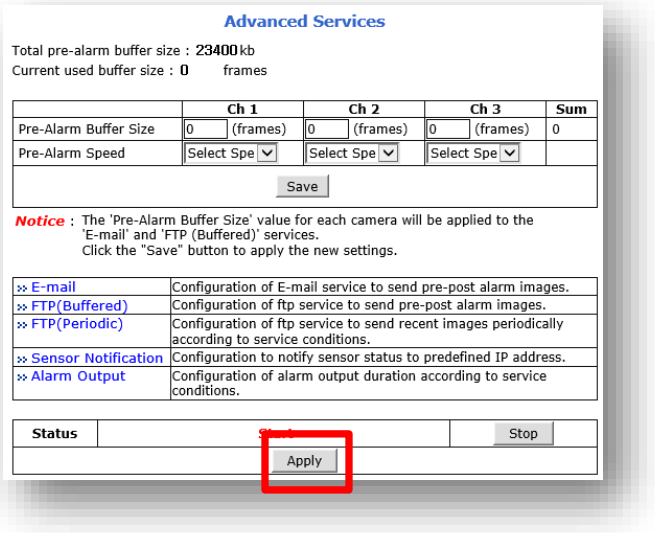
B. When set to Schedule and Event: The setting information is displayed the same as when Schedule and Event are set. The calendar is marked in light green. For example, if you set to save only when there is movement from Monday to Friday, 9:00 am to 6:00 pm, it will appear as shown in the figure below.



6) When the setting is complete, move to the Advanced Service menu as shown in the figure below and click Apply.

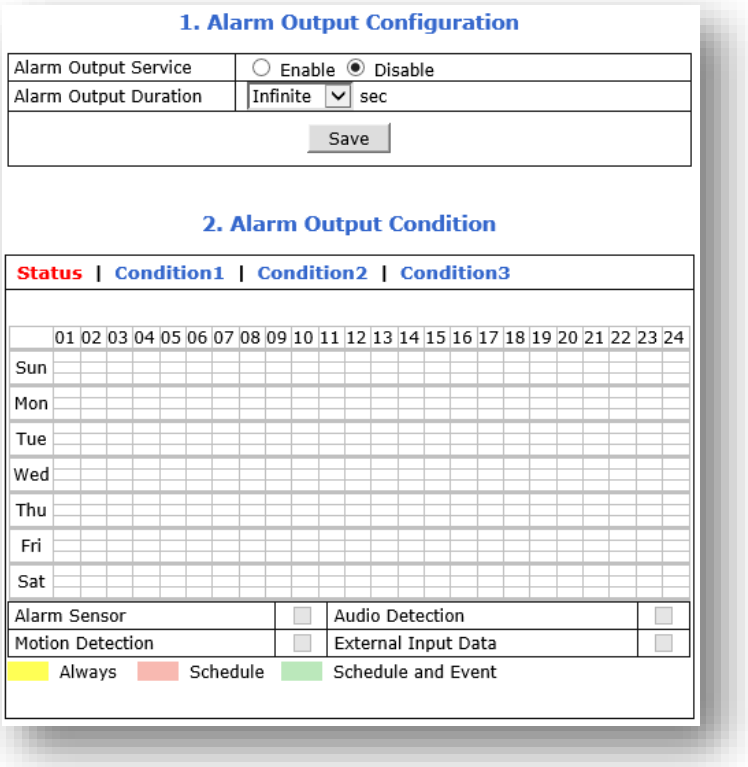
After clicking the Apply button, the set conditions are reflected and the service starts.

If the condition settings are changed, you must click the Apply button in this menu to reflect them.



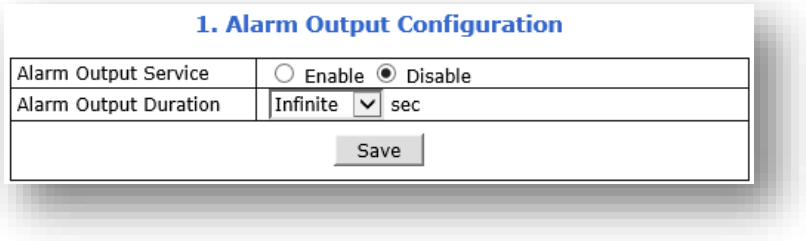
8.6 Alarm Output

This is a function that activates DO when an event occurs.



