Web Admin User Manual

For Camera Models with firmware versionV4.52-B0

July. 2022

- **Each name of IP Camera function might be changed without prior notice due to system update.**

1. Contents

2. Introduction

It works in Internet Explorer, Edge Browser, and Chrome Browser, but this manual describes the Edge Browser UI.

3. 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.

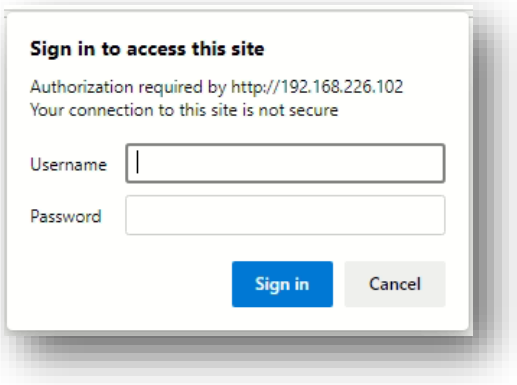
3.1 Entering to Web Admin Page

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

1) Enter the **IP Address** or **Domain Name** of device at the address bar on your web browser .

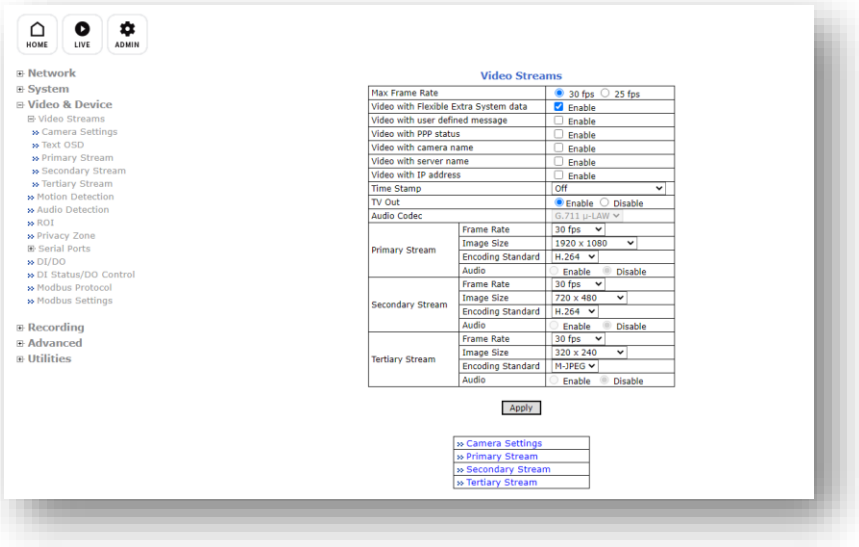
2) When connected to device via the web browser successfully, the device home page will be displayed as shown below.

3) Click **Admin** at the upper of the device home page.
4) Enter **User name** and **Password** when an authentication window is appeared as shown below, and then click **Sign in.**



Note: *The default User name and Password is "root" and "root".*
Default IP adres is 192.168.82.2

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



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

3.2 Web Admin Menu Navigation

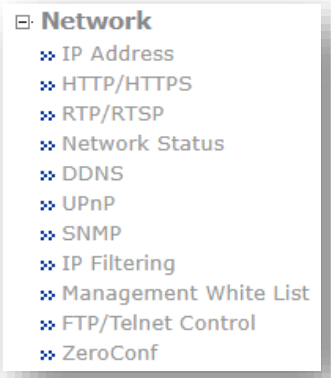
The following table shows the hierarchy of the Web Admin Page menu structure:

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		
	Zero Config		
System	Name		
	Hostname		
	Date & Time		
	Admin. Password		
	Access Level		
	User		
	Add On service		
Video & Audio	Stream Setup		
	Camera Setup		
	Text OSD		

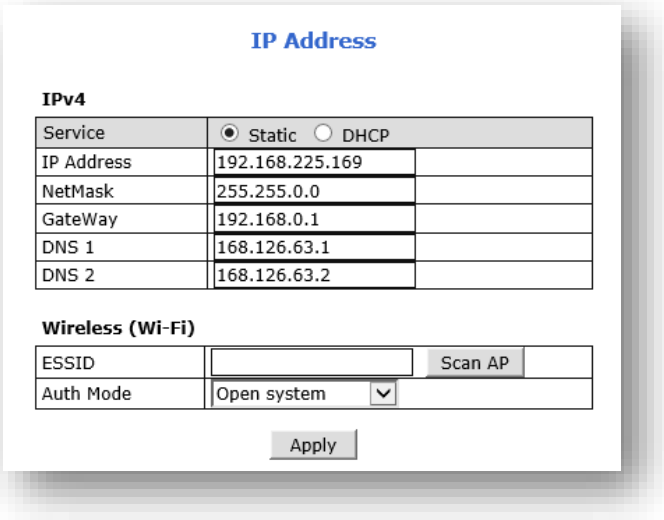
	PTZ Text OSD		
	Motion Detection		
	Audio Detection		
	ROI		
	Privacy Zone		
Device	PTZ OSD		
	Serial Ports		
	Serial Input Mode		
	Serial Output Mode		
	Transparent Mode		
	PTZ Mode		
	DI/DO		
	DI Status / DO Control		
	Modbus Protocol		
	Modbus Settings		
Recording	SD Status & Format		
	SD Information		
	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		

4. Network

All network related settings can be found under the Network Menu.

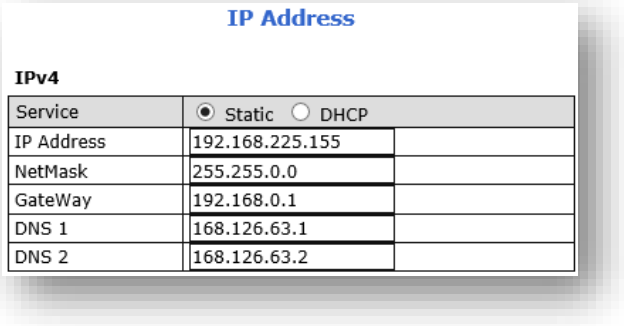


4.1 IP Address



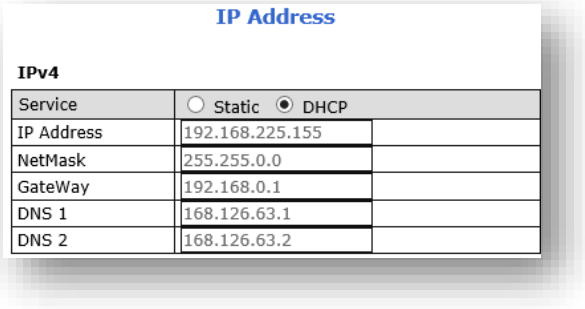
4.1.1 IPv4

4.1.1.1 Static



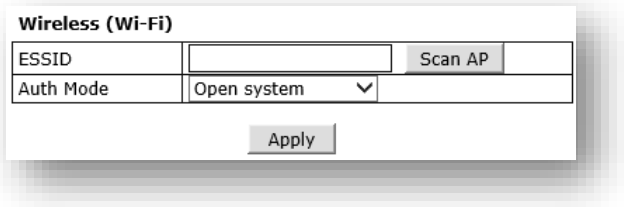
If you select Static IP, you can set or modify IP Address, NetMask, Gateway, DNS1, DNS2, etc. as shown above. After input each value, click Apply button to save then confirmation message screen appears. Click the OK button to apply the settings, and you will be prompted to close the web browser. It takes about 30 to 40 seconds until the setting is applied. If you do not want to apply the changes, you can cancel the changes by clicking the Back button. Clicking the Refresh button shows the IP information before modification.

4.1.1.2 DHCP



In order to use the DHCP function, a DHCP server is required. Usually the IP router acts as a DHCP server. When DHCP is selected, the window for entering IP info is disabled..
Click Apply button then Close button appears.
Click Close button to apply the settings, and then you will be prompted to close the web browser. It takes about 30 to 40 seconds until the setting is applied. If you do not want to apply the changes, you can cancel the changes by clicking the Back button. The changed IP can be checked in the IP Installer.

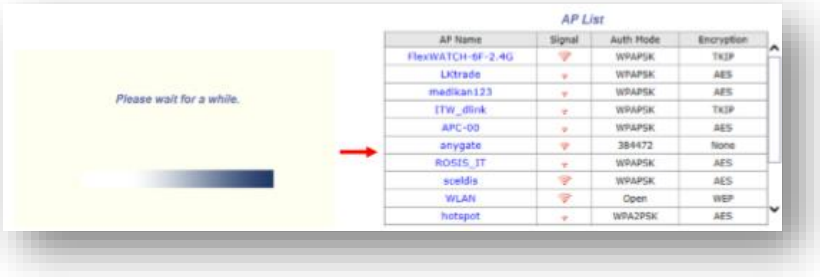
4.1.2 Wireless (Wi-Fi)



This menu appears only for products equipped with a wireless LAN (Wi-Fi) module in the camera.
This menu does not appear if the wireless LAN (Wi-Fi) module is not installed..
To use the wireless LAN function, the AP (Access Point) must have encryption settings such as ESSID, Auth Mode, Encryption, etc. Wireless LAN and wired LAN do not work at the same time.
Even if a wireless LAN is set, it operates as a wired LAN when wired LAN is connected, and operates as a wireless LAN when the wired LAN cable is disconnected.. It takes about 40 seconds to switch between Wired LAN and Wireless (Wi-Fi) LAN.

The wireless LAN setting method is as follows..

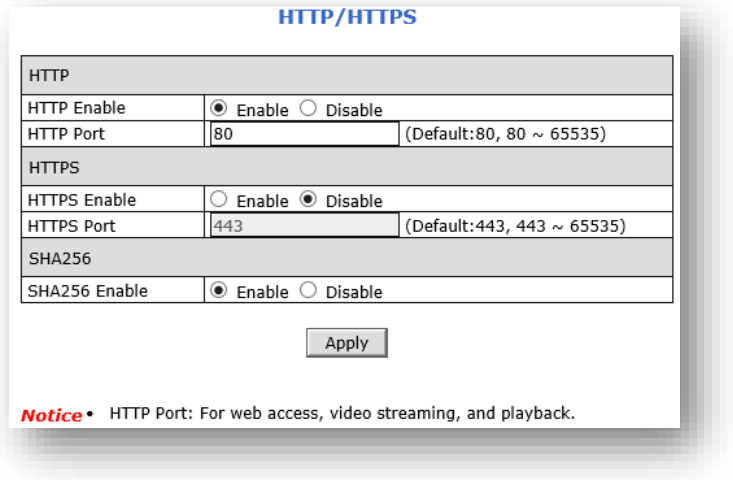
1) Click Scan APbutton.
2) The message “Please wait for a while” appears and start searching an available APs then displays the list of APs searched. (APs set to hide the ESSID are not searched.)



3) Set the Auth Mode according to the AP settings and click the Apply button to complete the wireless LAN setup.

4.2 HTTP/HTTPS

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



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

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

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

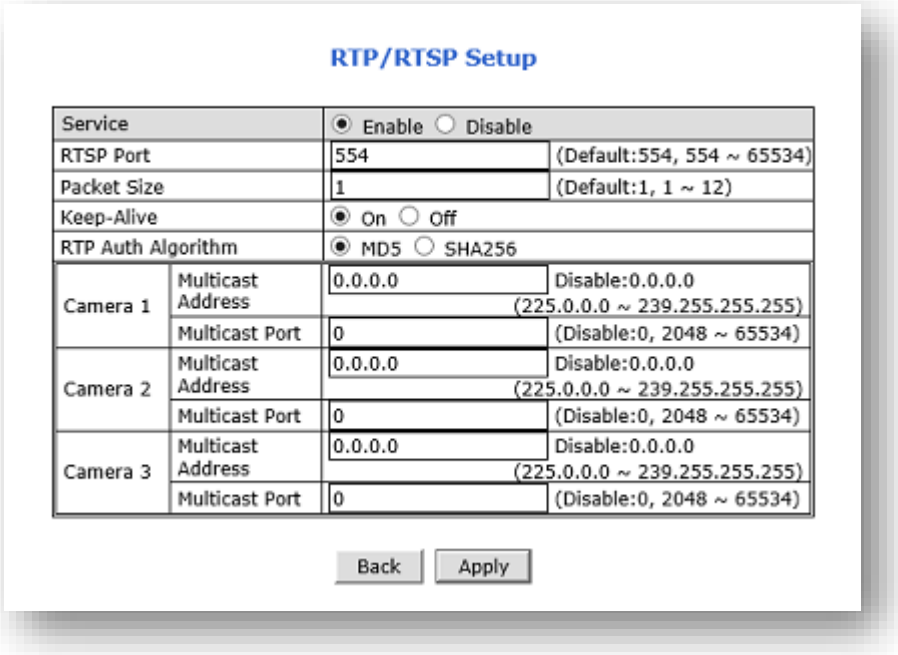
Note1: If the HTTP port, HTTPS port is set to a different value than default (80, 443), make sure the port number must be entered at the end of IP address , you will have to enter http://192.168.1.100:8080 or https://192.168.1.100:4430 at the address bar on your Web browser to connect to camera.

Note2 : It is impossible to disable both HTTP Port and HTTPS Port. Either one must be Enabled.

4.3 RTP / RTSP

RTSP (Real-Time Streaming Protocol) is a protocol to transfer video and audio streams over the network and it allows compatibility with other manufactures' VMS/NVR software or video streaming software such as VLC player, Quick Time player. It 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 Setup



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 S/Ws. Divide and send small packets.
   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 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.

Camera 1	Multicast Address	225.0.0.0	Disable:0.0.0.0 (225.0.0.0 ~ 239.255.255.255)
	Multicast Port	2048	(Disable:0, 2048 ~ 65534)
Camera 2	Multicast Address	225.0.0.1	Disable:0.0.0.0 (225.0.0.0 ~ 239.255.255.255)
	Multicast Port	2049	(Disable:0, 2048 ~ 65534)
Camera 3	Multicast Address	225.0.0.2	Disable:0.0.0.0 (225.0.0.0 ~ 239.255.255.255)
	Multicast Port	2050 ×	(Disable:0, 2048 ~ 65534)

Example of Multicast.

4.3.1 RTSP URL

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

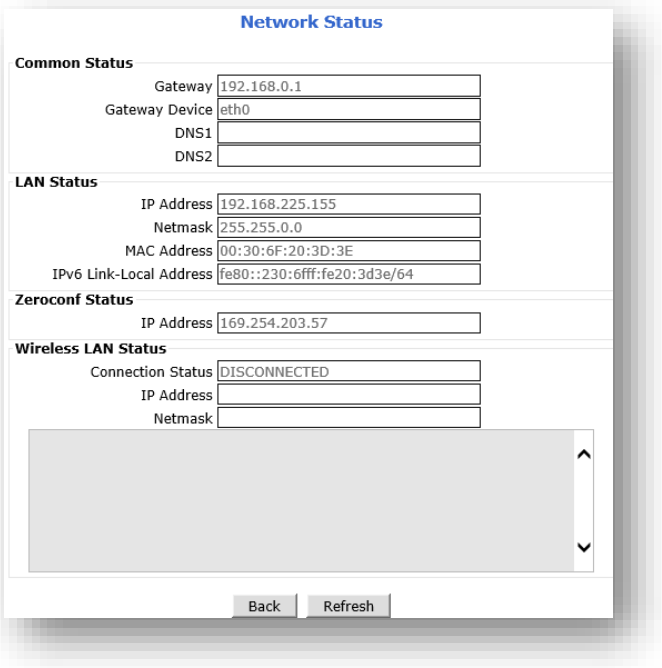
If multicast is not set, this address will not work.

- 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

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

4.4 View 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..



Note : For models without a wireless LAN module, the Wireless LAN Status is not displayed.

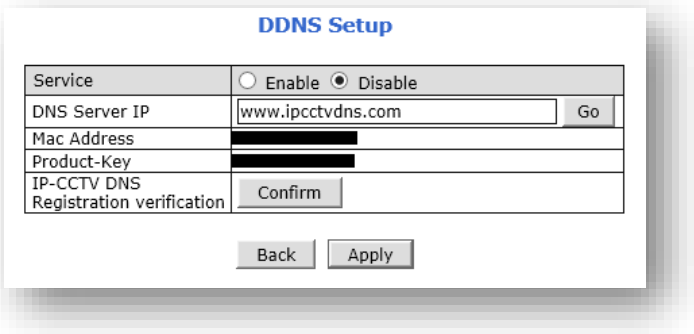
4.5 DDNS

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.

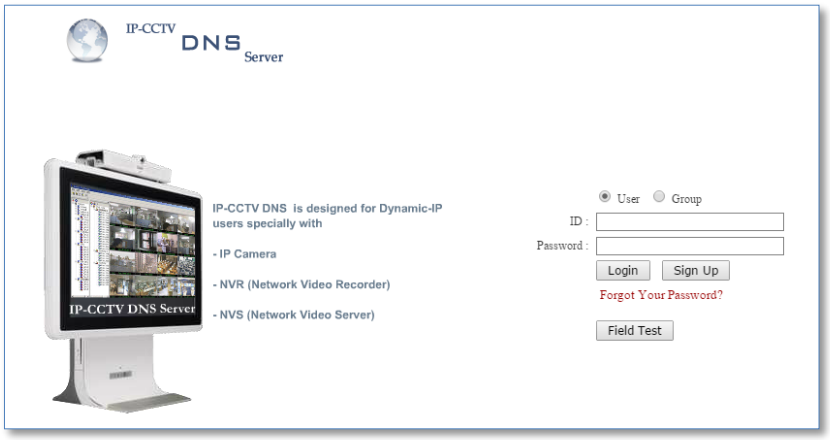
For port forwarding (port mapping) settings, please refer to the router manual..

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



1) Select **Enable** to use IP-CCTV DNS™ service and click Apply button.

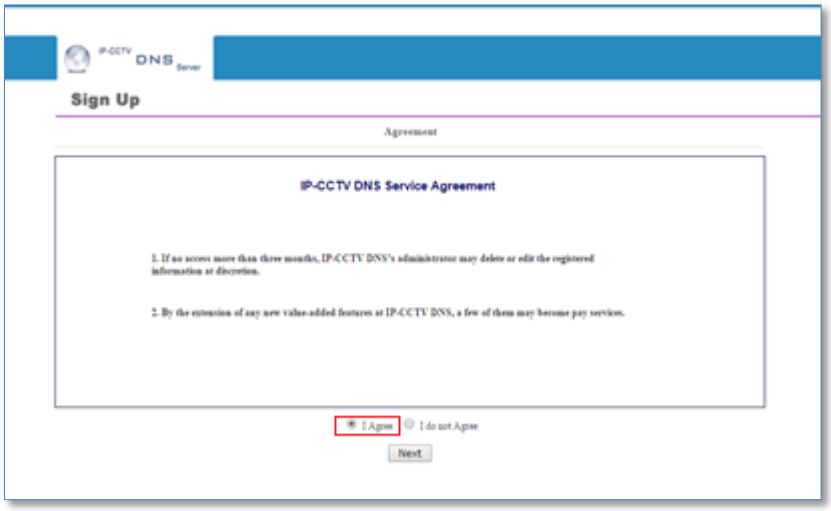
2) Click **Go** to go to IP-CCTV DNS™ web site or go to www.ipcctvdns.com directly through the web browser.



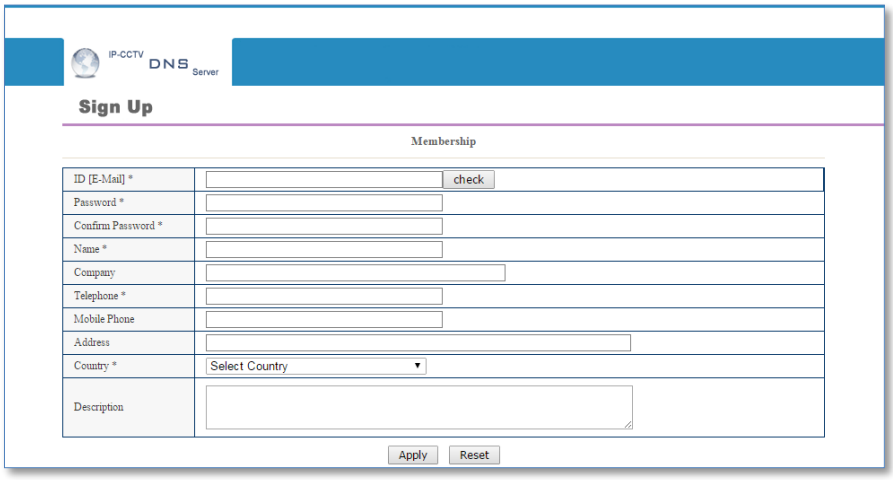
3) Click **Sign Up** to create an account if you do not have one

If you have one, proceed from the step 6

4) Select "I Agree" and click **Next** as shown below.