8.6.1 Alarm Output Configuration

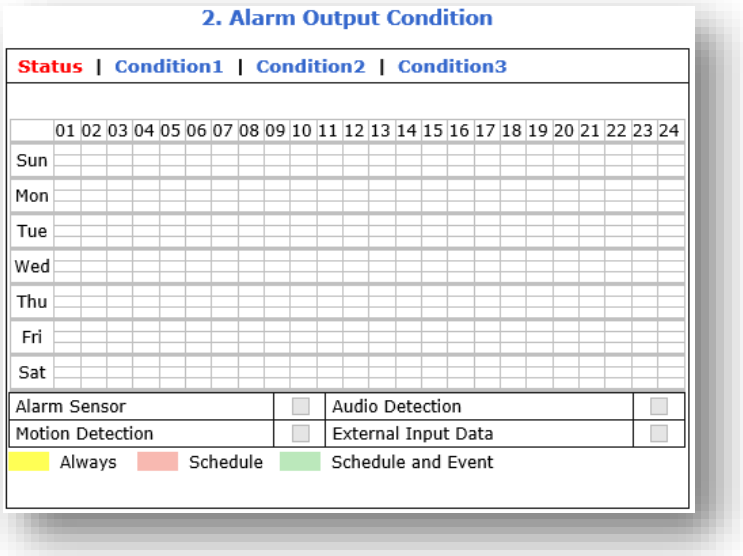
This is a menu to set whether to use the Alarm Output function and the operation time.



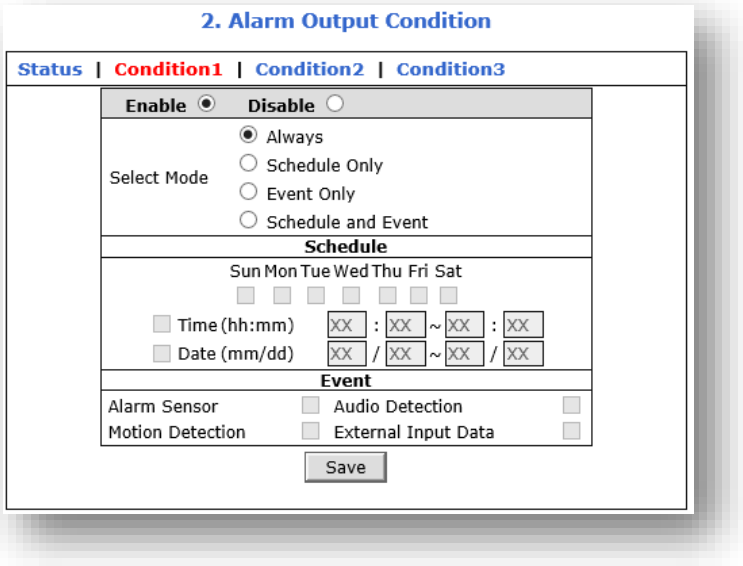
- Alarm Output Service: Set whether to use this function.
- Alarm Output Duration : Designate the time to operate DO.
  - 1~30 : Operates as set from 1 to 30 seconds and then automatically turns off.
  - Infinite: Continues to operate until the user cancels it.

8.6.2 Alarm Output Condition

This is a menu to set the conditions necessary for Alarm Output operation.

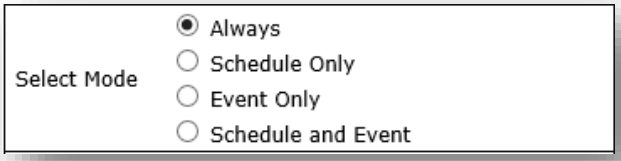


The condition setting method is as follows.



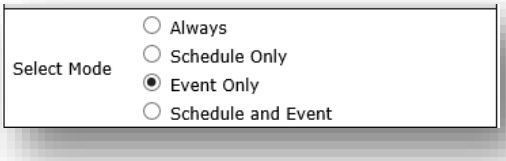
1) Enable / Disable : This menu activates the Alarm output Condition

2) Select Mode : This is the menu to select the alarm transmission mode..



- Always: Not used for Alarm Output Service.
- Schedule Only: Not used for Alarm Output Service.
- Event Only: Operates when events such as alarm sensor, audio detection, and motion detection occur.
- Schedule and Event: Operates on the specified day, time and event occurrence.

3) Select Event Only if you want operation by event. If Event Only is selected, the Event window at the bottom is activated..