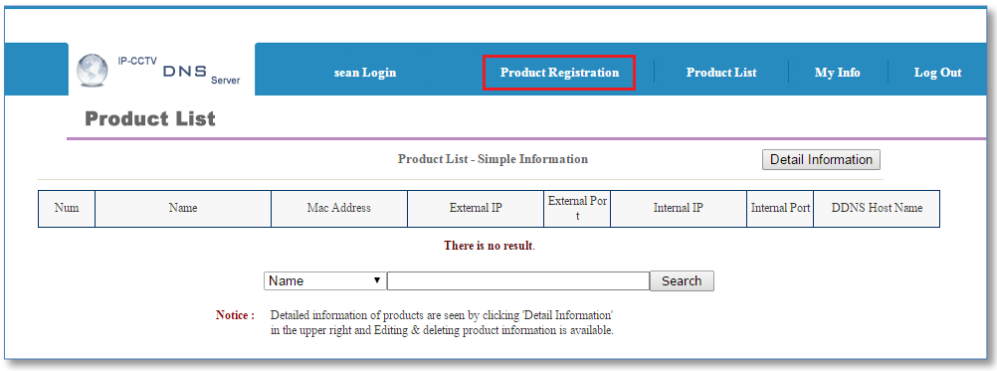


5) Enter the information requested such as ID, Password and Name, and then click Apply to finish.



6) **Login** to the IP-CCTV DNS™ with the ID and password

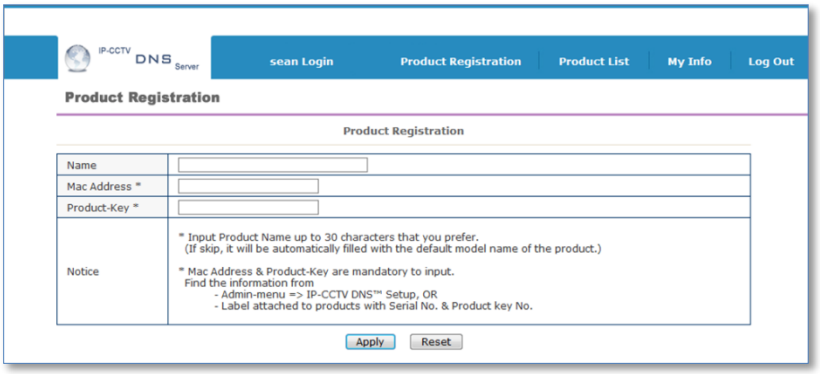
7) Click on **Product Registration** on Top Menu as shown below.



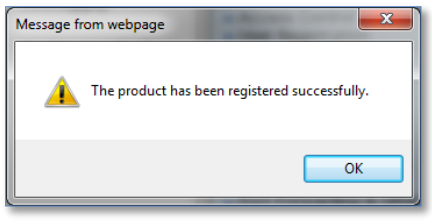
8) Enter the information requested (Camera Name, MAC Address, Product Key) and Click Apply as shown below.

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..



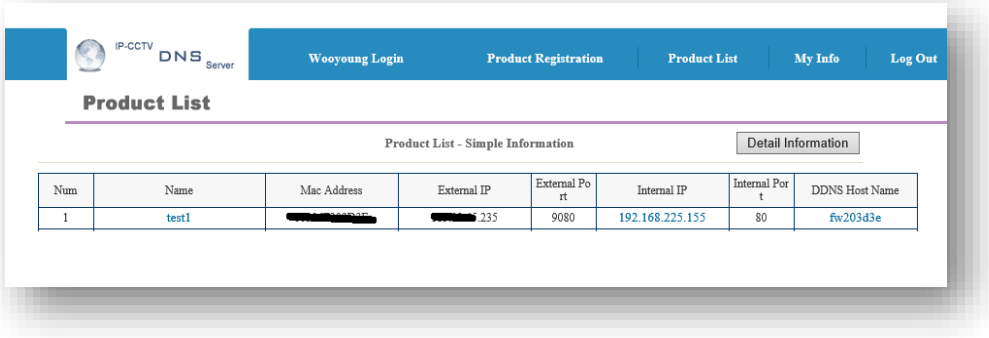
9) If registration is successful, the following message appears.



10) If registered successfully in DDNS, it will be appeared in Product List.

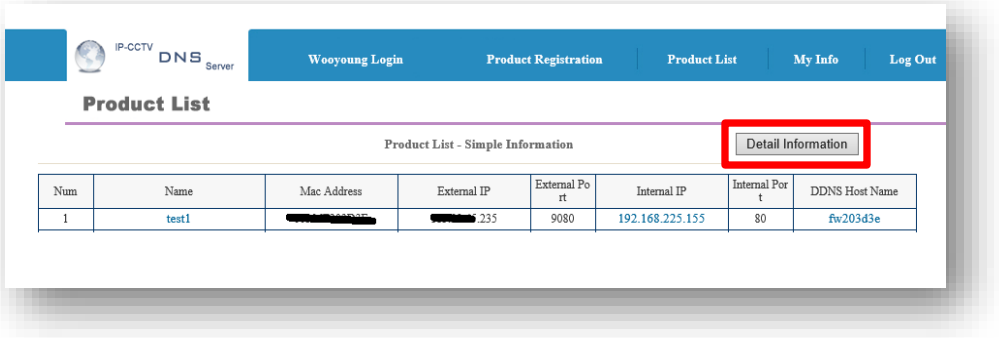
a. If you have port forwarded (port mapped) the camera's External Port to 9080 on the router, you can access it by clicking External IP or DDNS. (If it is not set to 9080, it will not connect.)

b. External Port can be changed in UPNP menu. This part will be explained again in the UPNP menu below.

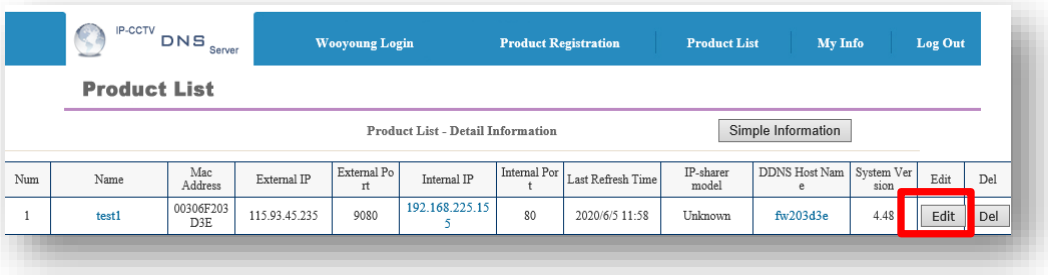


c. The default DDNS Host Name is fw****** which is last 6 digits of Mac Address. DDNS Host Name can be changed.

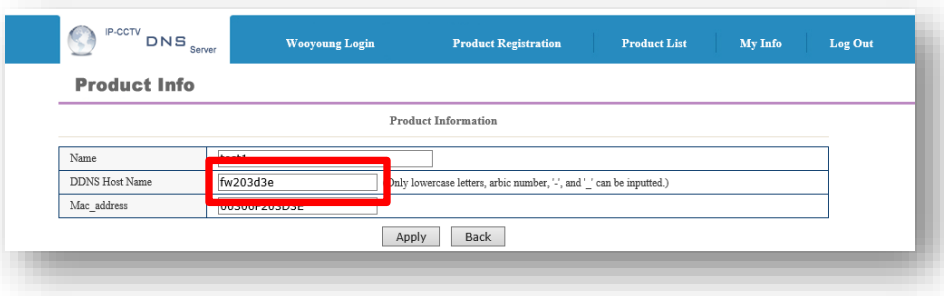
i. Click Detail Information



ii. Click Edit as shown below.

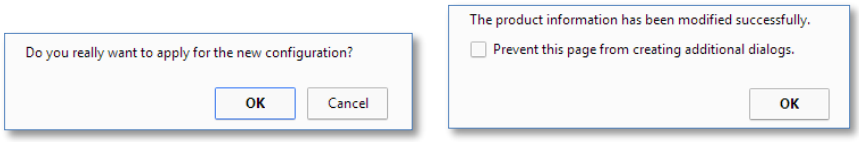


iii. Enter desited DDNS Host Name. (Only English Letters and numbers are allowed)

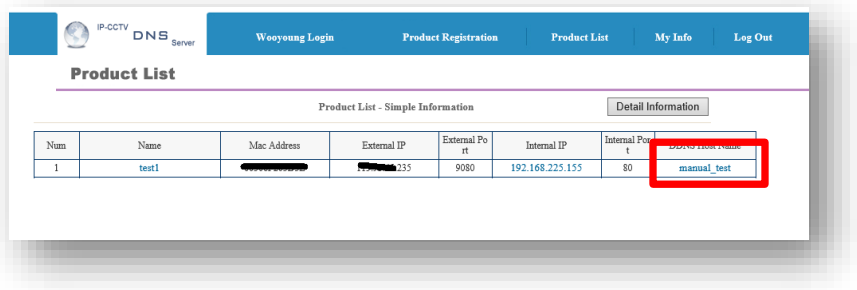


iv. Enter Host Nameand Click Apply

1. When the confirmation message appears, click the 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.

4.6 UPnP

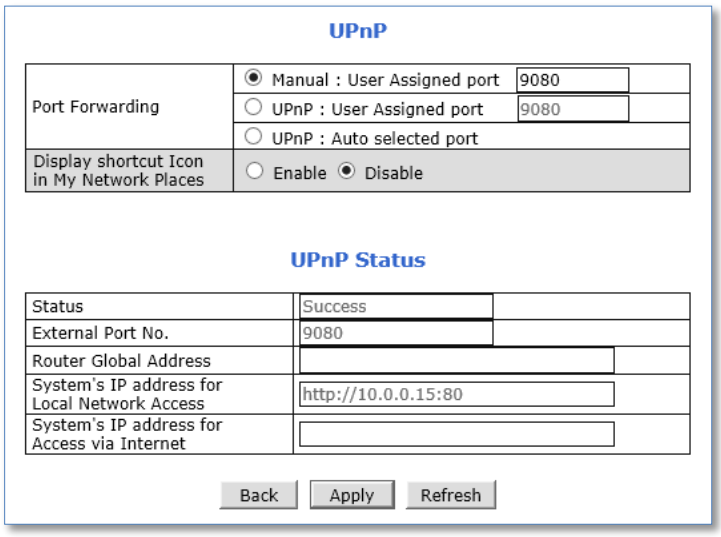
4.6.1 UPnP

UPnP (Universal Plug and Play) is a protocol used to conveniently search for and configure network devices on the local network. Port forwarding (port fabping) 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 (router).

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

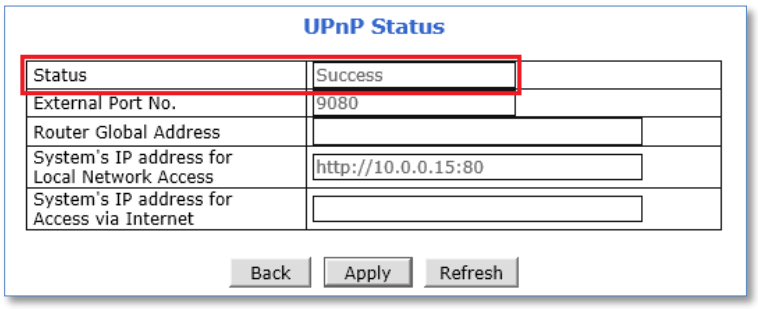
The value entered in Port Forwarding is displayed in External Port of IPCCTVDNS.

The external port number set in Port Forwarding 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.

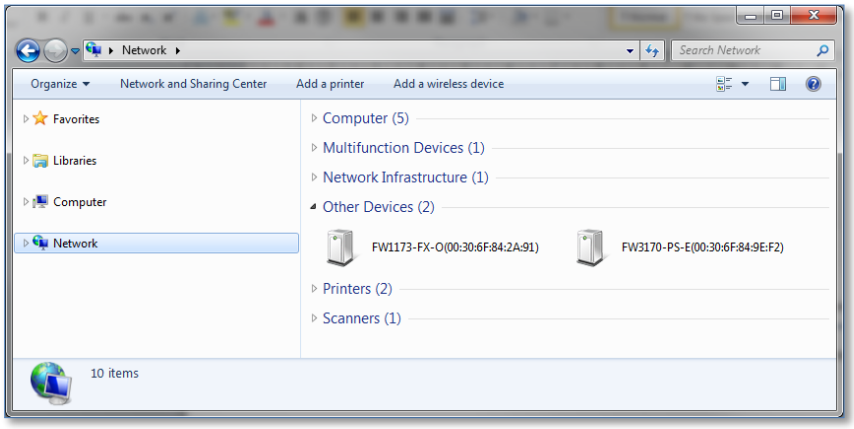
1) When the UPNP port forwarding process is done successfully, "**Success**" message will be appeared as shown below.



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

4.6.2 Display Shortcut Icon in My Network Place

Display shortcut Icon in My Network Places option will allow you to access device via **Windows Explorer** as shown below.



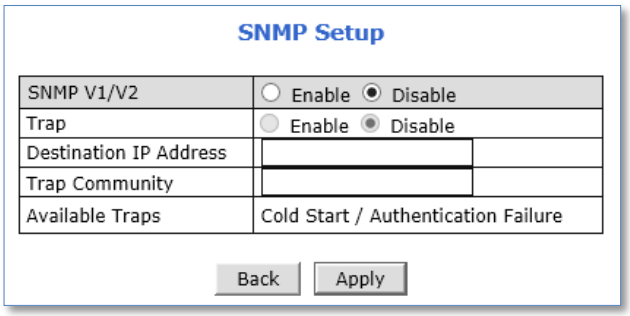
Note: To use this function, Windows™ XP Service Pack 2 (SP2) or higher version of Windows™ is required..

4.7 SNMP

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

Note: SMTP versions 1 and 2 support is based on MIB-2.

To setup SNMP, the below SNMP setup pageappears.



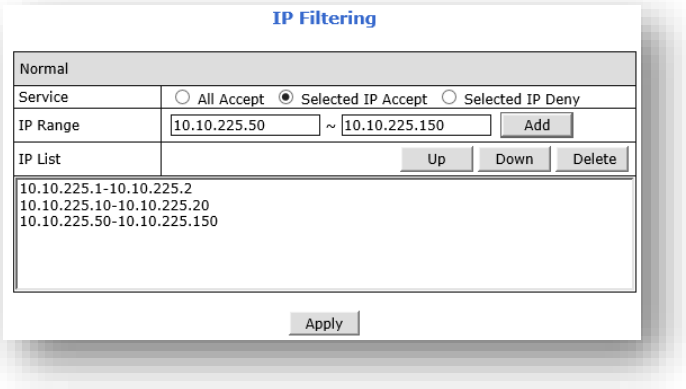
To use SNMP,

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**.**

4.8 IP Filtering

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

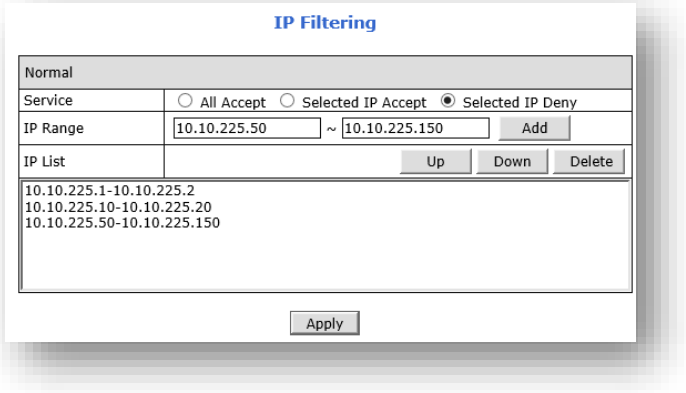
- All Accept : Disable the IP Filtering function. Can be accessed from any device.
- Selected IP Accept : Enter the IP list to allow access.
- Selected IP Deny : Enter the IP list to deny access.
- Setting Method
  - Selected IP Accept
    - Enter the IP address range to be allowed.



- 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.

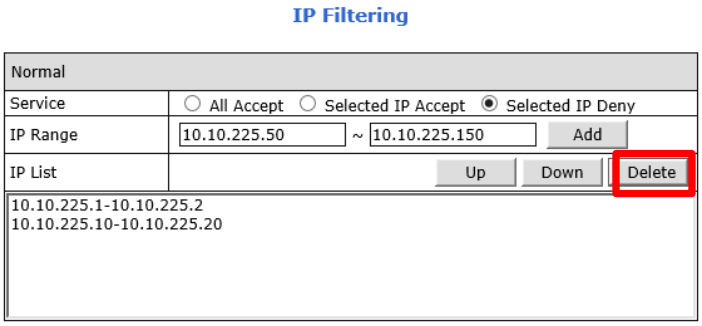
  - Selected IP Deny
    - Enter the IP address range to be denyed.
    - Click the Add button then denyed IP address Rage will be displayed in the list.



- 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.

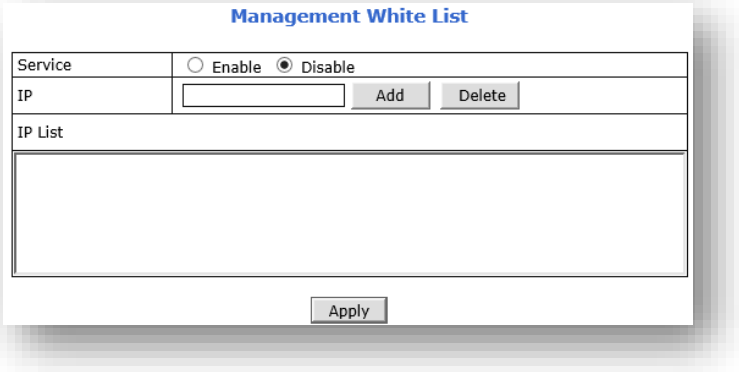
- The registered list can be moved by clicking the UP / Down button..
- How to delete the list and apply
  - Select a value registered in the IP List and click the Delete button to delete it..
  - Click Apply button to save.



- To disable IP Filtering function, select All Accept.

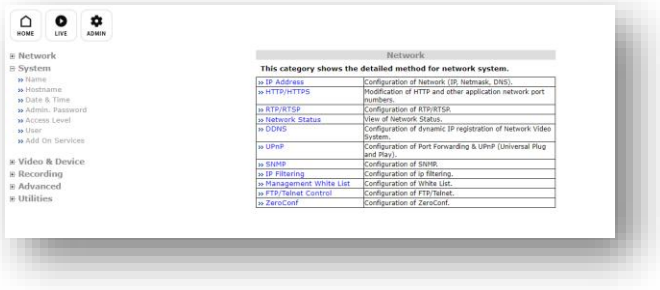
4.9 Management White List

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 (Admin)..



- 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 .

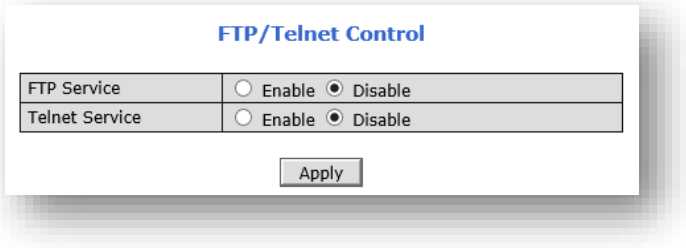
- When accessing the Admin page from the PC with access rights

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

4.10 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.

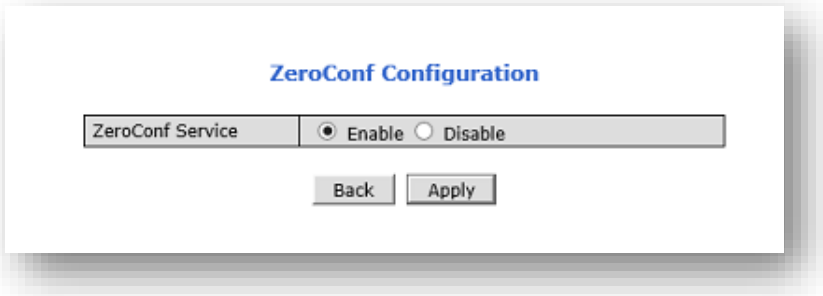
4.11 ZeroConf

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 Zero Conf protocol. Zero Conf IP uses 169.254.x.x range.

You can check the camera's Zero Conf IP in the Network Status menu.

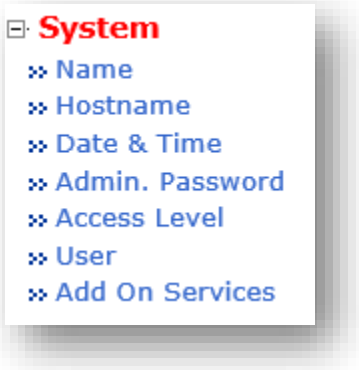
ZerConf Service is enabled by default.

If you don't want to use it, you can disable it to disable it.