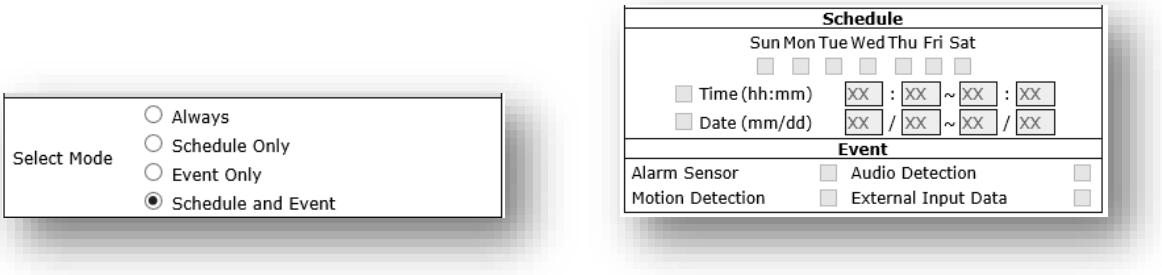


■ Event conditions are as follows.

- Alarm Sensor : It proceeds the operation by DI sensor.

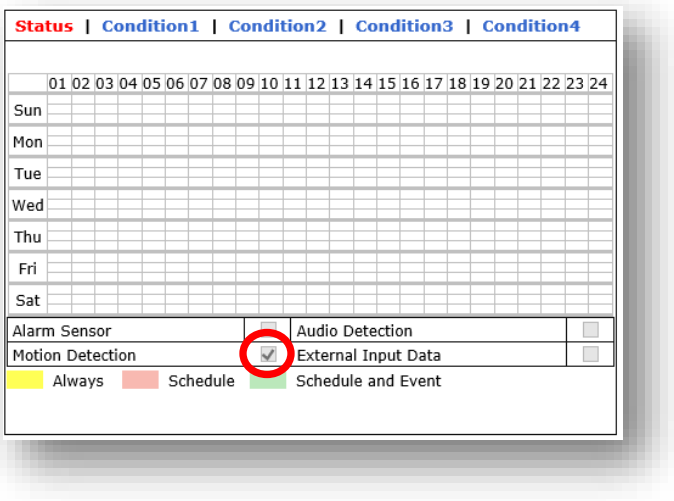
- Audio Detection: Proceeds with the operation by audio detection.
- Motion Detection: Proceeds with motion detection.
- External Input Data : Operations are triggered by external inputs such as FES/POS or by AI/VA. Depending on the environment, separate development may be required to utilize these conditions.

4) It is used when operating in combination by schedule and event. If you select the Schedule and Event menu, the Schedule and Event menus are activated together. You can set the desired schedule and event combination.



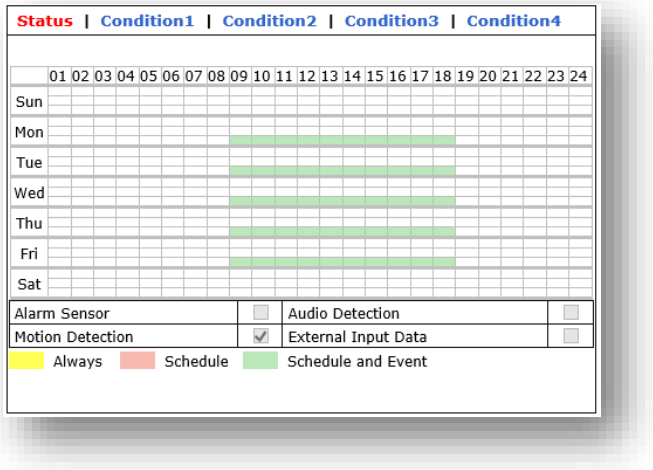
5) When the condition setting is complete, click the Save button at the bottom of the window.

A. When set to Event : Event settings are displayed in the checkbox at the bottom. For example, if it is set to operate when there is motion detection, Motion Detection is checked..



B. When set to Schedule and Event : The setting information appears the same as when setting Schedule and Event. The calendar is marked in light green. For example, if you set to save only

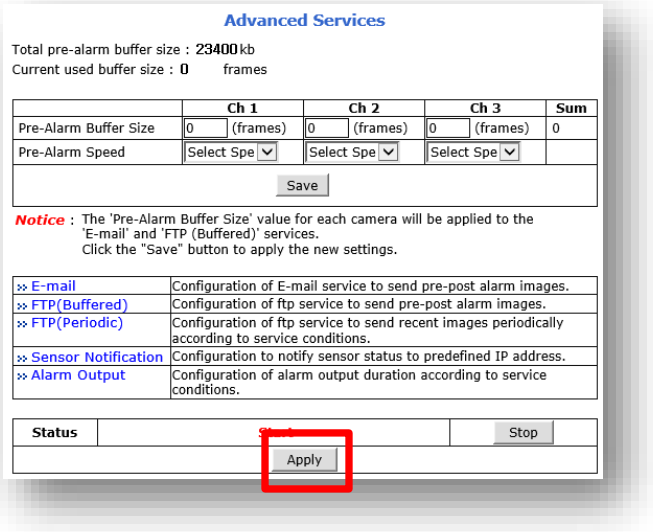
when there is motion from Monday to Friday, 9:00 am to 6:00 pm, it will appear as shown in the figure below.