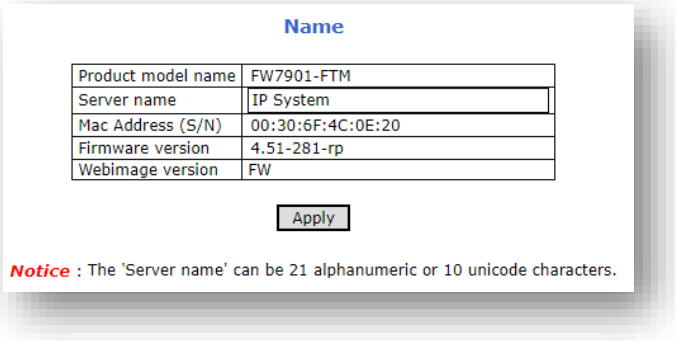
5. System

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

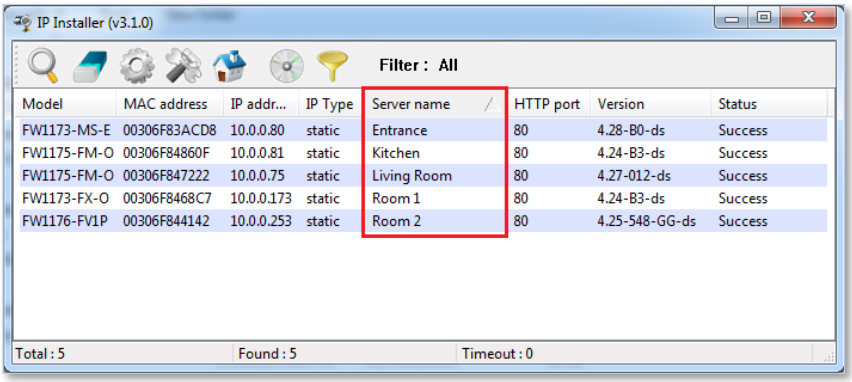


5.1 Name

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



The server name set here will be displayed in the IP Installer Server Name as shown below..

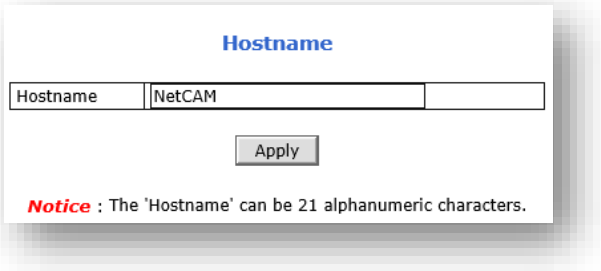


Enter the Server Name and click Apply to apply..

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.

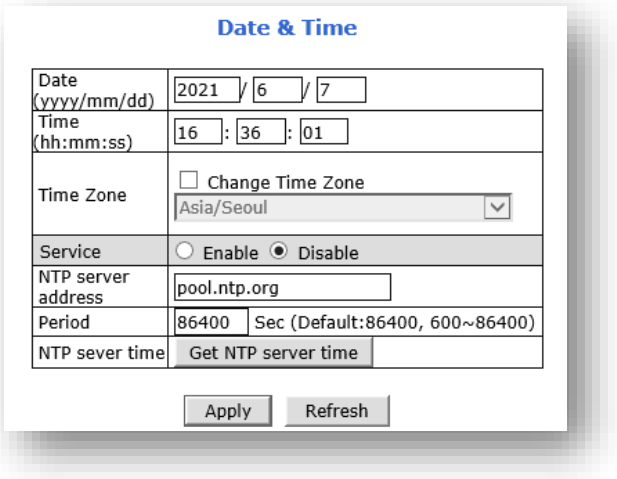
5.2 Hostname

If you click Hostname, a window appears where you can change the hostname of the camera as shown in the figure below. After entering the Hostname you want to change, click the Apply button at the bottom to apply it.



5.3 Date & Time

If you click Date & Time, the following window appears and you can set the date and time information of the server. After changing the date and time, click the Apply button at the bottom to apply directly to the system. In addition to this method, you can also use the Internet to synchronize time..



If the camera is connected to the Internet, click the Get NTP server Time button to synchronize the time using the address recorded in the NTP server address. At this time, the synchronized time information is based on the area displayed in the Time Zone.

■ **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. (Reboot prompt will appear)
- Please proceed to below steps after reboot.

2) Select Enable at Service .
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 the following status:

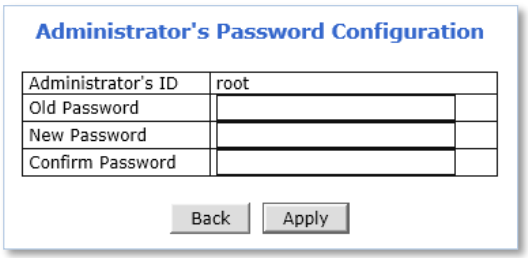
- Internet Connection
- Check whether NTP server and camera communicate normally

6) Click Apply button to apply.

5.4 Admin. Password

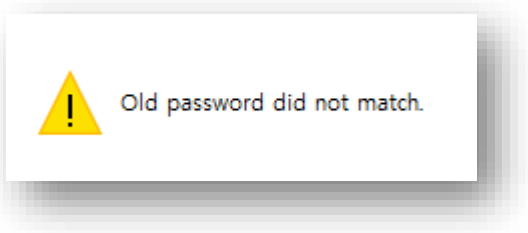
This is the menu to change the administrator password (default password is root).

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

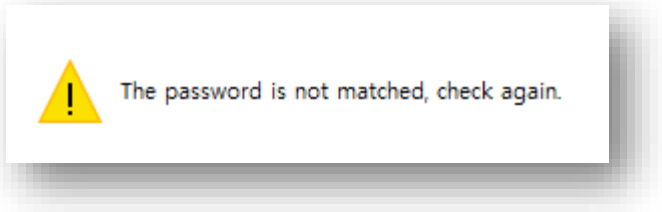


To change the password for the administrator, please follow the steps below.

1) Enter the current password in Old Password field.
2) Enter the new password in New Password and Confirm Passwordfield.
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..

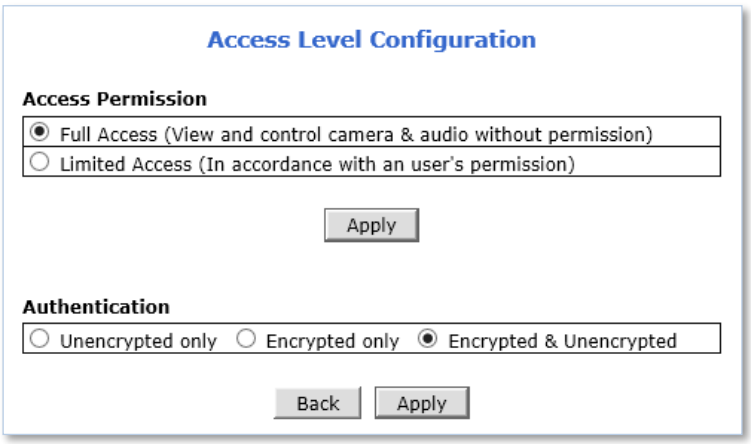


4) If the new password applied successfully, a new login window appears. Enter the new password and password changing process is completed.

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 =-_. ! @#$~^&+=|.*

5.5 Access Level

This menu is to set the access permission level when viewing real-time video using a web browser or RTP/RTSP. 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.

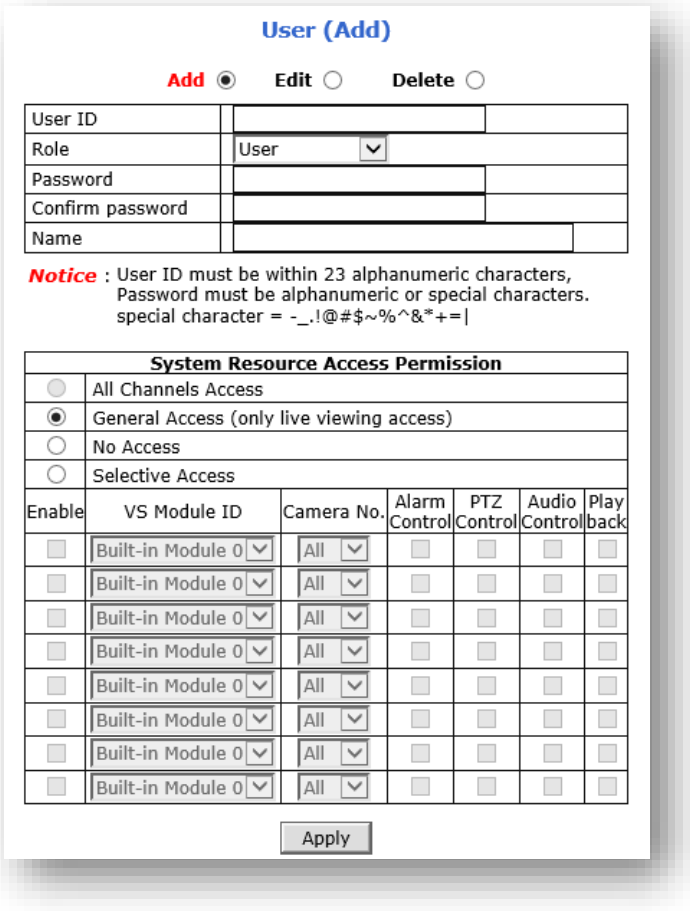
Authentication

- **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.

5.6 User

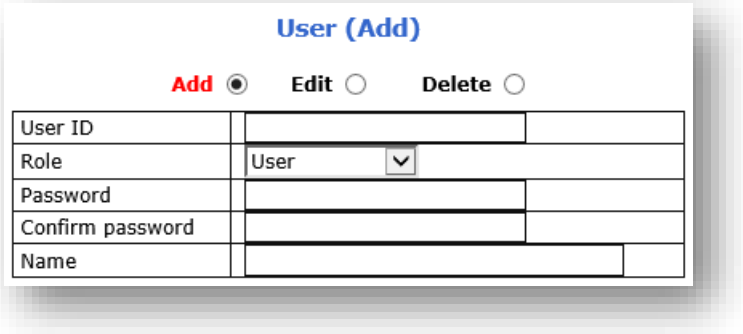
Users can be added, modified, and/or deleted by the administrator. Once registered as Limited Access setting, the user can access the device with some limited privileges.

Click the User menu and then the User Registation (Add) Menu appears as per below..



5.6.1 Add

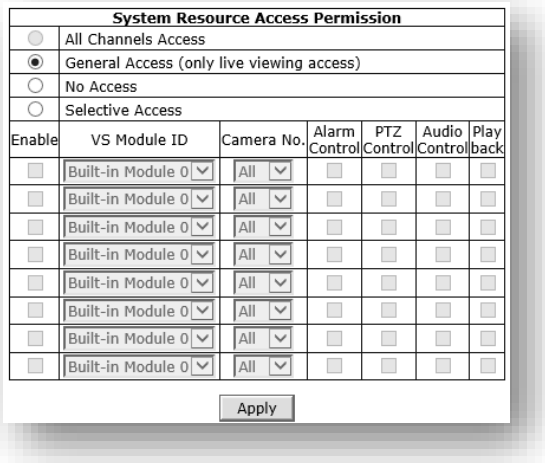
To add a new user, follow the below steps.



1) Select Add.
2) Enter the new User IDyou want to add.
3) You can specify the role of account (User, Manager, Administrator).
   - User : General user account. Basically, only Live View is available.
     - In case account set as User, System Resource Access permission sets to General Access (Only live viewing access)..
   - Manager : Manager account. All functions are granted except access to the admin page.
     - In case account set as Manager, System Resource Access Permissionsets to All Channel Access.
   - Administrator : Administrator account. You can use all functions as the root account. (However, if you use the IP Installer, you cannot set up with a user-created account.)
4) Password 와 Confirm Password : Enter the password to use for the specified account.
5) Name : Enter the name of account.
6) Click the Apply button to create an account.

- System Resource Access Permission

1) Even if an Access Permission has been determined by Role, you can change the permissions in this menu.



A. **All Channels Access**: The user has authority to access all channels and features

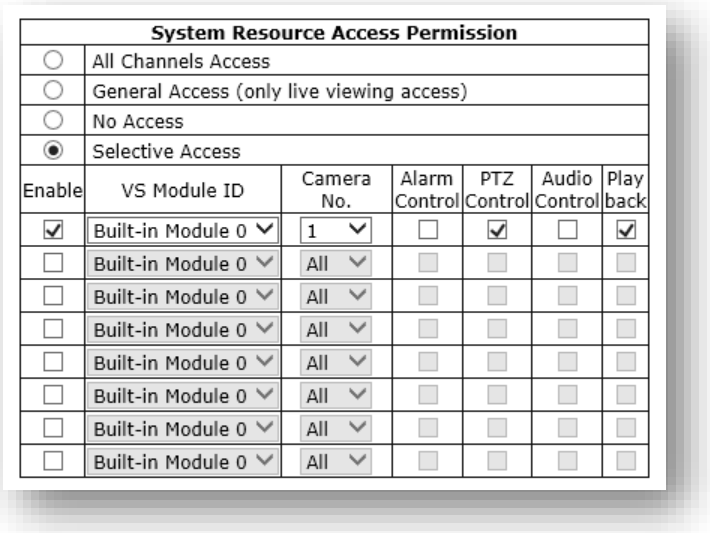
B. **General Access** (only live viewing access): Live monitoring is allowed only to the user

C. **No Access**: The user is not permitted to access the device at all

D. **Selective Access**: The user is allowed to access selected channels and features

2) If Selective Access permission is selected, go to the next step 3).

3) Check **Enable** to select access camera channel and features as shown below.



A. Select VS Module ID : The camera is fixed at Bulit-in Module 0. It is impossible to change.

B. Camera No. : Select a channel to allow. Select All to allow all channels.

C. Alarm Control : Allows DO control authority.

D. PTZ Control : Allows PTZ control authority.

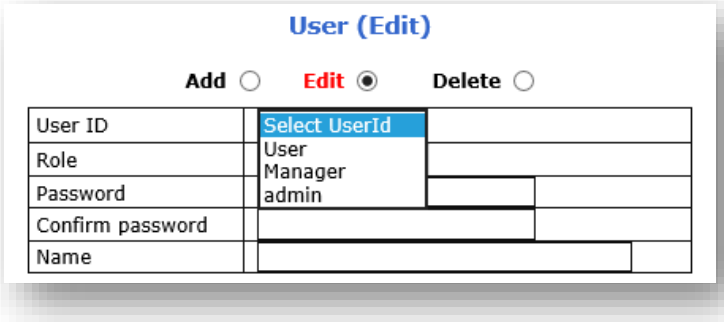
E. Audio Control : Allows Audio control authority.

F. Playback : Allows Playback control authority

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

5.6.2 Edit

This menu is for modifying the privileges and functions of the registered account..



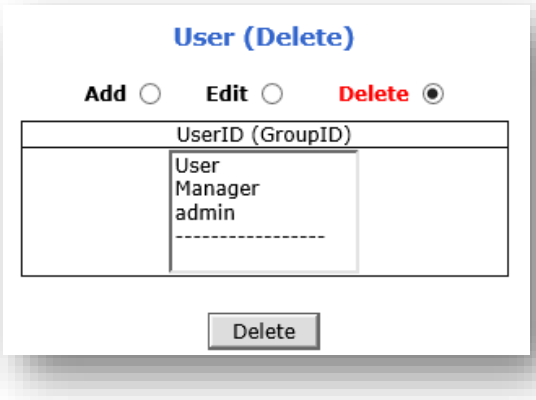
1) Select desired **User ID** to change the user account setting

2) The previously registered information of the selected ID is displayed.

3) After modifying with the desired permission, click the Apply button to apply.

5.6.3 Delete

This is a function to delete a registered account.



1) Select desired User ID to delete.

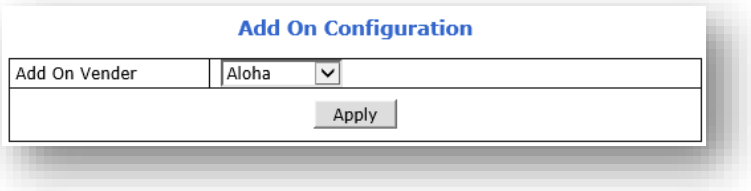
2) Click the Delete button then the selected account will be deleted.

3) Deleted accounts cannot be logged into the camera.

5.7 Add On Service

Add on Service is a function that supports the ability to shift the input data to the camera or store it in NVR in conjunction with POS devices. The protocol of each supporting company must be followed, and a separate program must be developed. The companies supported are as follows.

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

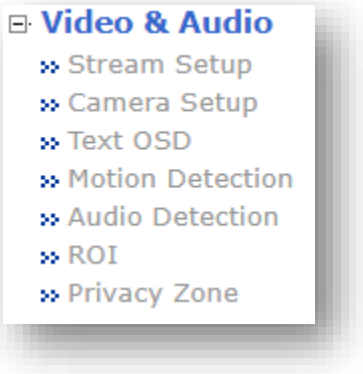


- Add on Vendor : Select the Vendor to use

- Add On Service : Select the option (Enable/Disable).

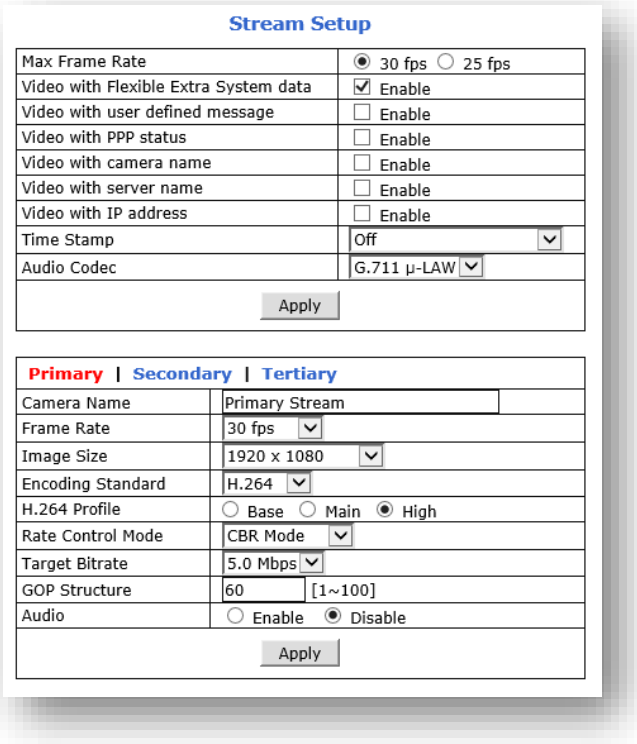
6. Video & Device

This menu is in charge of settings related to video and audio.

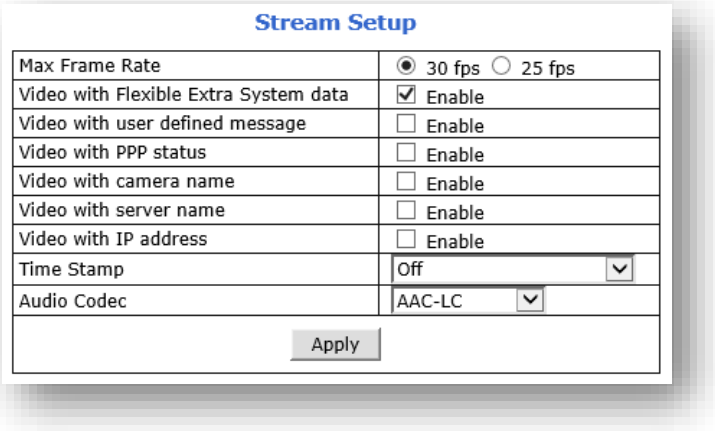


Note: Video streaming settings page may vary depending on the model number of firmware version..

6.1 Stream Setup



6.1.1 Stream Setup



- **Max Frame Rate:** This menu is for setting of Max Frame Rate, and it can be set to 60fps/50fps or 30fps/25fps, or 15fps/12.5fps depending on the product.
- **Video with Flexible Extra System Data:** If Enabled, video data will contain UART sensor data from COM port. (This menu requires the integration program using SDK.)
- **Video with User defined message:** If Enabled, video data will contain the user-defined message data. (This menu requires the integration program using SDK.)
- **Video with PPP status:** If enabled, video data will contain PPP connection status. (This menu requires the integration program using SDK.)
- **Video with Camera name:** If enabled, video data will contain the camera name defined by user. (This

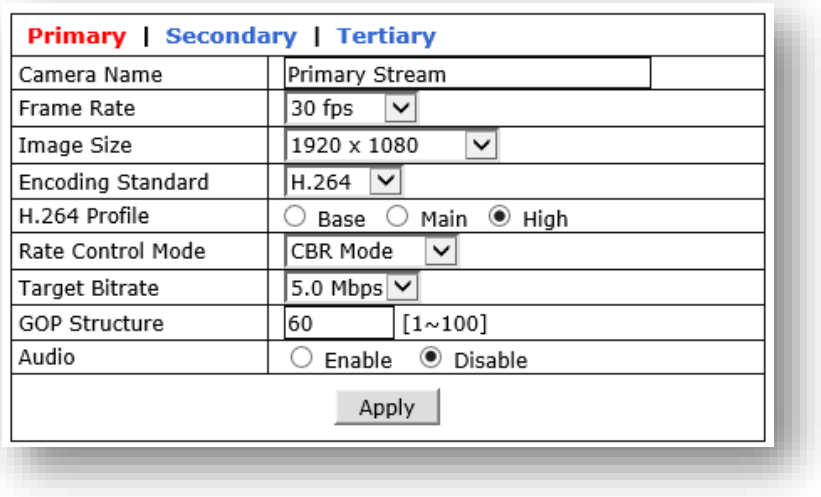
menu requires the integration program using SDK.)

- **Video with Server name:** If enabled, video data will contain the name of the device. (This menu requires the integration program using SDK.)
- **Video with IP address:** If enabled, video data will contain the IP address of the device. (This menu requires the integration program using SDK.)
- **Time Stamp:** If enabled, video data will contain the time stamp at upper left corner of Video.
  - **ISO Standard format :** 2020-06-03 01:01:01
  - **American Numeric format :** 06/03/2020-13:01:01
  - **British Numeric format :** 03/06/2020-13:01:01
  - **American Alphanumeric format :** JUN 03th 2020-01:01:01 PM
  - **British Alphanumeric format :** 03th JUN 2020-01:01:01 PM
- **Audio Codec**: Enable if Audio function is to be used..
  - Audio codec supports G.711 u-LAW / G.711 A-LAW / SPEEX / AAC-LC.

6.1.2 Primary / Secondary / Tertiary

This is a menu where you can configure video-related settings such as the name of each channel, frame, resolution, codec, and bit rate.

You can also turn the audio function on or off from this menu..



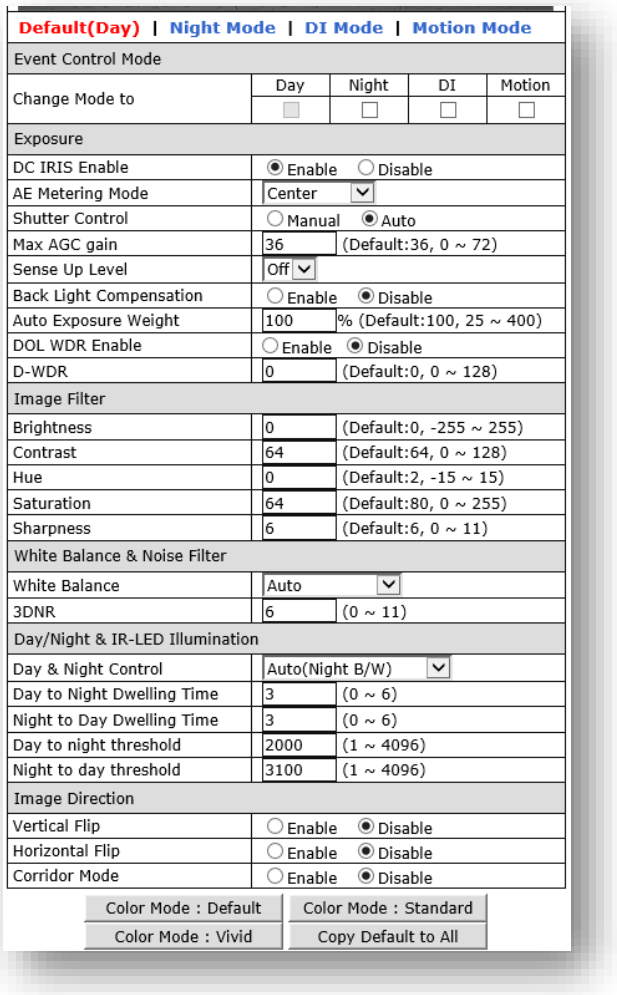
- Primary / Secondary / Tertiary : This is a menu to select each channel.
- Camera Name : This is a menu to change the name of the selected channel..
- Frame Rate : This menu changes the frame rate of the selected channel..
  - The higher the number, the smoother the playback..
- Image Size : This is a menu to change the resolution (image size) of the selected channel..
- Encoding Standard : This is a menu to change the codec of the selected channel.
  - It can be set to MJPEG / H.264 / H.265 (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 : his is a menu to change the transmission mode of the channel selected as H.264 / H.265. (MJPEG codec is not supported.)
  - ACBR : It works with an emphasis on picture quality. Frames may be displayed less.
  - AVBR : Set the minimum bitrate / maximum bitrate to operate the bitrate within the specified range..
  - ABR : Set the Bitrate to change with an emphasis on image quality.
  - CBR : Set the Bitrate to be fixed with a focus on bandwidth.
- Image Quality : This menu appears when the codec of the selected channel is set from MJPEG or H.264 (H.265) to VBR.
  - Lowest, Low, Normal, High, Highest, Low Compression can be set in 6 steps. The lower the compression, the better the picture quality and the larger the capacity..
- Target Bitrate : Bitrate is set in ACBR, CBR Mode..
  - When set to AVBR, it changes to the menu to set Minimum Bitrate / Maximum Bitrate.
- GOP Structure : This is the menu to set 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..

6.2 Camera Setup

This page is a menu for setting video related settings on the product.

Depending on the model, the Camera Settings menu is displayed differently.

6.2.1 Models supported as follows



- **Event Control Mode**
  - **Change Mode to :** This menu is selected when making other settings according to conditions. If you want to set different day and night settings, check Night in Day Mode, and check Day in Night Mode.
  - **Default(Day) :** This mode is usually used for Day time.
  - **Night Mode :** This mode is for setting when you need to set it separately at Night.
  - **DI Mode :** This mode is used when sensor input is detected.
  - **Motion Mode :** This mode is used when motion is detected
- **Exposure**
  - **DC IRIS Enable:**
    - **Disable :** Select when a manual IRIS lens is used, and No DC IRIS lens is used.
    - **Enable:** Select when a Auto IRIS lens is used.

    ※ For fixed lens cameras, this menu is displayed as Indoor / Outdoor instead of Disable / Enable.
  - **AE Metering Mode** : Select the position to measure of light. (Spot, Center, Average / Center Flip)
  - **Shutter Control: Select the shutter speed**.
    - **Auto :** Shutter speed will be controlled automatically
    - **Manual :** Set the shutter speed manually the Min / Max values
  - **Max AGC Gain:** Based on Selected maximum AGC gain, amplifies the video signal to make the

screen brighter in low light conditions automatically. In the higher gain value, video noise may be increased.

- **Sens Up Level:** Based on selected Sens Up Level (Off, 1, 2), the image brightness level can be improved by lowering the shutter speed of the camera in low light conditions automatically
- **Back Light Compensation :** Set whether to use backlight compensation function
  - **Disable** : Turn off the feature.
  - **Enable** : Turn on the feature.
- **Auto Exposure Weight :** Set Auto Exposure Weight level.
- **DOL WDR Enable:** Set whether to use WDR feature.
  - **Disable** : Turn off WDR feature.
  - **Enable** : Turn on WDR feature.
- **WDR :** Set WDR sensitivity level between 0 - 128.

- Image Filter

- **Brightness:** Select the brightness of image between 0 ~ 255.
- **Contrast:** Select the contrast of image between 0 ~ 128.
- **Hue:** Select the color tone of image between -15 ~ 15
- **Saturation:** Select the saturation of image between 0 ~ 255
- **Sharpness :** Select the sharpness of image between 0 ~ 11

- White Balance & Noise Filter

- **White Balance:**
  - **Auto**: Adjust white and gray-scale parameters in video, based on the color temperatures of the viewed scene automatically.
  - **Manual Temp. Mode**: The user can set white balance level based on specific environment as followings ; Incandescent, D4000, D5000, Sunny, Cloudy, Flash, Fluorescent, Fluorescent_H, Underwater.
  - **Custom**: The user can set white balance manually.
- **3DNR**: 3 Dimensional Noise Reduction analyzes the differences between successive frames in order to adjust pixels and improve fidelity. Select whether to use this feature or not.

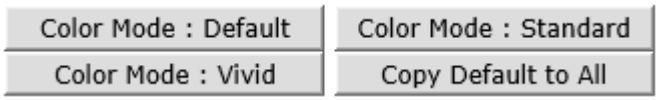
- Day/Night & IR-LED Illumination

- **Day & Night Control:**
  - **Color:** Images are always displayed in color.
  - **Black & White:** Images are always displayed in black and white.
  - **Auto:** Color mode for normal condition (Daytime), Black and White for Low light condition (Night time).
  - **Auto(Night Color10 ~ 50) :** Night time color mode. The higher the number, the darker the color
- **Day to Night Dwelling Time:** When switching from color to black and white, waits for the set time and then switches.
- **Night to Day Dwelling Time:** When switching from black and white to color, waits for the set time before switching.
- **Day to night threshold:** This is the point of transition from Color (Day) to B/W (Night) mode. Select between 1 and 4096, and higher the value the earlier the transition point, lower the value the later the transition point.
- **Night to day threshold :** This is the point of transition from B/W (Night) to Color (Day) mode. Select between 1 and 4096, and higher the value the later the transition point, lower the value the earlier the transition point. (Night to day threshold cannot be greater than Day to night threshold..)

- Image Direction

- **Vertical Flip:** Rotate the image 180^{o} vertically .
- **Horizontal Flip:** Rotate the image 180^{o} horizontally.
- **Corridor Mode :** Rotate the image 90^{o} clockwise.

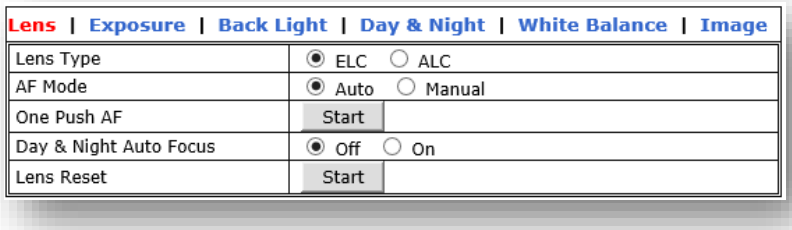
- **Color Mode buttons**



- **Color Mode : Default –** Initialize the values set by the user and change to the default color mode**.**
- **Color Mode : Standard –** Initialize the value set by the user and change to normal color mode**.**
- **Color Mode : Vivid** - Initialize the value set by the user and change to vivid color mode.
- **Copy Default to All –** Apply the value set in Day Mode to Night Mode, DI Mode, and Motion Mode.

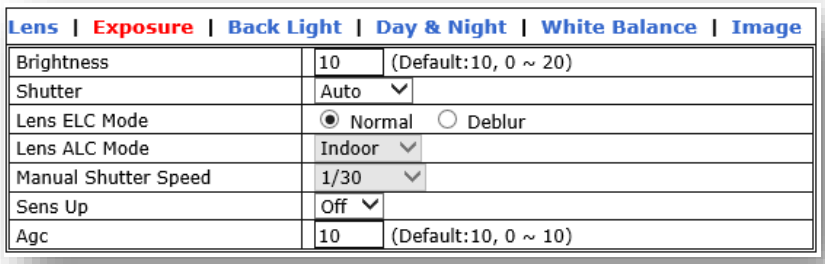
6.2.2 Supported models as below

Lens



- **Lens Type**:
  - **ELC**: Select when using a fixed lens or manual IRIS lens.
  - **ALC**: Select when using Auto Iris Lens.
- **AF Mode**: Select whether to use Auto Focus mode or not.
- **One Push AF** : Re-focus in the current zoom condition.
- **Day & Night Auto Focus**: Automatically adjusts focus when Day & Night mode is changed.
- **Lens Reset** : Reset the lens. When zoom is set, it moves to X1 and returns to the original position.

Exposure

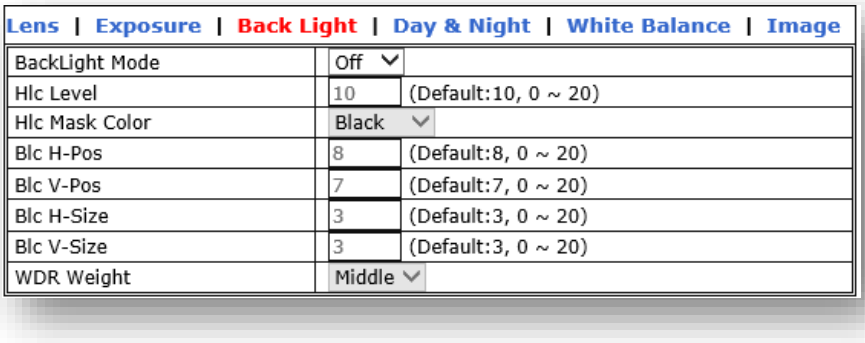


- **Brightness**: Set the brightness of the image from 0 to 20.
- **Shutter**: Select Shutter mode.
  -Auto : Set the shutter speed automatically.
  -Manual : Set the shutter speed manually. Manual Shutter Speed is activated.
  -Flicker : Eliminates flickering on the screen.
- **Lens ELC Mode**:

- **Normal**: ELC mode is used by default.
- **Deblur:** Increases sharpness in images.

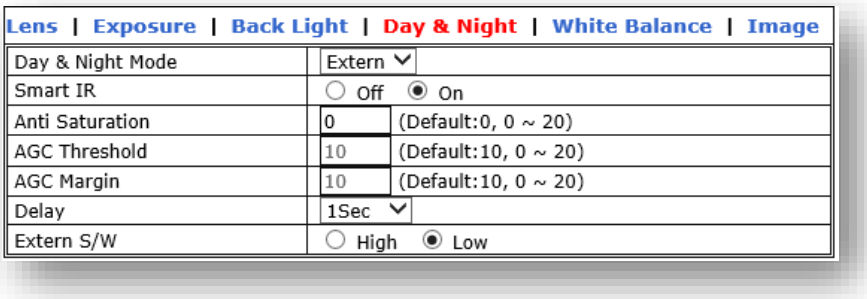
- **Lens ALC Mode**:
  - **Indoor** : Select when the camera is installed indoors.
  - **Outdoor** : Select when the camera is installed outdoors.
  - **Deblur** : Increases sharpness in images.
- **Manual Shutter Speed :** Select the desired shutter speed.
- **Sens Up:** In case of low light circumstance, The image can be improved by selecting Sens Up Level (Off, x2, x4, x8, x16, and x32) by lowering image frames..
- **AGC (Auto Gain Control) :** Abbreviation for Auto Gain Control, it is possible to improve the low-light image by adjusting the sensor gain from 0 ~ 16.

Back Light



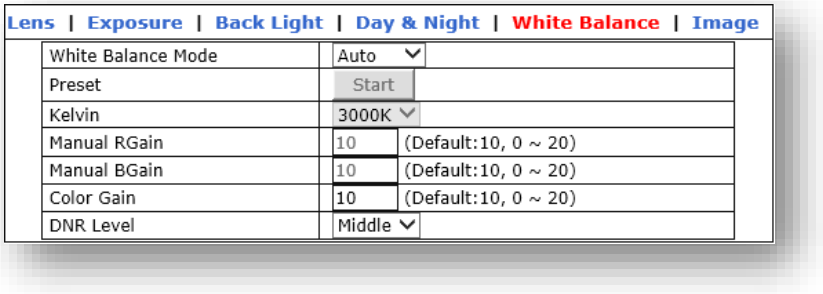
- **BackLight Mode**:
  - **OFF**: Disable Backlight Mode. (No backlight compensation.)
  - **HLC (Highlight Compensation):** When a strong light enters the designated area, mask it with the color specified by the user to ignore it.
  - **BLC (Backlight Compensation)**: When the camera receives strong light, the surrounding subjects appear black, and this function corrects them
  - **WDR (Wide Dynamic Range)**: WDR (Dynamic Contrast) can improve the exposure when there is a considerable contrast between light and dark areas in the image. Enable WDR in intense backlight conditions
- **HLC Level**: Select the HSBLC sensitivity level between 0 and 20.
- **Hlc Mask Color**: Select color of the HLC masking area.
- **Blc H-Pos:** Set the horizontal starting point for BLC area.
- **Blc V-Pos:** Set the vertical starting point for BLC area.
- **Blc H-size:** Set the width of BLC area.
- **Blc V-Size:** Set the height of BLC area.
- **WDR Weight:** Select the WDR sensitivity in WDR mode.

Day & Night



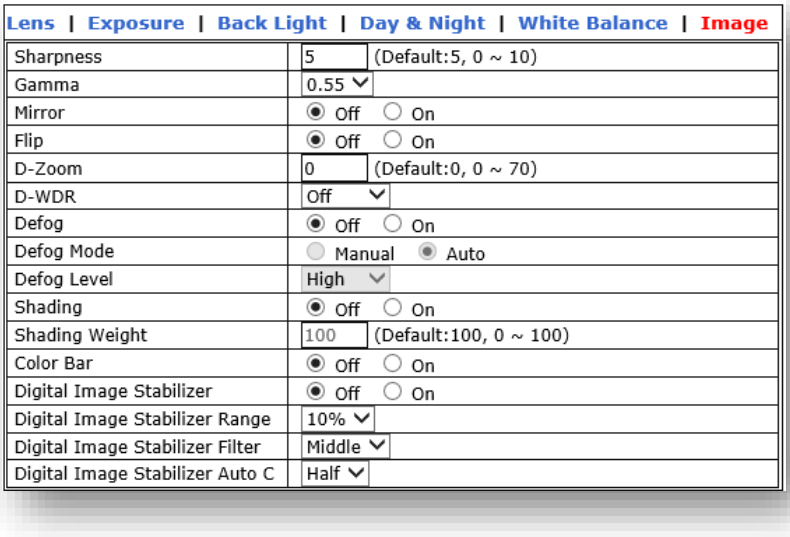
- **Day & Night Mode:**
  - **Auto**: Automatically converts the Day & Night mode depending on the amount of light.
  - **Color**: Color Mode
  - **B/W**: Black and White Mode
  - **EXT**: Automatically converts the Day & Night mode depending on the built-in IR operation.
- **Smart IR** : Set whether to use the function that adjusts the saturation of the image to the appropriate brightness by irradiating the IR LED strongly when using the IR camera..
- **Anti-Saturation**: set the sensitivity level of anti-saturation which prevent the image saturation by IR reflection.
- **AGC Threshold**: Set AGC Threshold level.
- **AGC Margin**: Set AGC margin Level.
- **Delay**: Select the delay time. The day and night mode changes after the delay time when day and night mode switching conditions are met.
- **Extern S/W**: Select the switching mode of CDS...
  - **Low**: This method is used when the voltage value decreases when CdS is blocked while the CdS voltage value is high.
  - **High**: This method is used when the voltage value rises when CdS is blocked while the CdS voltage value is low.

White Balance



- **White Balance Mode:**
  - **Auto**: Adjust white and gray-scale parameters in video, based on the color temperatures of the viewed scene automatically.
  - **Preset**: To get the best condition for the current lighting environment, let the camera shine white paper and press the Set button. When the environment changes, you have to adjust it again.
  - **Manual**: Adjust W/B by changing red, blue, color gain and Kelvin values manually.
- **Preset:** Adjust white balance by changing color gain value.
- **Kelvin:** Select color temperature for adjusting white balance manually.
- **Manual RGain:** Select red gain for manual white balance.
- **Manual BGain:** Select blue gain for manual white balance.
- **Color Gain:** Select color gain for preset or manual white balance.
- **DNR Level**: Select digital noise reduction level.