6) When the setting is complete, move to the Advanced Service menu as shown in the figure below and click Apply.

After clicking the Apply button, the set conditions are reflected and the service starts.

If the condition settings are changed, you must click the Apply button in this menu to reflect them.



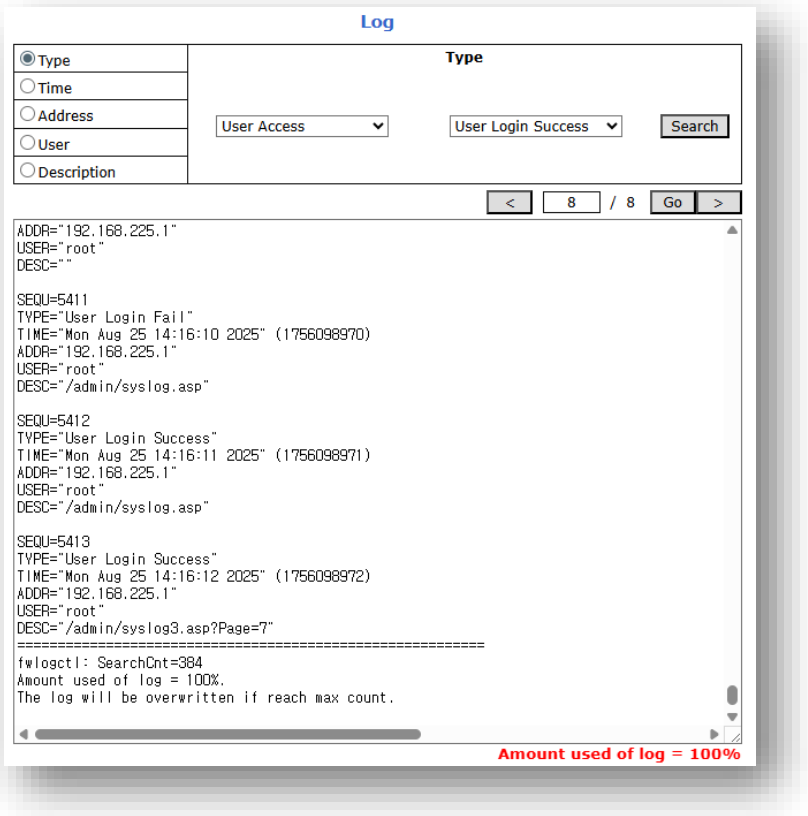
9. Utilities

In this menu, you can check system log, reboot, reset settings, firmware update, etc.

9.1 Log

This menu allows you to search or back up your camera's logs.

This log consists of eight pages, and older logs are automatically deleted.

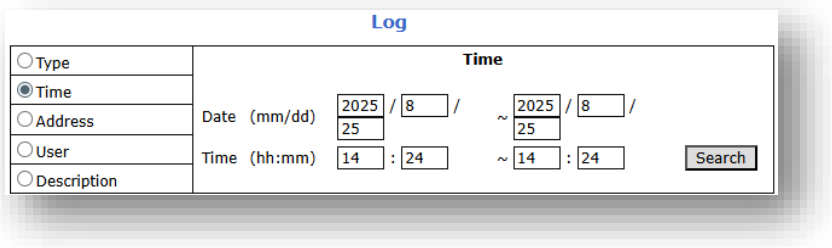


- Type : This menu searches for the type displayed in the log entry. Supported types are as follows:

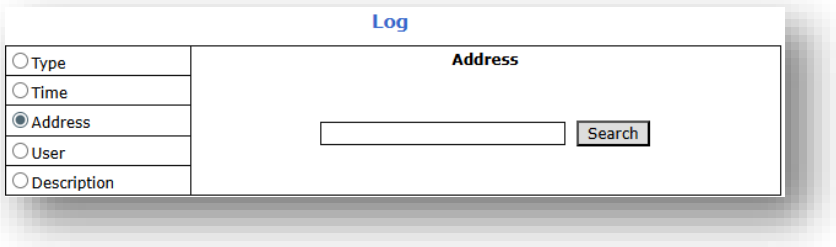
User Access	User Login Success
	User Login Fail
	User Login Deny
	User logout
Video Backup	Video Backup Begin
	Video Backup End
User Management	User Add
	User Delete
	User Modify