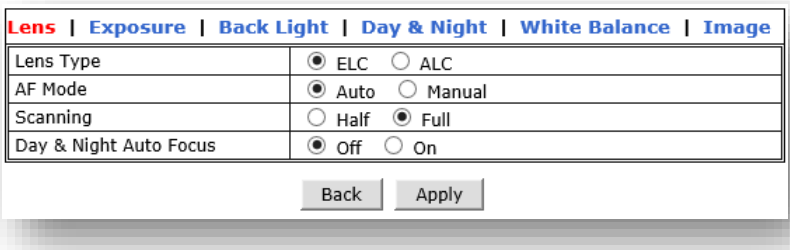
Image



- **Sharpness**: Select the sharpness of image between 0 and 10.
- **Gamma:** Adjust the balance between the input brightness signal and the output signal**.**
- **Mirror:** Flips the video images to the left or right.
- **Flip:** Flip the video images up or down.
- **D-Zoom**: Select whether to use digital zoom feature or not.
- **D-WDR**: Select Digital Wide Dynamic Rage level to use D-WDR feature, or disable it.
- **Defog Mode**: Defog(Fog compensation) function On/Off.
- **Defog Level :** When set to Manual, the fog compensation function operates according to the Defog Level. When set to Auto, fog compensation is performed automatically**.**
- **Defog Level**: When Defog Mode is Manual, user can specify Level.
- **Shading**: Corrects dark areas of the image.
- **Shading Weight**: Select the shading weight between 0 and 100.
- **Color Bar**: Display color bar on the screen.
- **Digital Image Stabilizer :** Set whether or not 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 the image compensation filter. (High, normal, Low)
- **Digital Image Stabilizer Auto C :** Specify the image compensation area. (Half/Full)

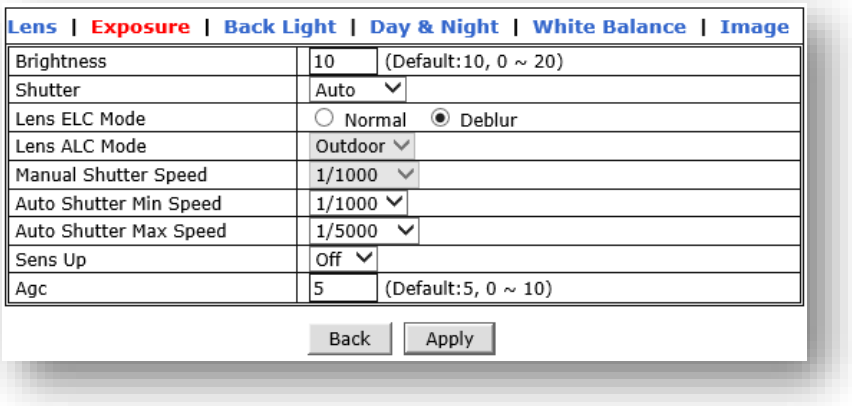
6.2.3 Supported models as below

Lens



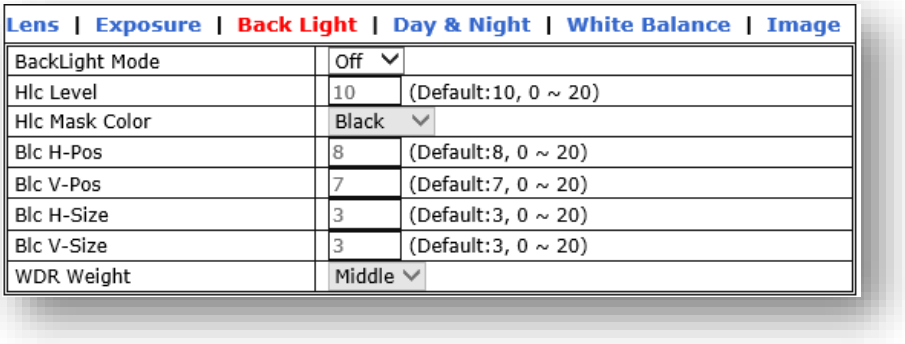
- **Lens Type**:
  - **ELC**: Select when using a fixed lens or manual IRIS lens.
  - **ALC**: Select when using Auto Iris Lens.
- **AF Mode**: Select whether to use Auto Focus mode or not.
- **Scanning** : Set the scan interval when focusing automatically.
- **Day & Night Auto Focus**: Automatically adjusts focus when Day & Night mode is changed.

Exposure



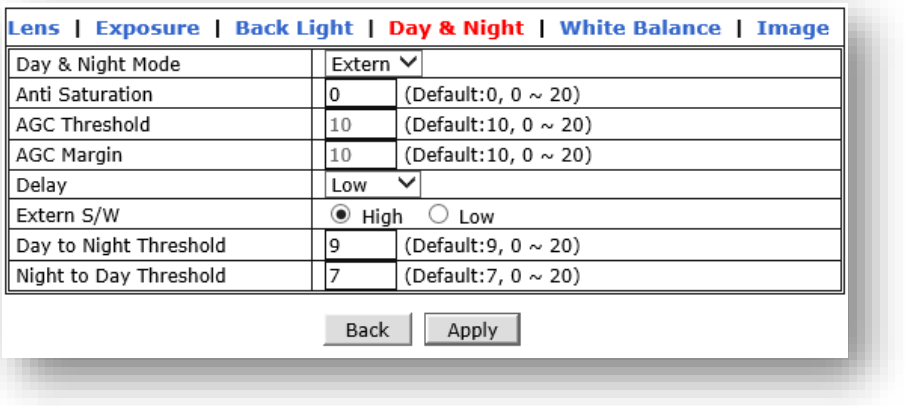
- **Brightness**: Set the brightness of the image from 0 to 20.
- **Shutter**: Select Shutter mode.
  -Auto : Set the shutter speed automatically.
  -Manual : Set the shutter speed manually. Manual Shutter Speed is activated.
  -Flicker : Eliminates flickering on the screen.
- **Lens ELC Mode**:
  - **Normal**: ELC mode is used by default.
  - **Deblur:** Increases sharpness in images.
- **Lens ALC Mode**:
  - **Indoor** : Select when the camera is installed indoors.
  - **Outdoor** : Select when the camera is installed outdoors.
  - **Deblur** : Increases sharpness in images.
- **Manual Shutter Speed :** Select the desired shutter speed.
- **Sens Up:** In case of low light circumstance, The image can be improved by selecting Sens Up Level (Off, x2, x4, x8, x16, and x32) by lowering image frames..
- **AGC (Auto Gain Control) :** Abbreviation for Auto Gain Control, it is possible to improve the low-light image by adjusting the sensor gain from 0 ~ 16.

Back Light



- **BackLight Mode**:
  - **OFF**: Disable Backlight Mode. (No backlight compensation.)
  - **HLC (Highlight Compensation):** When a strong light enters the designated area, mask it with the color specified by the user to ignore it.
  - **BLC (Backlight Compensation)**: When the camera receives strong light, the surrounding subjects appear black, and this function corrects them
  - **WDR (Wide Dynamic Range)**: WDR (Dynamic Contrast) can improve the exposure when there is a considerable contrast between light and dark areas in the image. Enable WDR in intense backlight conditions
- **HLC Level**: Select the HSBLC sensitivity level between 0 and 20.
- **Hlc Mask Color**: Select color of the HLC masking area.
- **Blc H-Pos:** Set the horizontal starting point for BLC area.
- **Blc V-Pos:** Set the vertical starting point for BLC area.
- **Blc H-size:** Set the width of BLC area.
- **Blc V-Size:** Set the height of BLC area.
- **WDR Weight:** Select the WDR sensitivity in WDR mode.

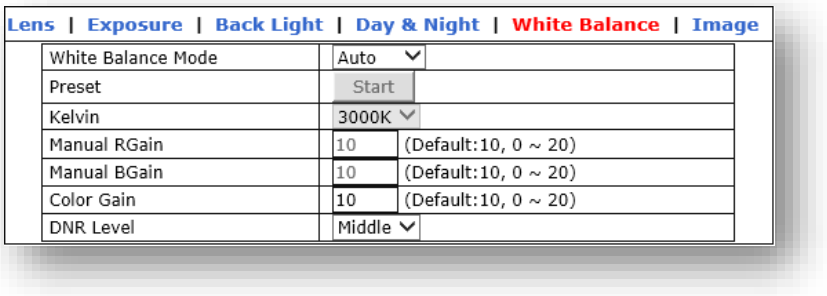
Day & Night



- **Day & Night Mode:**
  - **Auto**: Automatically converts the Day & Night mode depending on the amount of light.
  - **Color**: Color Mode
  - **B/W**: Black and White Mode
  - **EXT**: Automatically converts the Day & Night mode depending on the built-in IR operation.
- **Anti-Saturation**: set the sensitivity level of anti-saturation which prevent the image saturation by IR reflection.
- **AGC Threshold**: Set AGC Threshold level.

- **AGC Margin**: Set AGC margin Level.
- **Delay**: Select the delay time. The day and night mode changes after the delay time when day and night mode switching conditions are met.
- **Extern S/W**: Select the switching mode of CDS...
  - **Low**: This method is used when the voltage value decreases when CdS is blocked while the CdS voltage value is high.
  - **High**: This method is used when the voltage value rises when CdS is blocked while the CdS voltage value is low.
- **Day to Night Threshold :** Set the point of time to switch from daytime (color) to nighttime (black and white).
- **Night to Day Threshold :** Set the point of time to switch from night (black and white) to daytime (color).

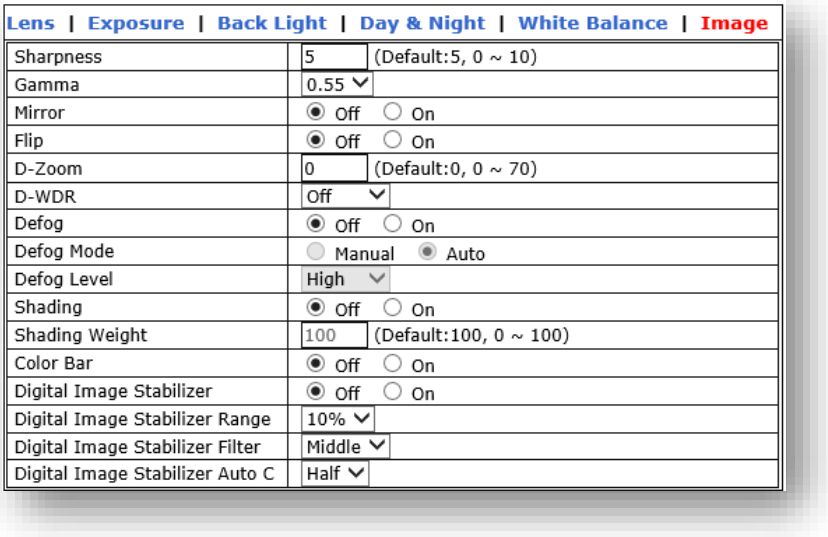
White Balance



- **Auto**: Adjust white and gray-scale parameters in video, based on the color temperatures of the viewed scene automatically.
- **Preset**: To get the best condition for the current lighting environment, let the camera shine white paper and press the Set button. When the environment changes, you have to adjust it again.
- **Manual**: Adjust W/B by changing red, blue, color gain and Kelvin values manually.

- **Preset:** Adjust white balance by changing color gain value.
- **Kelvin:** Select color temperature for adjusting white balance manually.
- **Manual RGain:** Select red gain for manual white balance.
- **Manual BGain:** Select blue gain for manual white balance.
- **Color Gain:** Select color gain for preset or manual white balance.
- **DNR Level**: Select digital noise reduction level.

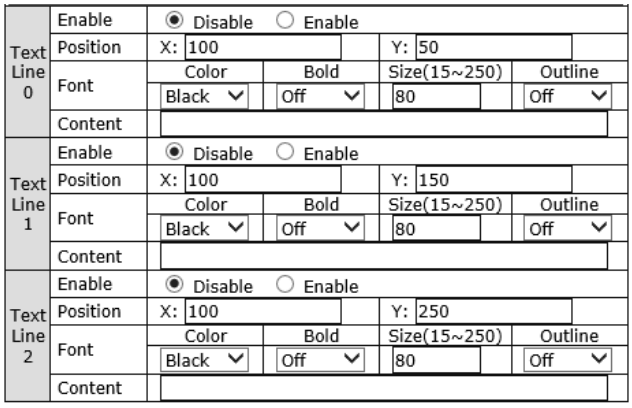
Image



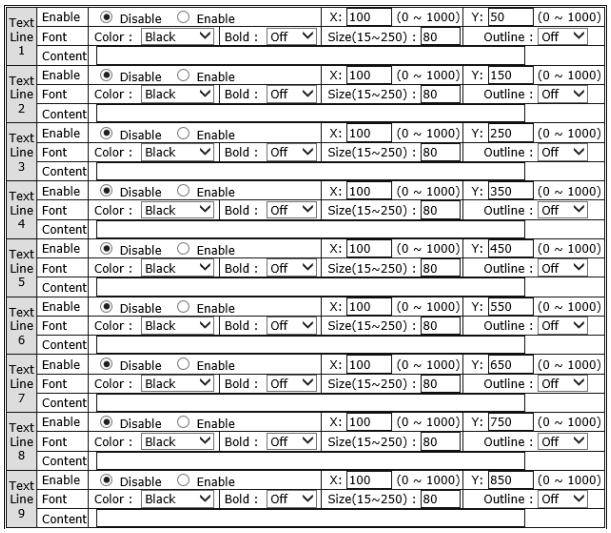
- **Sharpness**: Select the sharpness of image between 0 and 10.
- **Gamma:** Adjust the balance between the input brightness signal and the output signal**.**
- **Mirror:** Flips the video images to the left or right.
- **Flip:** Flip the video images up or down.
- **D-Zoom**: Select whether to use digital zoom feature or not.
- **D-WDR**: Select Digital Wide Dynamic Rage level to use D-WDR feature, or disable it.
- **Defog Mode**: Defog(Fog compensation) function On/Off.
- **Defog Level :** When set to Manual, the fog compensation function operates according to the Defog Level. When set to Auto, fog compensation is performed automatically**.**
- **Defog Level**: When Defog Mode is Manual, user can specify Level.
- **Shading**: Corrects dark areas of the image.
- **Shading Weight**: Select the shading weight between 0 and 100.
- **Color Bar**: Display color bar on the screen.
- **Digital Image Stabilizer :** Set whether or not 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 the image compensation filter. (High, normal, Low)
- **Digital Image Stabilizer Auto C :** Specify the image compensation area. (Half/Full)

6.3 Text OSD

This is a function that can display a text message on the camera image..
ra firmware can display up to 3 texts, rp firmware can display up to 9 texts.



Menu screen for ra firmware



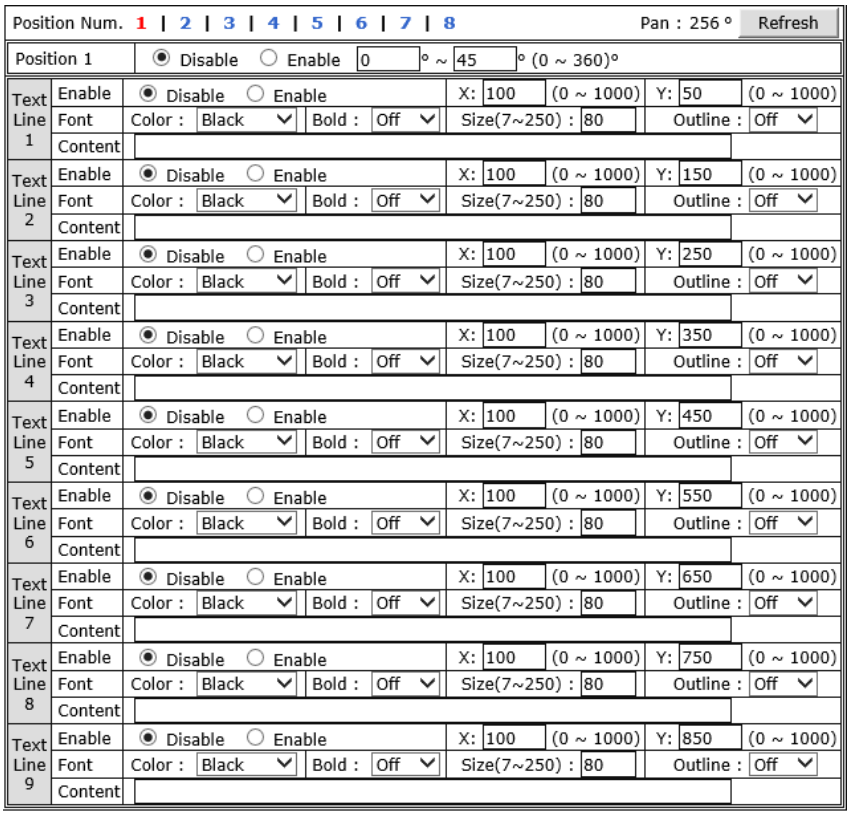
Menu for rp firmware

- Enable: Enable or disable the Text OSD function.
- Position (X,Y) : Set the horizontal and vertical coordinates to display the OSD..
- Color : Set the color of the Text OSD to be displayed..
- Bold : Sets the thickness of the Text 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 text string to be displayed on the OSD.

※ *Note : The OSD may not be displayed on the screen depending on settings such as position and size. .*
Please use it by setting the position and size properly.

6.4 PTZ Text OSD

For PTZ cameras, the OSD can be displayed according to the PAN coordinate value..
Basically, it can be set in 8 areas based on 45° angle, and 9 OSD can be displayed per area. PAN angle can be modified by the user.



- Position Num : Up to 8 PAN positions can be specified.
- Refresh : Displays the current PAN angle.
- Position 1~8 : Activate each area. PAN location can be specified in this menu.
- Enable: Enable or disable the Text OSD function.
- Position (X,Y) : Set the horizontal and vertical coordinates to display the OSD..
- Color : Set the color of the Text OSD to be displayed..
- Bold : Sets the thickness of the Text 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 text string to be displayed on the OSD.

6.5 Motion Detection

This menu is for setting the motion detection area. By default, the entire screen is divided into 4 motion detection zones and all zones are enabled. The user can select and set the desired area in this menu.

6.5.1 Motion Detection

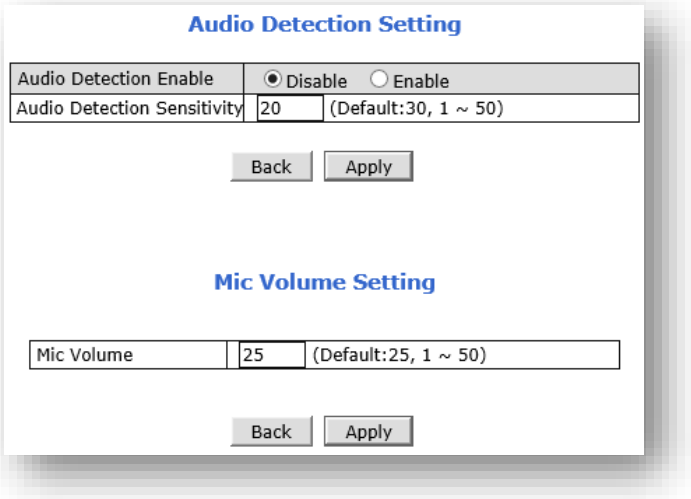
If you want to modify the motion detection area, set as below...

1) Motion detection can be set up to 4 areas.
2) You can adjust the size using the corner point, and you can also move the area..
3) New area can be set by using New button, and the motion area can be deleted by using Delete button..

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

6.6 Audio Detection

This function detects the audio through the microphone connected to the camera..
You can use this function to record using VMS provided by Seyeon or using Micro SD.. (Recording continues for 20 seconds after the audio is detected.) In order to use the Audio Detection function, Audio must be enabled in the Video Stream menu to operate normally. Below is the description of the Audio Detection menu.



- Audio Detection Enable : This menu is to enable or disable the audio detection function..
  - Disable / Enable
- Audio Detection Sensitivity : Set the sensitivity of the audio detection function.
  - Lower the number becomes less sensitive and the higher the number becomes more sensitive
- Mic Volume : This function adjusts the volume of the microphone connected to the camera.
  - The lower the number, the smaller the volume and the higher the number, the higher volume.
  - Be careful that this setting may cause howling depending on the speaker angle or position..

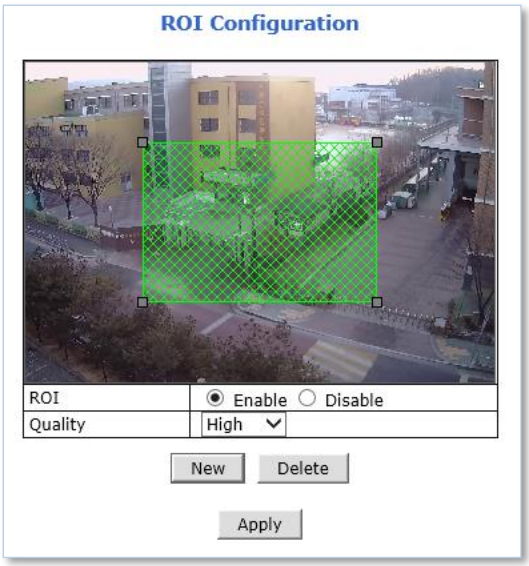
Note : The buttons for setting Audio Detection and Mic Volume are separate. It works normally when you click the apply button that matches the setting.

6.7 ROI (Region of Interest)

This is a function to set a specific area of the camera image as a region of interest. You can set different image quality for each area by separating the region of interest or the region of non-interest. By using this function, high image quality is set in the region of interest and low image quality is set in the region of non-interest to provide high image quality to the region of interest without increasing the overall data volume. ROI can be set up to 8 areas.

To add ROI, do the following:.

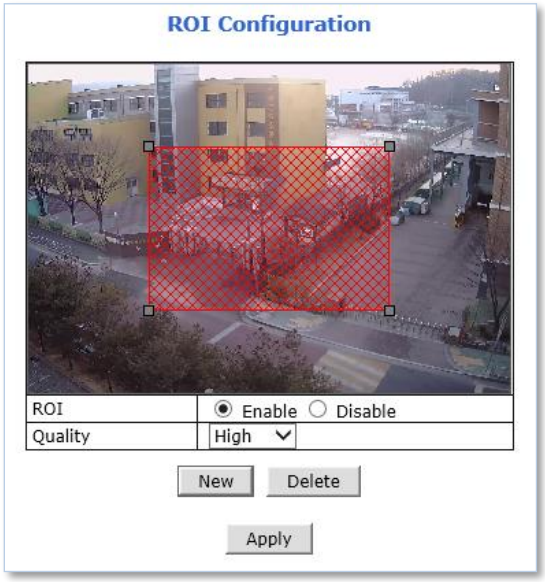
1) Select Enable for ROI Function.
2) Click New button.
3) Green box is created.