PTZ Control	PTZ Control Begin
	PTZ Control End
Traffic Control	Traffic Set IP Filter
Remote Admin	Remote Admin Set IP
	Remote Admin Set SVC
Admin Session	Admin Session Timeout
	Admin Session Deny
Environment	CFG Backup Restore
	Modify Network CFG
	Modify Time
	Modify REC Condition
	Modify IP Device Registration
System	System Boot
	System Reboot
	Restore Default
	Firmware Update
	Storage Attach Detach
	Storage Format
	System Status
	Secret Key Fail
	Secret Calc Fail
	Log Service
Playback	Playback Access
	Playback Close
Record	Record Start
	Record Stop
	Record Storage Error
	Storage Information

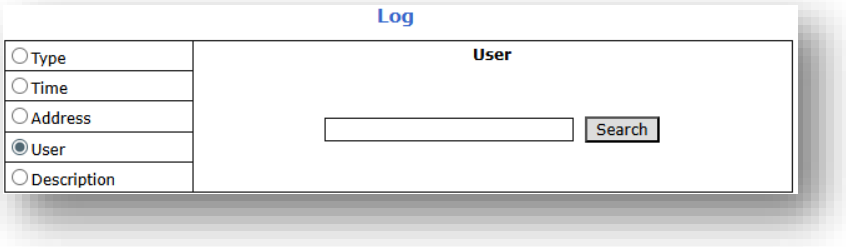
■ Time : This is a menu to search for the time shown in the log entry.



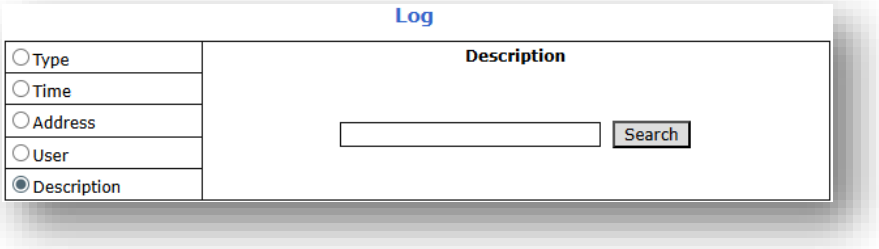
- Address : This is a menu to search for the IP address (ADDR) shown in the log entry.



- User : This is a menu to search for the user (USER) that appears in the log entries.



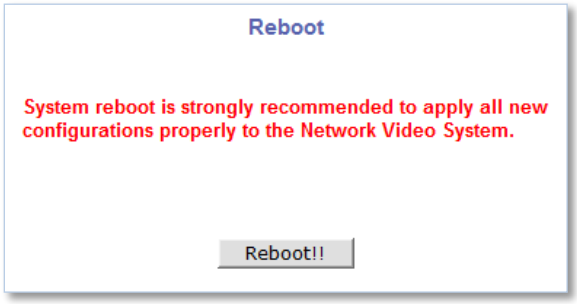
- Description : This is a menu to search for the description (DESC) shown in the log entry.



- Log Backup : When you search for a log, a Log Backup button appears. You can back up the log.

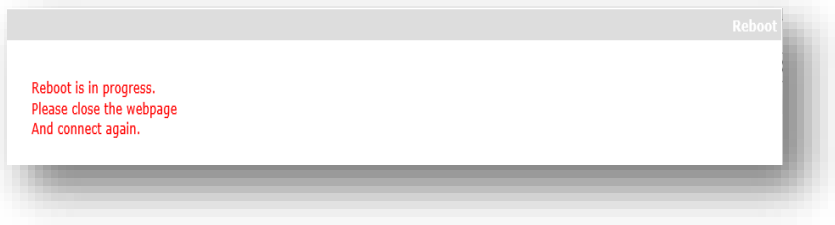
9.2 Reboot

This is a function to reboot the camera using a web browser. Click the Reboot button and click the OK button to start rebooting.



If you click the Reboot button, a message prompting you to reconnect appears as shown below.

You can access it by restarting your web browser.



9.3 Restore Default

This is a menu that initializes all other settings except for IP, Web Port, and DDNS among all settings set in the camera. If you perform Restore Default in Admin, the network information remains as it is, so you can continue setting by connecting to the existing IP without setting another IP even after initialization.

If the password has been changed, it will be initialized as root after this function.

You will need to change your password again to use it.