4) Click on the green box, place it in the desired location and resize it.

. Resize : Click and hold any corner and drag to desired size

. Relocate : Click and hold anywhere inside the box and drag to desired location.



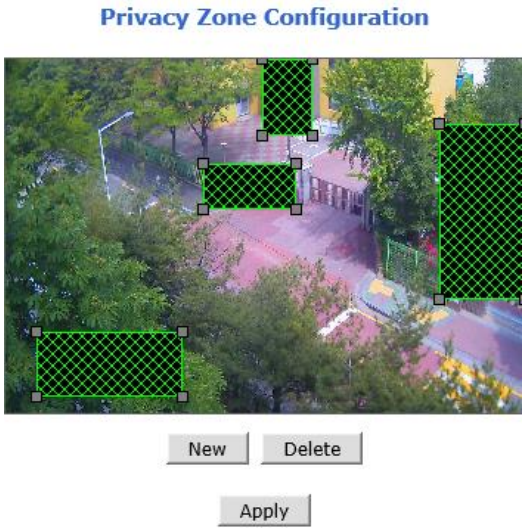
5) Select quality in ROI area and click.

6) Click Apply to save ROI setting.

When deleting an ROI, click the area and then click the Delete button and click the Apply button to apply..

6.8 Privacy Zone (PTZ camera doesn't support)

By using this function, certain parts of the screen could be blocked as a privacy zone. The privacy zone is designated as a rectangular block and could be set up to 8 areas. The privacy zone is displayed in black.



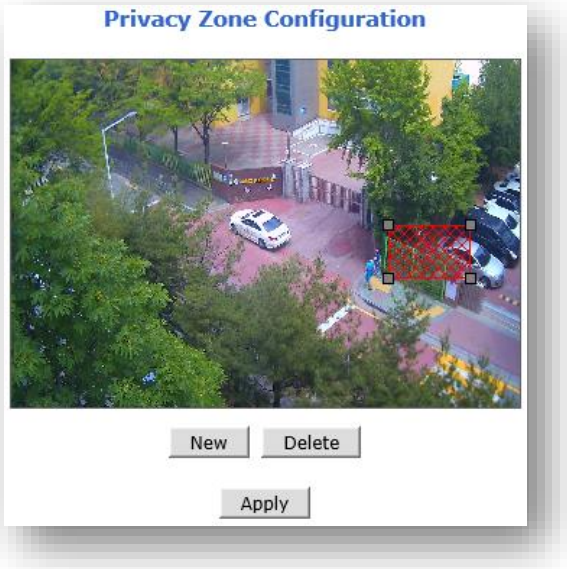
Privacy Zone Setup screen

Live View screen

When adding a new privacy area, set as below..

1) Click New button**.**
2) Click on 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 settings area, press the Delete button and click the Apply button. .

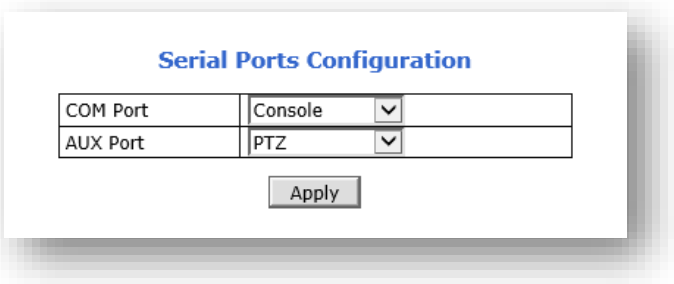
7. Device

The product has two ports: COM and AUX. Basically, 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, COM port is used for console connection, and AUX port is used for PTZ connection.

7.1 Serial Ports

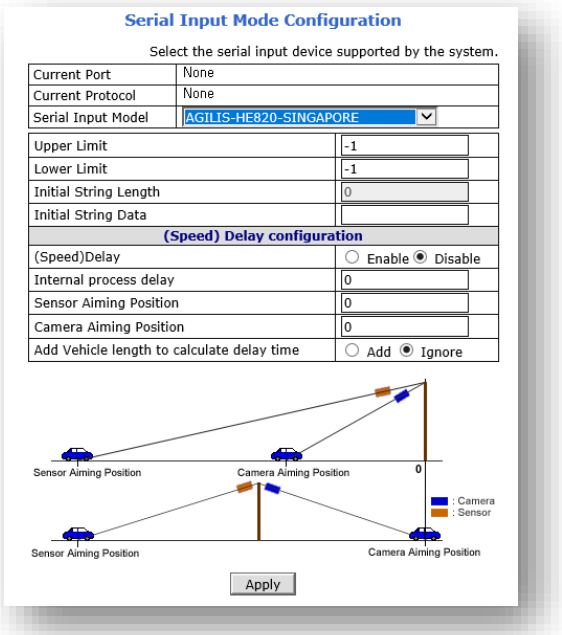
It is a menu to change COM Port and AUX Port. If there is a change in each port, it must be rebooted for it to take effect. Each port supports Serial Input Mode, Serial Output Mode, Transparent Mode and PTZ. (PTZ can be set only for AUX.)



7.2 Serial Input Mode

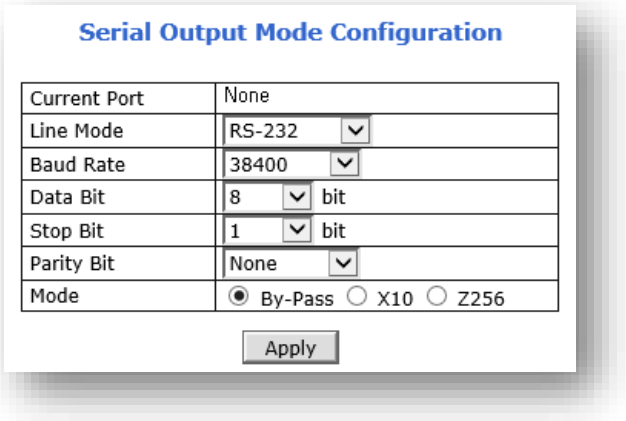
When COM or AUX port is set to Serial Input Mode, the camera can receive data using an external device. For example, when a speed detection device is connected and used, when a over speeding car is detected, data can be sent via e-mail or FTP, including images, along with the data received from this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

To use this function, you need to develop a protocol in cooperation with the manufacturer.



7.3 Serial Output Mode

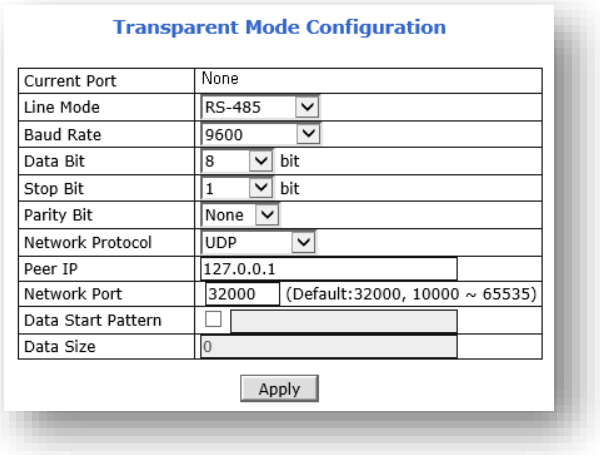
Specific commands can be sent from camera to UART(Universal Asynchronous Receipt and Transmission) device by using Serial Output Mode.
By using this function, you can control equipment such as multiplexers, access control devices, X10 Protocol, and z256 protocol using RS-232 or RS-485/422..
Serial Output Mode can be selected from By-Pass, X10, Z256 as shown below.



To control the connected equipment correctly, select the Serial Output Mode correctly and click Apply..

7.4 Transparent Mode

Transparent is a function to bypass data received from a device connected through RS485 (RS232, 422) to another client using a network. On the contrary, you can control the device connected to the camera via RS485 (RS232, 422) data received from another server (client)..



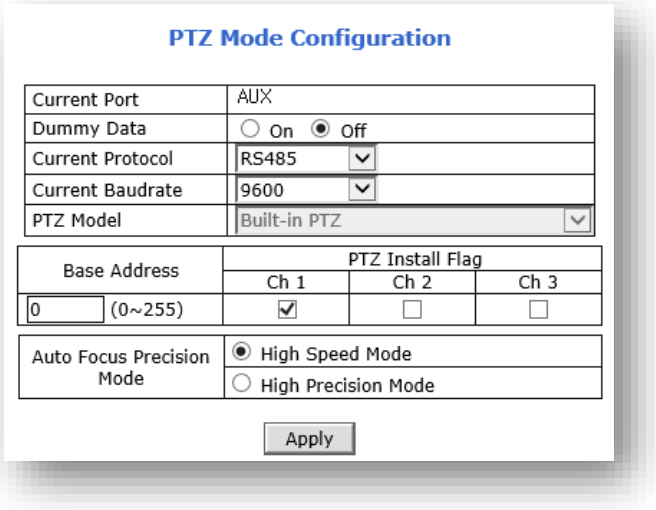
To configure Transparent Mode, please follow the steps below.

1) **Line Mode**: Communication protocol.
2) **Baud Rate**: Communication speed.
3) **Data Bit**: Data Bit Size at Transmission.
4) **Stop Bit**: Stop Bit Size at Transmission.
5) **Parity Bit**: Type of Parity Bit.
6) **Network Protocol**: Type of network protocol used to transfer data.

7) **Peer IP**: Other Client IP address connected on the network.
8) **Network Port**: Network Port number to be used as Transparent
9) **Data Start Pattern**: The starting pattern of communication data.(Do not check when not in use)
10) **Data Size**: Size of data delivered at one time. (Do not check when not in use)

7.5 PTZ Mode

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



To configure PTZ Mode, please follow the steps below:

1) Dummy Data: Set On when using dummy data.
2) Current Protocol: Set the connection method of the PTZ camera.
3) Current Baudrate: Set 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: Set the address of the PTZ camera. In general, you can enter the -1 value of PTZ Address. If the PTZ Address is 1, the Base Address is 0.
6) Auto Focus Precision Mode
   a. High Speed Mode : This is a method of focusing with priority on speed. Accuracy may decrease.
   b. High Precision Mode: This is a method that gives priority to focus. The speed may be lower than in High Speed Mode.

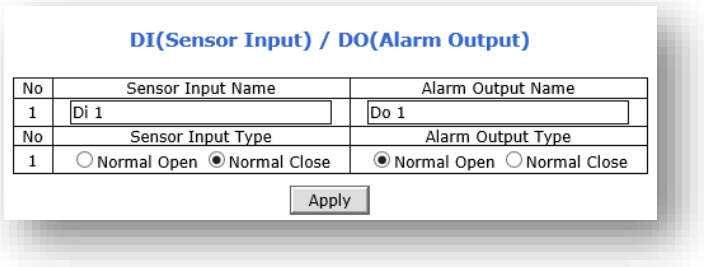
Note: Ptotocol (PTZ Model), Baudrate, ID number must be matchedon both PTZ and device.

F58 PTZ Protocols which are 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

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

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



1) **Sensor Input Name, Alarm Output Name :** Enter Sensor Input Name and Alarm Output Name.

   (Up to 31 alphanumeric or 15 Unicode characters can be used for server name .)

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

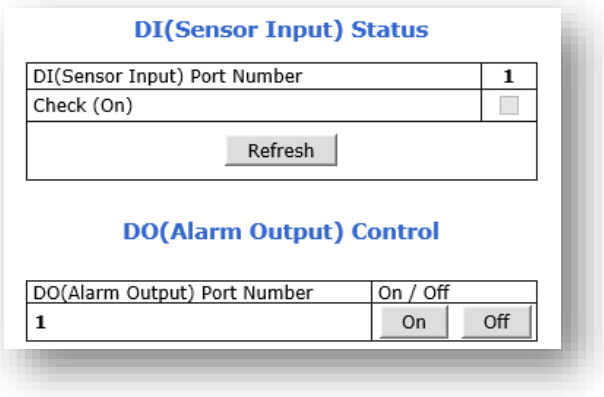
   - Normal Open : Normal is open, and goes Closed when triggered by an event.
     - Normal Open(NC) Type is commonly uses for buttons
   - Normal Close : Normal is closed, and goes open when triggered by an event.
     - Normal Close(NC) Typeis commonly used for Door sensor.

3) **When the setting is completed, click the Apply button to apply.**

> *Note: Make sure the type of the sensor is correctly set. If a Sensor Input is not used, it must be set to Normal Open Type to avoid a false input.*

7.7 DI Status / DO Control

DO(Alarm Output) Control is a function to check if the device connected to DO is operating. Clicking the On button activates DO and clicking Off stops it.



External device that connected with the DO (Alarm Output) port can be tested as picture above.

- Click **On** to operate the external device connected with DO port.
- Click **Off** to stop operating the external device.

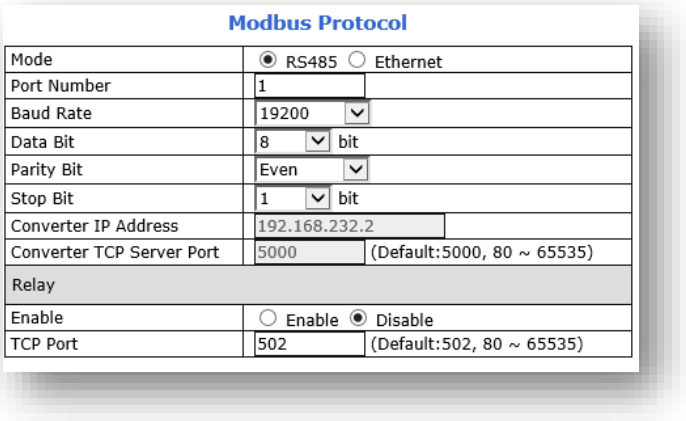
DI (Sensor Input) Status shows Sensor Status as shown picture above.
The check mark in the box indicates that the DI (Sensor Input) is activated. If there is no check mark in the box, means the DI is not activated.

7.8 Modbus Protocol

Modbus is a protocol developed for the purpose of connecting manufacturing plants or industrial electronic devices using RS485 or Ethernet. Because the protocol is simple, functions necessary for control or monitoring can be performed. To use Modbus, you need to set it up by referring to the SPEC and manual of the devices provided by each company. Interworking with VMS supporting Modbus is also possible..

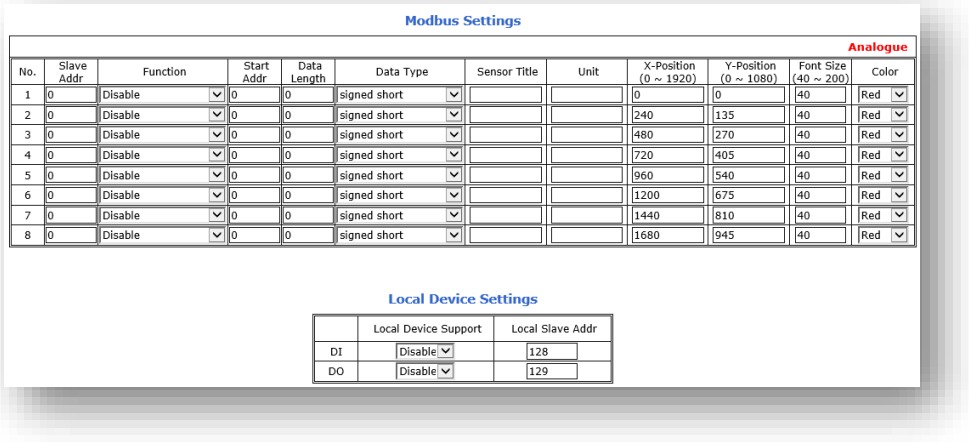
To use Modbus using Ethernet, Ethernet Converter is required.

7.8.1 Modbus Protocol



- Mode: Select the communication method (RS485 / Ethernet) to use for MODBUS.
- Port Number: Set the port number to be used in RS485.
- Baud Rate: Set the Baud rate to be used in RS485.
- Data Bit: Set the data bit to be used in RS485.
- Parity Bit: Set the Parity Bit to be used in RS485.
- Stop bit: Set the Stop Bit to be used in RS485.
- Converter IP Address: Set the IP address of the converter to be used in Ethernet.
- Converter TCP Server Port : Set the TCP Server Port of Converter to be used in Ethernet.
- Relay: Set the link with VMS.
- Enable: To link with VMS, select Disable to do not work.
- TCP Port: Set the TCP Port to be used for VMS interworking.

7.9 Modbus Settings



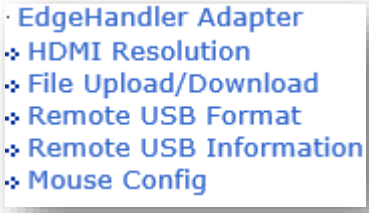
- Slave Addr : Set up the Slave Address of the Modbus device.
- Function : Set the function to be used for request of Modbus device.
- Start Addr: Set the Start Address to be used for request of Modbus device.
- Data Length: Set the Data Length to be used for requests from Modbus devices.
- Data Type: Set the type of response data received from Modbus device.
- Sensor Title: Set the Text OSD Title of the response data received from the Modbus device.
- Unit: Sets the Text OSD Unit of the response data received from the Modbus device.
- X-Position: Set the X-coordinate to display the response data received from the Modbus device.
- Y-Positon: Set the Y-coordinate to display the response data received from the Modbus device.
- Font Size: Set the text OSD size of the response data received from the Modbus device.
- Color : Sets the Text OSD color of the response data received from the Modbus device.
- Local Device Settings: Set TextOSD for DI/DO status. If the Local Save Addr value in this menu is set to the same address as the Slave Addr in Modbus Settings above, it operates to use the DI/DO status of the camera, not the Modbus device.

7.10 Edgehandler Adpater

This is a description of Edgehandler Adapter products . You can set and / or check the HDMI resolution connected to the adapter or set the mouse action..

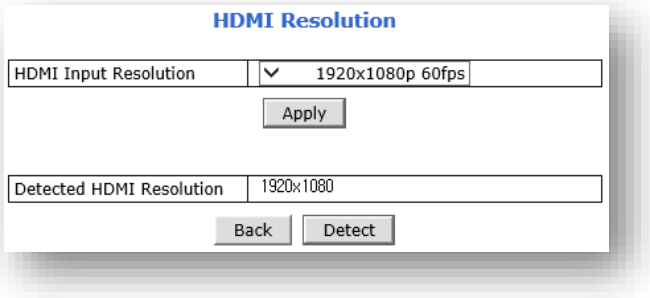
you can upload or download files after inserting Micro SD card.

The menu appears differently depending on model.



7.10.1 HDMI Resolution

This menu allows you to check the HDMI resolution of the remote device connected to the adapter. 1920x1080p 60fps is set as default, and if a different resolution supported by the adapter is input, it is automatically recognized and restarted. Users can also change the resolution manually.

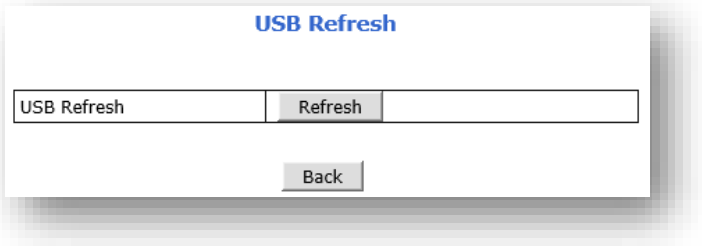


1) HDMI Input Resolution : You can view the list of resolutions supported by the adapter or set them manually. The supported resolution is listed as below.
   1920x1080p 60fps / 1920x1080i 60fps / 1280x1024p 60fps
   1280x720p 60fps / 1024x768p 60fps / 800x600p 60fps

2) Detected HDMI Resolution : By clicking Detect button, you can check the resolution information entered into the adapter. If the result value is 0x00 or a resolution which was not supported by the adapter is displayed, the image will not be displayed. If a converter, etc., is used, please check if the connected converter is operating normally and there is no problem with the HDMI cable.

7.10.2 USB Refresh

In case the USB cable is normally connected but when an error occurred due to the temporary mal-function of PC or NVR, you can refresh the software without removing and reconnecting the USB cable. By clicking Refresh button then disconnect USB connection and restore the connection again.

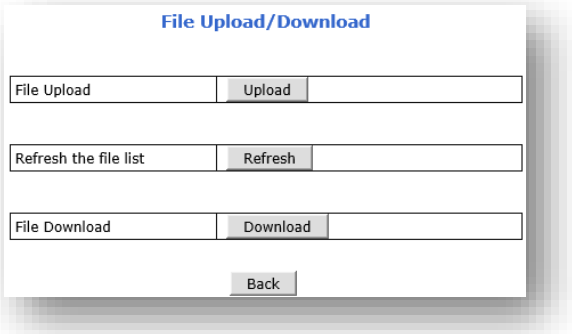


7.10.3 File Upload / Download

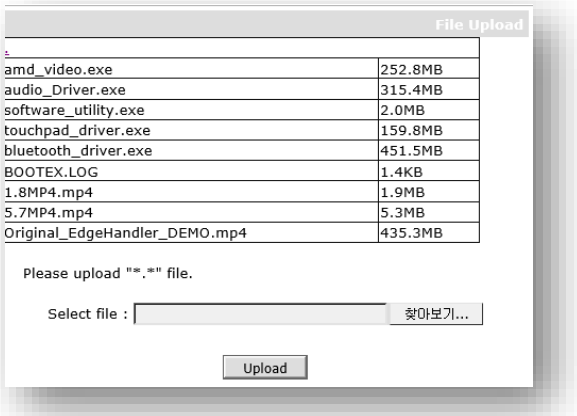
You can upload or download files using the Micro SD inserted in the adapter.