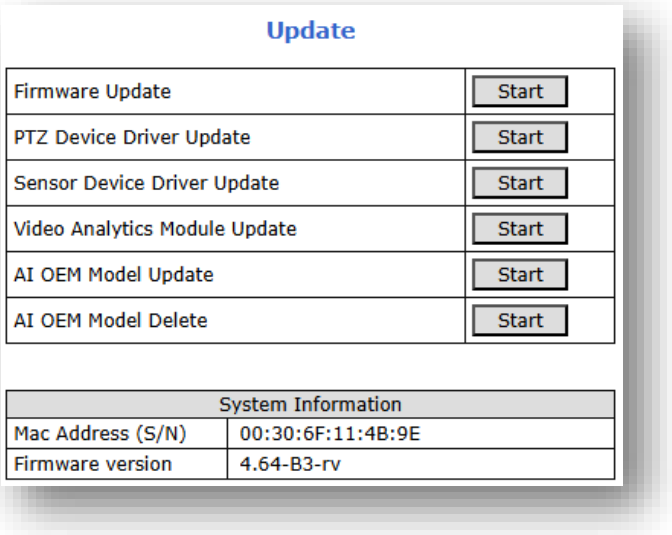
Once initialization is complete, you must reboot.

If you do not reboot, the menus displayed in Web Admin may not be displayed properly.

9.4 System Update

This menu is used to update camera firmware, PTZ Driver, or sensor equipment.

It is recommended to update the system using Edge or Google Chrome Browser

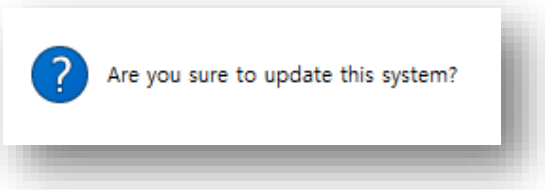


- **Firmware Update**: Upgrade the firmware of the camera.
- **PTZ Device Driver Update**: Update the PTZ driver.
- **Sensor Device Driver Update**: Updates the sensor device driver.
- **Video Analytics Module Update :** Update the video analytics module (rv, ru firmware only)
- **PTZ Firmware Update :** Update the PTZ firmware. (PTZ cameras only)
- **AI OEM Model Update :** Update AI OEM models (rv, ru firmware only)
- **AI OEM Model Delete :** Delete the updated AI OEM models (rv, ru firmware only)
- **System Information :** You can check the Mac Address and firmware version of the product in this item.

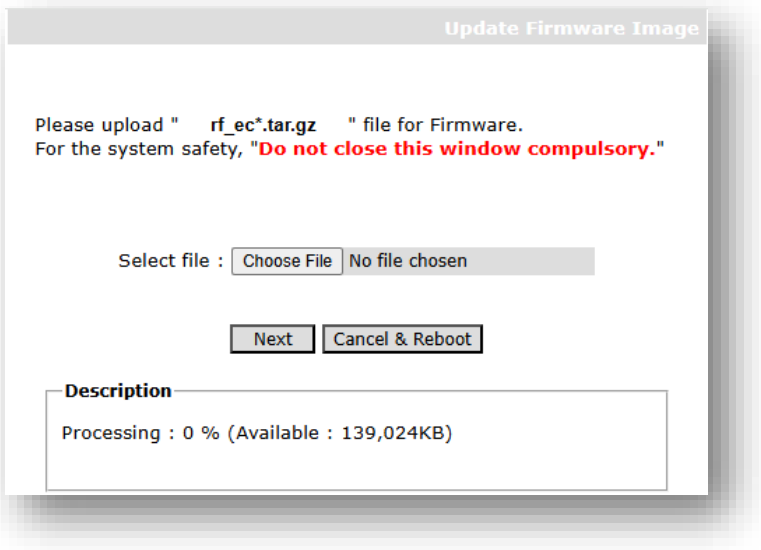
■ Firmware Update

Updating the camera firmware can be done in the following ways.

1) Click the Start button to the right of the Firmware Update item.
2) When the update check window appears as shown below, click the OK button.

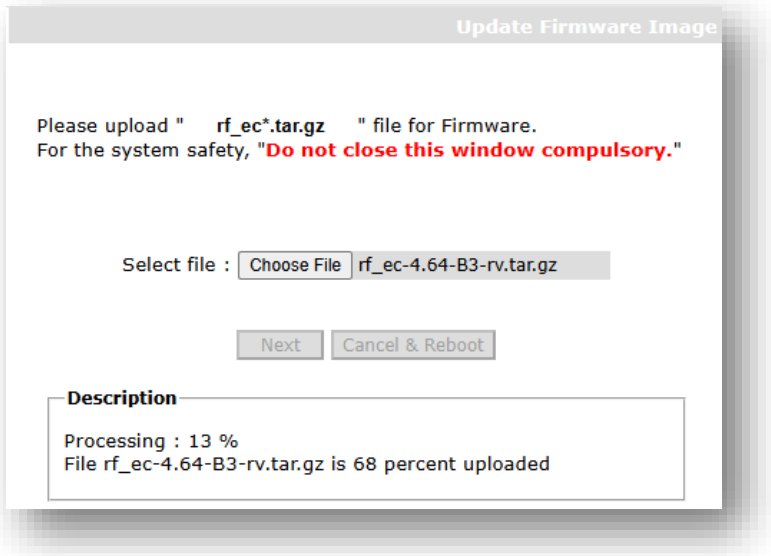


3) The firmware update window appears. Click the Choose File button to select the firmware.

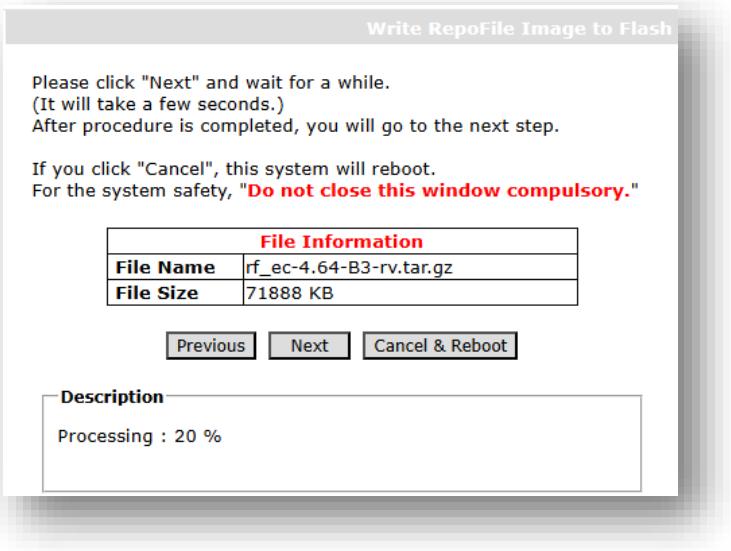


- If you want to cancel the update at this time, click the Cancel & Reboot button to cancel.
- Click the Cancel & Reboot button to cancel the update mode and reboot the camera.

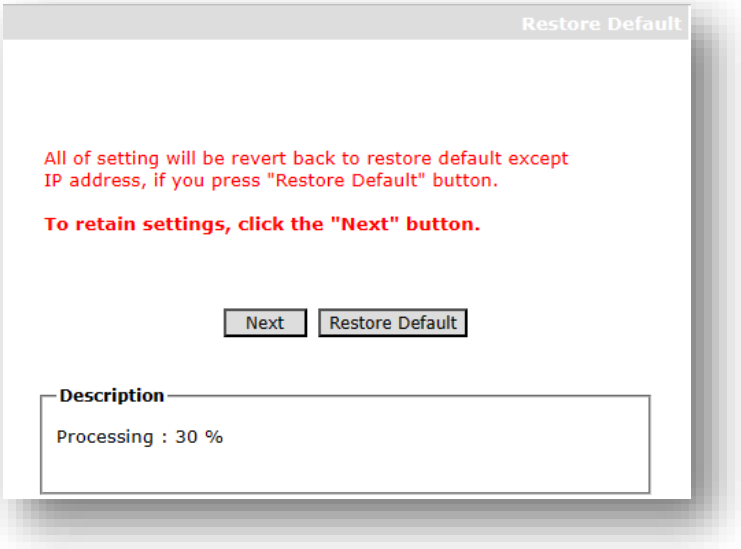
4) After selecting the update file, click the Next button to upload the firmware to the camera.



5) When the firmware is uploaded to the camera, the following message appears. Click the Next button to proceed.