File name is supported only in English, and one file can be uploaded/downloaded up to 2GB.

If the PC is connected to the adapter, you can use Windows Explorer to view the contents file on Micro SD card. Just check the Remote USB drive.



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

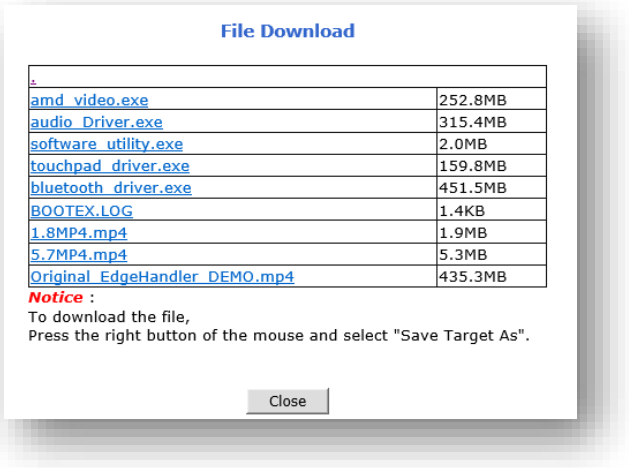


If there is a file that has been uploaded in advance, it is displayed. After selecting the desired file using the Browse button, click the Upload button to complete the upload.

2) Refresh the file list : Click Refresh button to synchronize uploaded files.

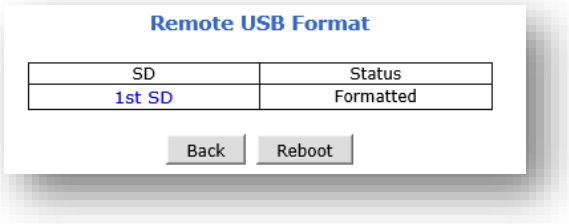
If you don't see the uploaded file, you can use the Refresh button to view it.

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

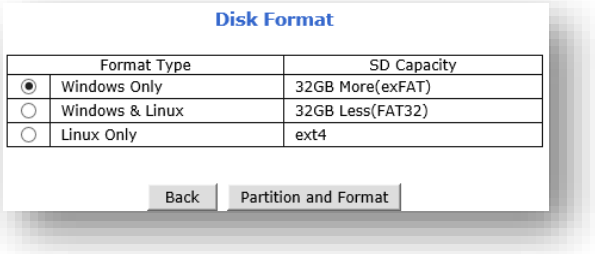


7.10.4 Remote USB Format

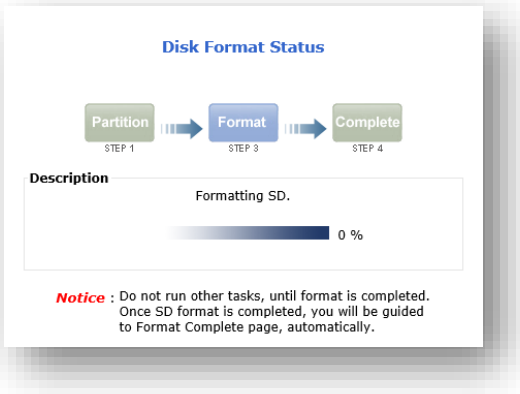
This menu is for formatting Micro SD memory inserted in the adapter. Formatting time may vary depending on the adapter usage rate, Micro SD capacity, and class..

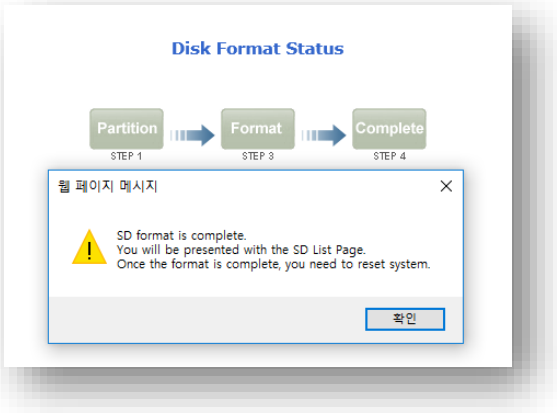


1) Click 1st SDMenu then enter to Disk format Menu.



2) Select the file system to format.
exFAT : It is a file system only available for Windows. (32GB or More)
FAT32 : It is a file system for Windows and Linux.. (32 GB or Less)
ext4 : This is a file system only for Linux



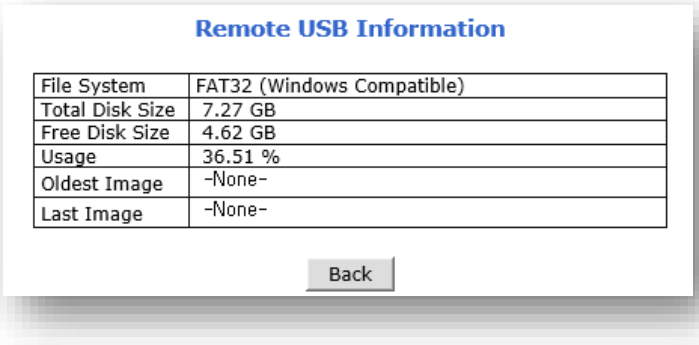


→

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

7.10.5 Remote USB Information

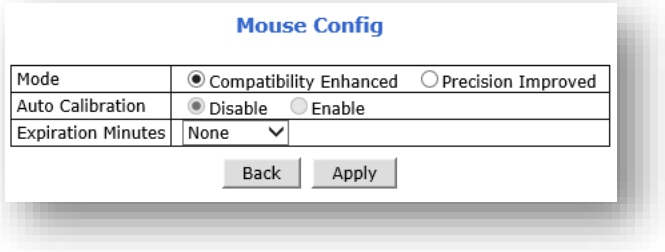
Shows information of Micro SD inserted in the adapter. The file system, total memory capacity, currently used capacity, and remaining capacity are displayed.. (Oldest, Last Image do not show.)



7.10.6 USB Config

When using the Edgehandler Adapter for remote control, this menu allows you to select the mouse movement mode..

(For Windows10) Please disable Enhance pointer precision option at Windows control panel → Mouse →Pointer Option.



- Mode
  - Compatibility Enhanced : This mode is to directly control a remote mouse. Delay of 150ms minimum and 250ms maximum may occur.
  - Precision Improved : This mode is available when the resolution of remote device and local device are the same. Local mouse and remote mouse are displayed at the same time (two), and the remote mouse is followed after local movement. Could be used with less delay.
- Auto Calibration : This is an automatic synchronization function. This function can be used in Precision Improved mode. In remote control, the location of the local mouse and the remote mouse is synchronized whenever the mouse button is clicked. If the mouse position is not synchronized in Precision Improved mode, the Auto Calibration function cannot be used..
- Expiration Minutes : This function automatically disconnects the connection if there is no control for a certain period of time when using the remote control mode..

8. Recording

When a Micro SD card is installed in the camera, you can record camera images or search and playback the recorded video image. In this menu, you can setup all settings required for recording (Micro SD format, Disk information check, Recording setting, Clear setting and Delete Recorded Data, etc.)..

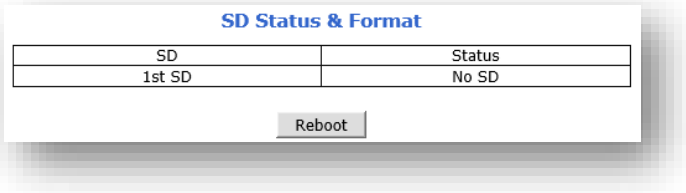
8.1 SD Status & Format

This is the menu for setting the Micro SD mounted on the camera. In this menu, SD card format, Disc information check, Recording setting, Clear setting and Delete Recorded Data, etc. are possible.

Note: A newly installed SD card must be formatted in the Disk Setting menu.
All SD card data will be deleted after the disk formatting..

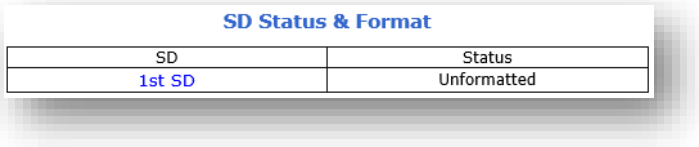
Depending on current disk status, the Disk Status & Format page will be displayed as follows.

- No SD: Micro SD card is not installed or not recognized due to defect of SD card. Make sure that the Micro SD card is installed properly or working properly.



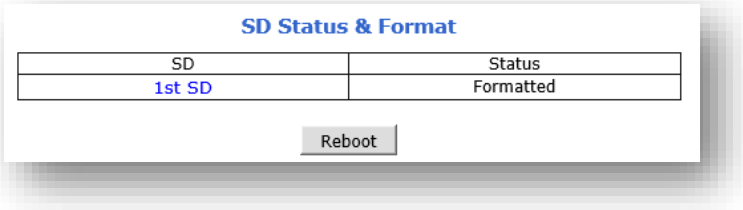
No SD

- Unformatted: Micro SD card is not formatted. A newly installed Micro SD card must be formatted.



Unformatted

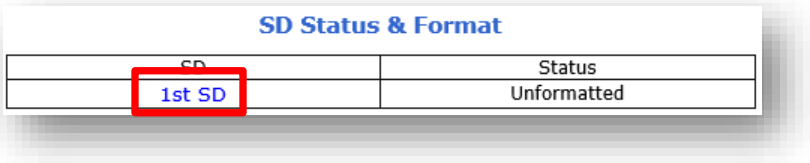
- Formatted: Micro SD card is ready for recording or under recording now.



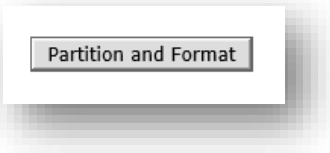
Formatted

In order to format the Micro SD card, please follow the steps below.

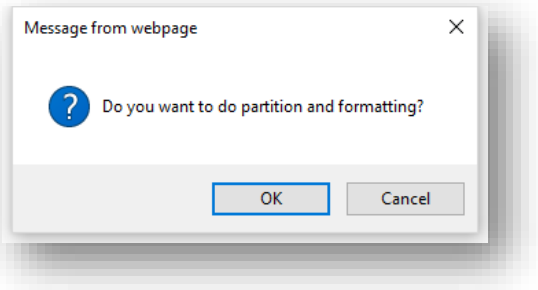
1) Select desired Micro SD card to format. (1st SD)



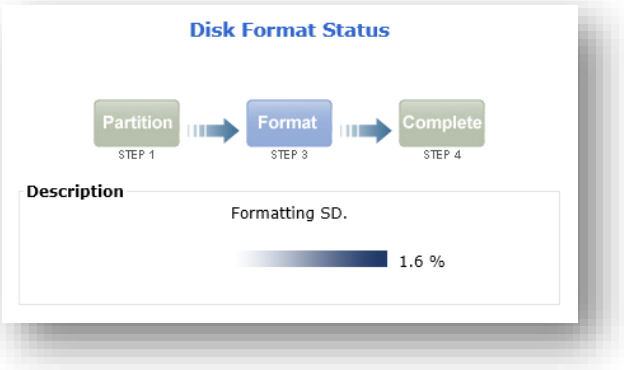
2) Click Partition and Format button



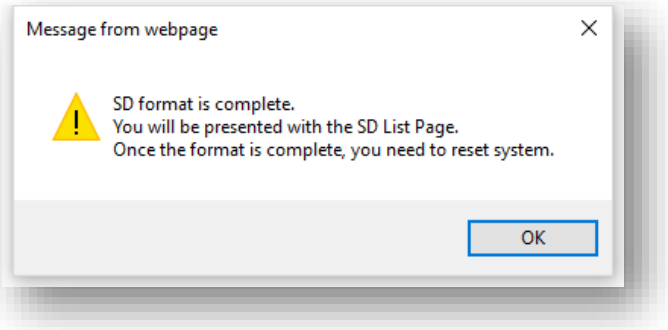
3) Click **OK** to continue when confirmation window appears**.**



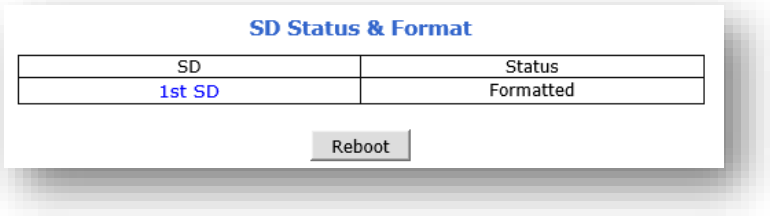
Note: Do not leave HDD format Status page during the formatting. If an abnormal termination is happened during the formatting process, it is possible for SD card to be defected. Make sure to complete the process properly



4) When SD format is completed, click **OK** to finish formatting**.**



5) When the format is completed normally, Formatted is displayed as below.



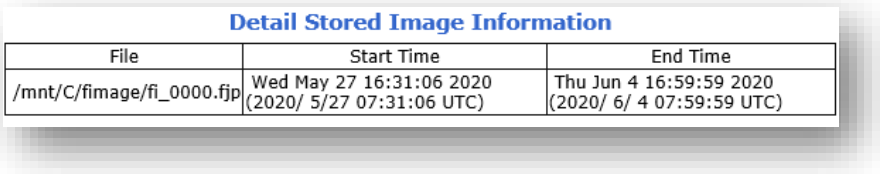
6) You can use it after restarting the system by clicking the Reboot button..

Note: If the current status is not displaying "Formatted", it is possible for the Micro SD card to be defected. Make sure to complete the process properly.

8.2 SD Information

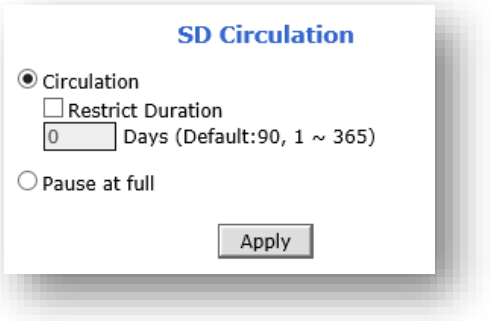
Detailed information of the installed Micro SD card can be found in Disk Information page as shown below.

- **File System**: Display current file system
- **Total Disk Size**: Display the capacity of the storage
- **Free Disk Size**: Displays the remaining capacity of the storage
- **Usage**: Display the storage usage
- **Oldest Image**: Shows the creation time of the oldest image files stored in the storage
- **Last Image**: Shows the creation time of the latest image files stored in the storage
- **Detail Stored Image Information** : Displays detail stored image information as shown below



8.3 SD Circulation

This menu is to set whether to use Disc circulation function on the installed Micro SD card.

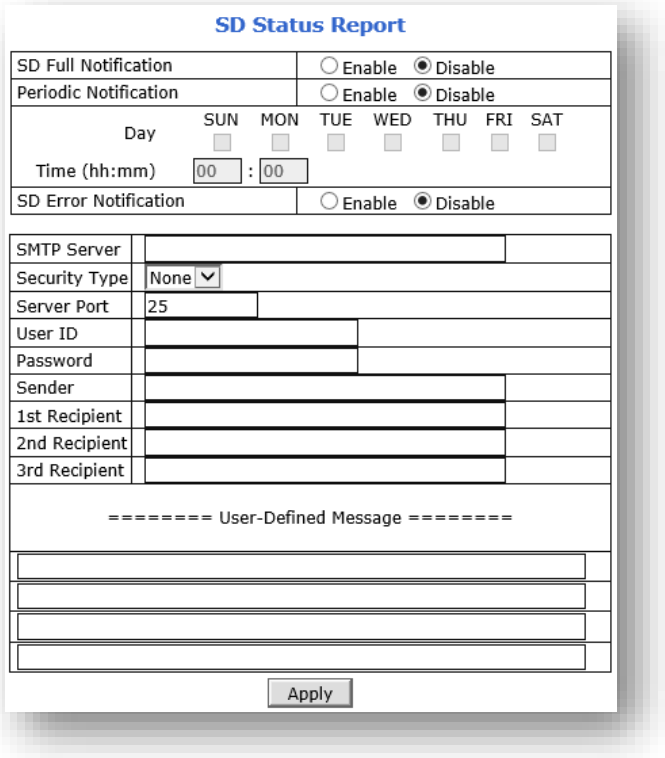


- Circulation: Overwrites old recorded data when the installed Micro SD card is full.
  - Restriction Duration: Record data only in the configured period and delete after the period.
  - If the capacity of the SD card is insufficient, this setting is ignored and circulation proceeds according to the capacity..
- Pause at full: Stops recording when the storage is full, and display STOP in the status as shown below.

8.4 SD Status Report

Current status of the installed Micro SD card can be reported by email periodically or in the set conditions.

- Set **Report conditions** as explained below**.**

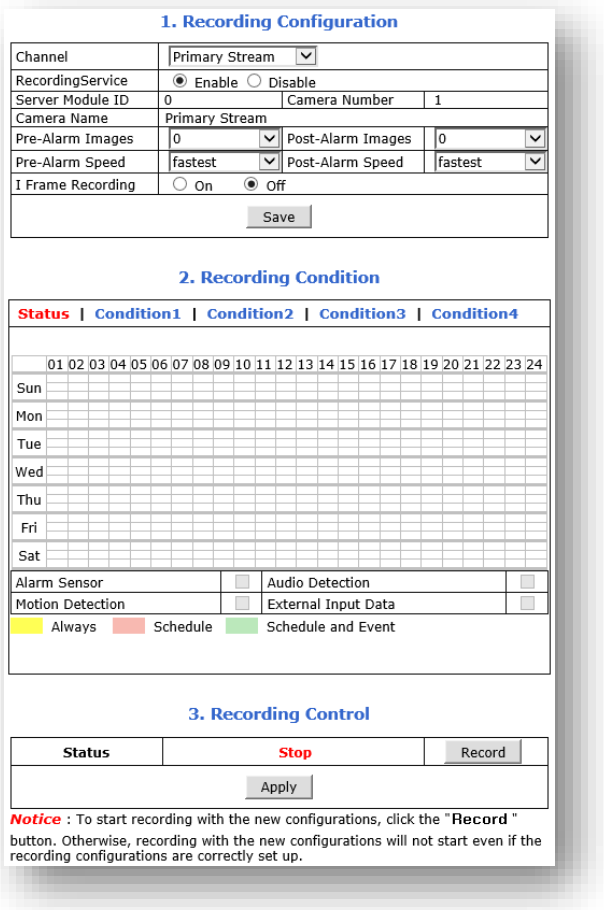


1) **Disk Full Notification**: when the Micro SD card is full, notify by email..
   - This function works only when Pause at full..

2) **Periodic Notification**: At a specified time, notify the Micro SD card status by email.
   - When this function is enabled, the lower menu is activated..
   - You can specify the day/time.
3) **Disk Error Notification**: When the Disk error occurred, notify by email.
4) **SMTP Server** : Enter your SMTP Server address.
5) **Security Type** : Set 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 password to log in to SMTP.
9) **Sender**: Enter the sender's email address. The outgoing email server must be SMTP.
10) **1st Recipient** : Enter the first e-mail address. (Must)
11) **2nd Recipient** : Enter the second e-mail address.. (Option)
12) **3rd Recipient** : Enter the third e-mail address.. (Option)
13) **User-Defined Message box**: Text message that will be included with notification email.
14) When the setting is completed, click the Apply button to save.

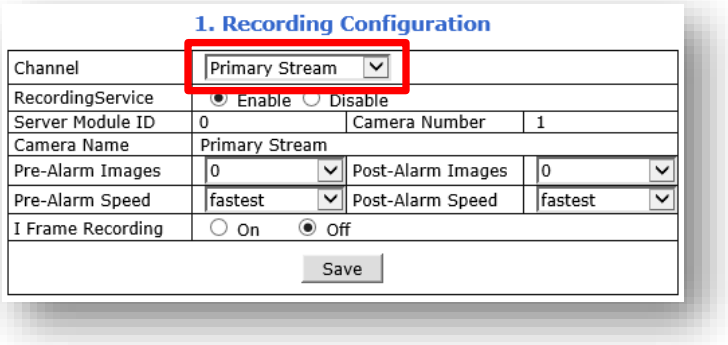
8.5 Recording Setting

Note: Recording settings can be set for each channel (stream). If the recording condition has been changed, you must click the Apply button in the Recording Setting menu to reflect the changed condition..