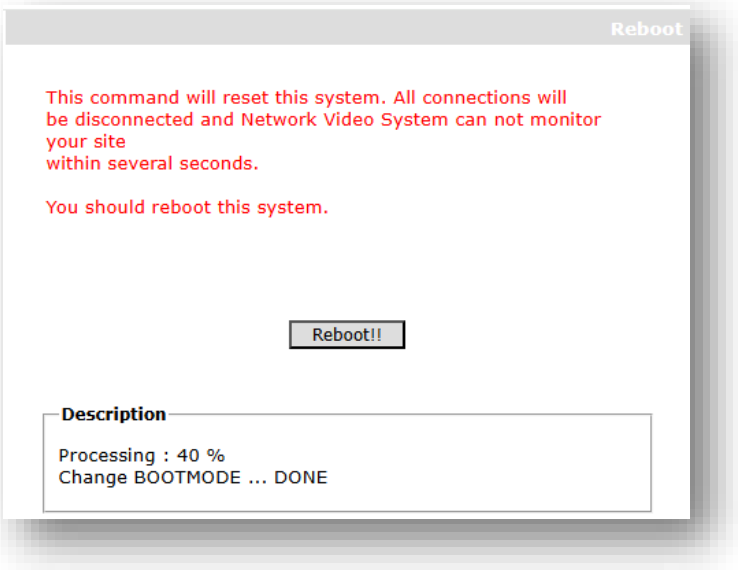


6) Choose whether to proceed with firmware update or initialize.

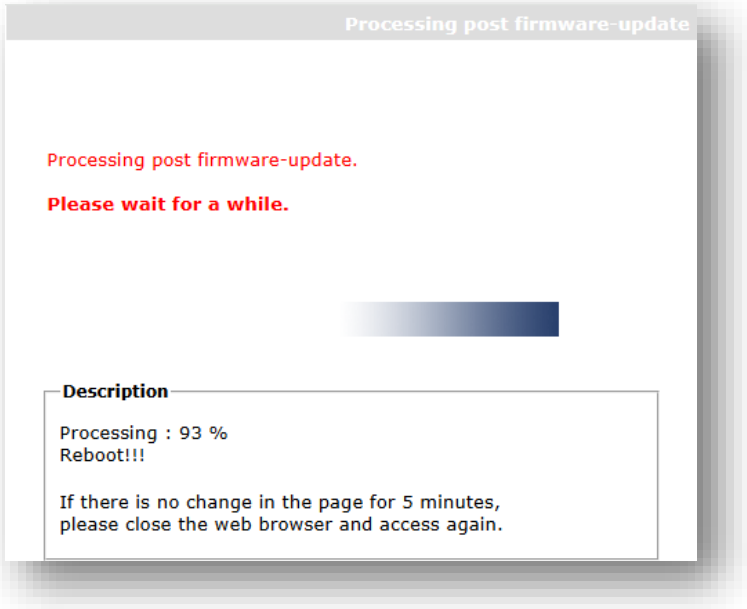


- Next : Maintains the current settings and proceeds with firmware update.
- Restore Default : Initialize the current settings and proceed with firmware update.
- From now on, please always keep the camera powered on.
- A power cut in the middle of an update can severely damage the firmware.
- If the firmware is damaged, you must get After Service from the manufacturer

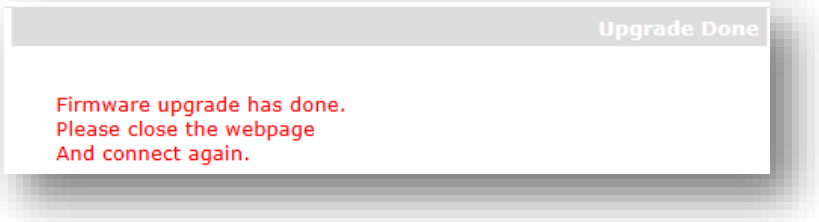
7) If you wait for a while after the process of step 6, a Reboot message will appear. Click the Reboot button to complete the firmware update process.



8) Firmware update will proceed automatically after rebooting. Progress is displayed in %.



9) When the firmware update is complete, a message prompting you to close the web page and connect again appears.



- After reconnecting, check the Firmware Ver information at the bottom.

- If the new firmware version information is displayed, the firmware update has been completed successfully.

  In some cases, the firmware update was successful, but the previous firmware information is displayed due to the cookie of the web browser. In this case, press CTRL + F5 to delete the cookie of the IP and check the information for reconnection.

If the firmware update is performed on a remote or the camera is DHCP, there may be cases in which the connection with the PC is disconnected after the camera reboots during the update process and the process does not proceed at 40%. In this case, wait for about 10 minutes, close the update window, and connect again to check for updates.

PTZ Device Driver and Sensor Device Driver can be updated in he same way as firmware update

Seyeon Tech Co., Ltd.

HEAD OFFICE

- **Address** #403, Gayang Techno Town, 217, Heojun-ro, Gangseo-gu, Seoul, 157-193, South KOREA
- **PHONE** +82-2-2192-6800
- **FAX** +82-2-2659-0831
- **Email** sales@seyeon.co.kr

www.FlexWATCH.co.kr
www.FlexWATCH.com