For recording setting, set as below steps.

8.5.1 Recording Configuration



- Channel : Select the channel you want to save. (Primary Stream / Secondary Stream / Tertiary Stream)

- Recording Service : Set up storage service. Even if the condition is set, if the Recording Service is disabled, it will not be saved. (The default setting is Enable.)

- Server Module ID, Camera Number (Displays module ID and camera number. Changes are not possible.)

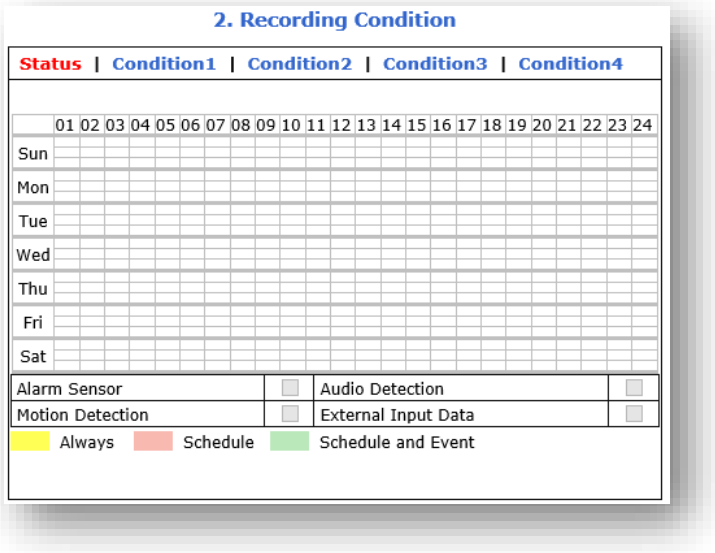
- Camera Name : Displays the camera name. (Camera name cannot be changed in this menu.)

- Pre-Alarm Images / Post-Alarm Images : If saving by event is set, this is a menu to select how many additional images to save before/after the event occurs..

- Pre-Alarm Speed / Post-Alarm Speed : It works only when the codec type is MJPEG. In the case of Pre-Alarm, it is reflected when setting saving by Always, Schedule, and in the case of Post-Alarm Speed, it is reflected when setting saving by Event, Schedule and Event..

-I Frame Recording : It works only when the codec type is H.264 or H.265. Even if no event occurs when Event or Schedule and Event is set, I Frame is saved continuously. If only I Frames are saved without events, data display does not appear in the player.

8.5.2 Recording Condition

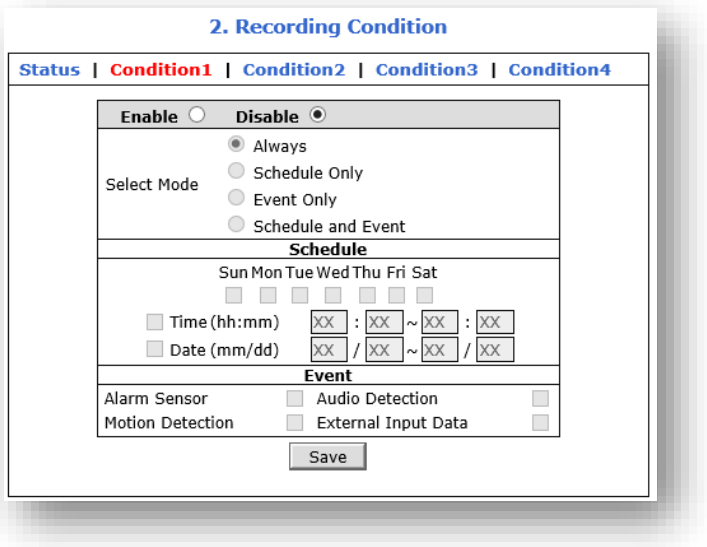


1) This is the menu to set the storage condition. Up to 4 storage conditions can be set per channel.
2) If set by Always, Schedule Only, (Schedule and Event) Schedule and Event, the color that meets the condition is displayed.

3) If saving by event is set, it is displayed with a check box.

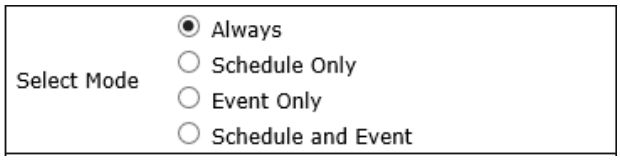
8.5.2.1 Condition setting.

※Notice
- Each Condition operates in an OR method.
(Storing will proceed even if only one Condition is satisfied.)
- When multiple conditions are set in one Condition, it operates in AND method.
(Storing will proceed only when all multiple conditions set in Condition are satisfied.)



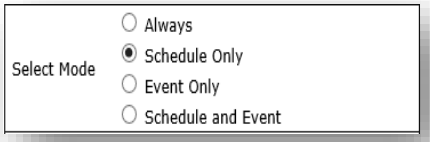
1) Enable / Disable : This is the menu to activate each Condition..

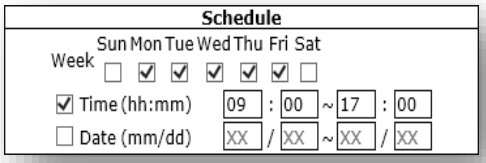
2) Select Mode : This is the menu to select the save mode..



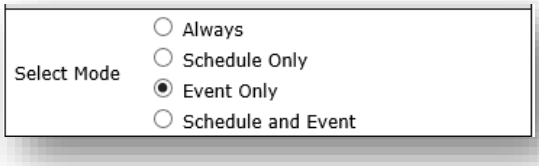
- Always: Always save regardless of condition.
- Schedule Only: It is saved on the day and time specified by the user..
- Event Only: It is saved by events such as alarm sensor, audio detection, motion detection, etc..
- Schedule and Event: Saves as a user-specified day, time and event combination.

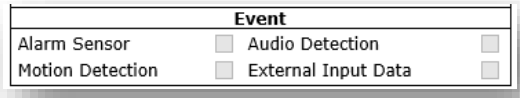
3) Fdsf Select Schedule Only if you want to save by schedule. If you select Schedule Only, the Schedule menu at the bottom is activated. It is recommended to set the day and time, or a combination of time and date.
(This is because, if the day, time, and date are all specified, saving may not be possible if the conditions are not met.)



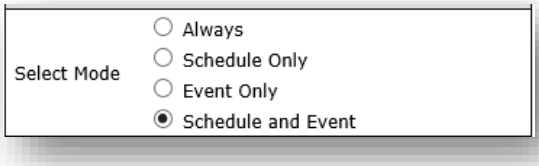


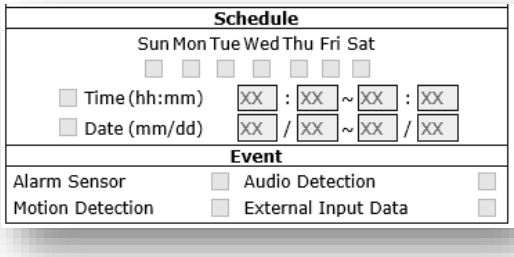
4) If you want to save settings by event, select Event Only. If you select Event Only, the Event window at the bottom is activated.
   - Event conditions are as follows.
     - Alarm Sensor : Save by DI sensor.
     - Audio Detection : It proceeds to save by audio detection.
     - Motion Detection : Save by motion detection.
     - External Input Data : Save by external input such as FES / POS. Separate development is required to use this condition.



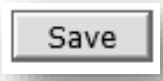


5) It is used to set the save setting by combination by schedule and event. If you select the Schedule and Event menu, the Schedule and Event menus are activated together. You can set any combination of schedules and events you want. date.



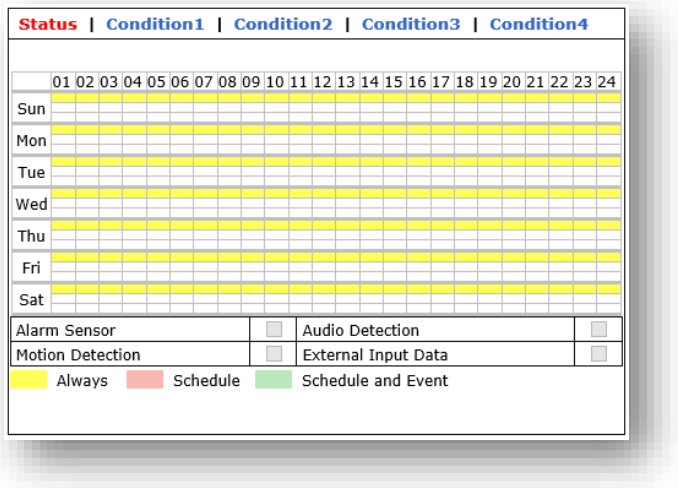


6) When the setting is complete, click the Save button at the bottom of the window.

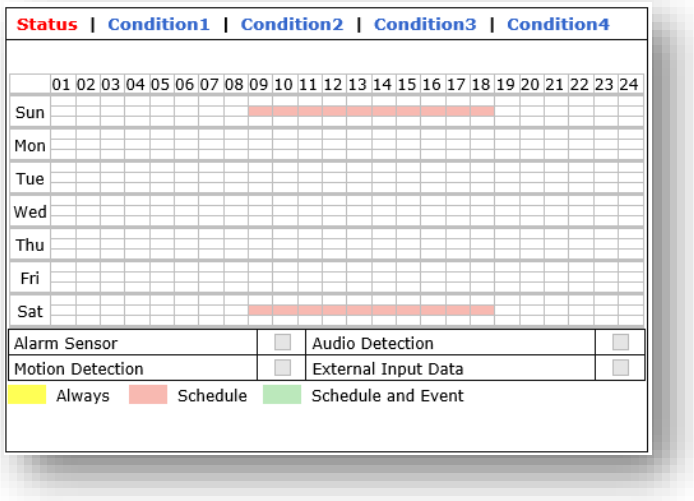


7) Contents of each Condition

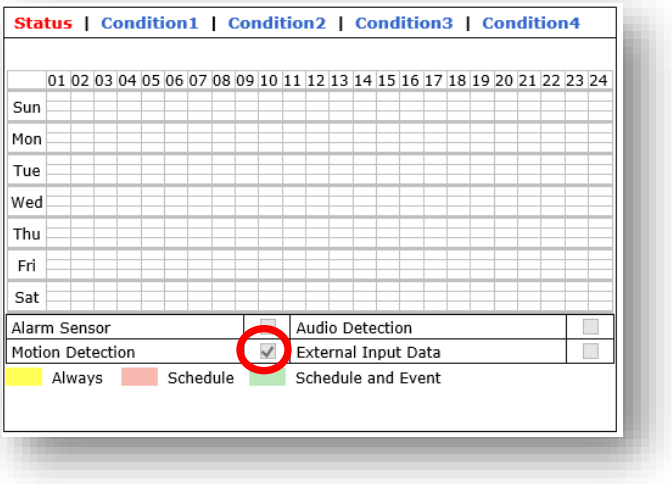
- Se in Always: Condition is marked as Always, and yellow bars are displayed on the calendar at the bottom.



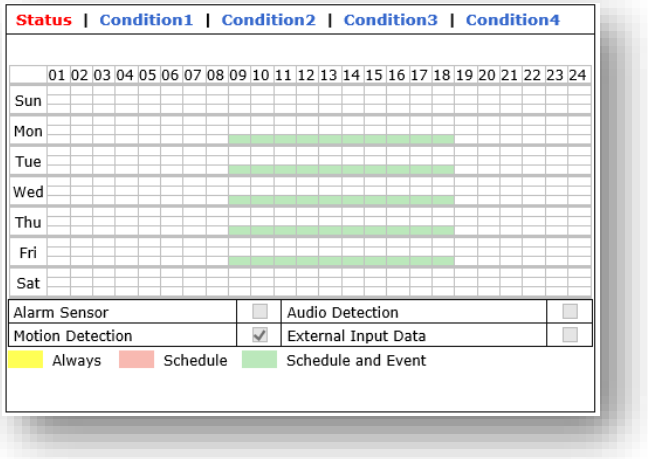
- Set in schedule: For example, if the condition is set from 9:00 am to 6:00 pm on Saturdays and Sundays, it is displayed in pink on the timetable.



- Set in Event: Event setting is indicated in the checkbox at the bottom. For example, if it is set to save when there is motion detection, Motion Detection is checked.

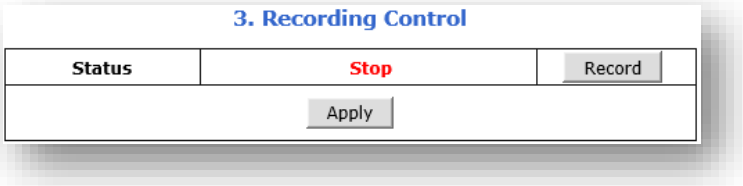


- Set in Schedule and Event: The setting information is displayed in the same way as when Schedule and Event are set. It is displayed in yellow green on the calendar. For example, if it is set to save only when there is movement from Monday to Friday, 9:00 to 18:00, it will appear as shown below.



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

8.5.3 Recording Control



Click the Apply button to start saving by reflecting the set conditions. If there is a change in the saving conditions, you must click the Apply button in this menu to be reflected. If you want to temporarily stop recording or want to save again, just click the Record / stop button. The current saving state can be known by looking at the Status.

8.6 Recording Profile

Recording Profile shows current recording settings for all channels as shown below.

Recording Profile

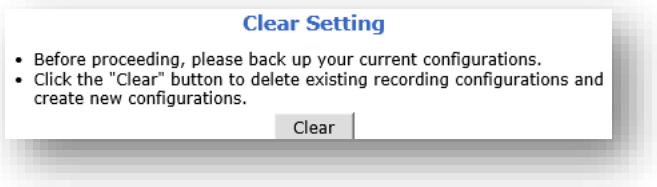
Server	Camera	REC. Config.	Status	Start Date		End Date		Start Time		End Time		Week			
				Month	Day	Month	Day	Hour	Min	Hour	Min	Sun	Mon	Tue	Wed
Built-in Module 0 (Built-in Module 0)	Primary Stream	Enable	☑	XX	XX	XX	XX	XX	XX	XX	XX	☐	☐	☐	☐
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
	Secondary Stream	Disable	☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
	Tertiary Stream	Disable	☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑
			☐	XX	XX	XX	XX	XX	XX	XX	XX	☑	☑	☑	☑

8.7 Clear Setting

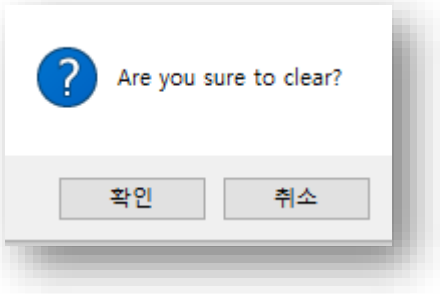
Clear Setting is a menu to initialize the recording settings. Does not affect recorded data.

To clear recording setting

1) Click **Clear** to clear or delete recording setting.



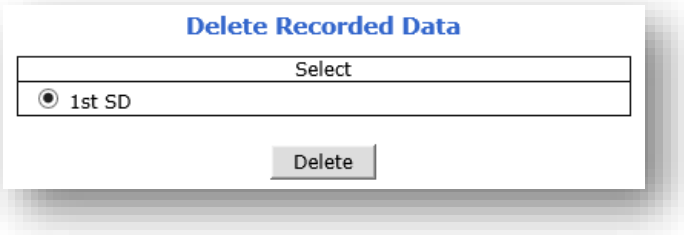
2) Click **OK** when confirmation message appears as shown below.



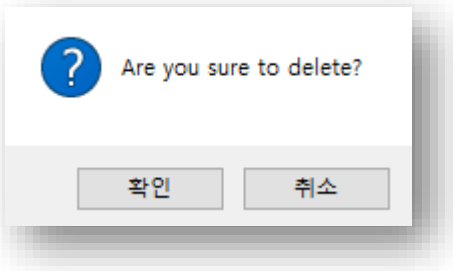
8.8 Delete Recorded Data

This menu is used to delete the recorded data. If there is not much data recorded on the SD card, this function can be used to delete recorded data faster..

1) Select the SD card to delete recorded data



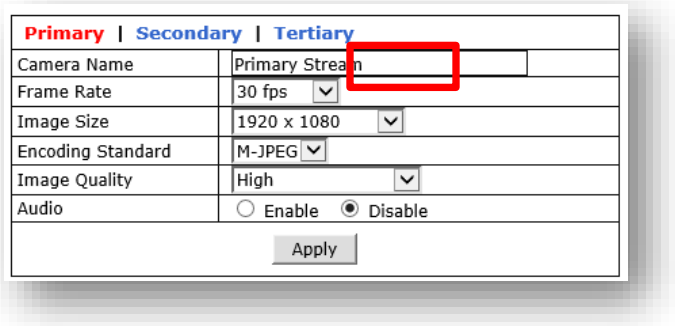
2) Click Delete button to delete the recorded data.
3) Click **OK** when confirmation message appears as shown below



9. Advanced

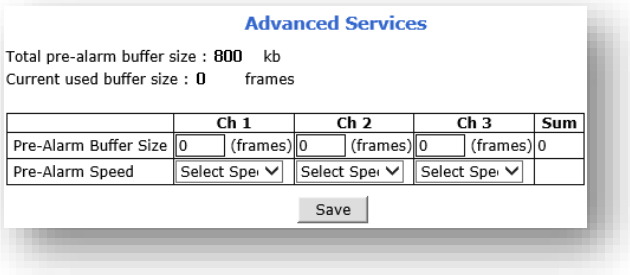
Advanced features or services such as email notification, FTP, alarm out can be setup in this menu section.

In order to use the function of sending images by using Email, FTP, etc., the codec of the corresponding channel must be set as MJEPG as shown below.



9.1 Advanced Services

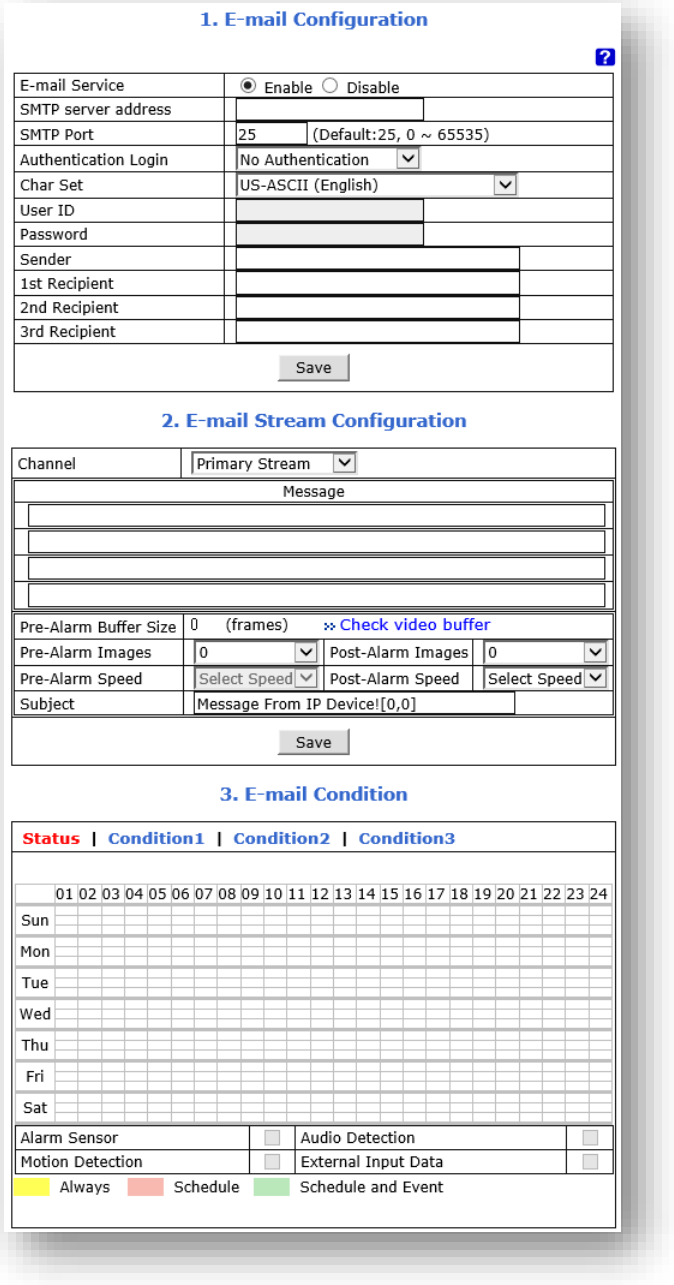
Pre-Alarm buffer size and buffering speed can be defined here..



- **Pre-Alarm Buffer Size:** You can set the buffer size which will store the images before event. The unit is in frame, and each channel can be set with different values. The total number of frames for Pre-Alarm buffer and Post-Alarm Buffer is limited to 10 frames.
- **Pre-Alarm Speed:** Buffering speed can be set. If it's set to Fastest, the server will store images as fast as it can. Each cannel can be set with different values.

9.2 E-mail

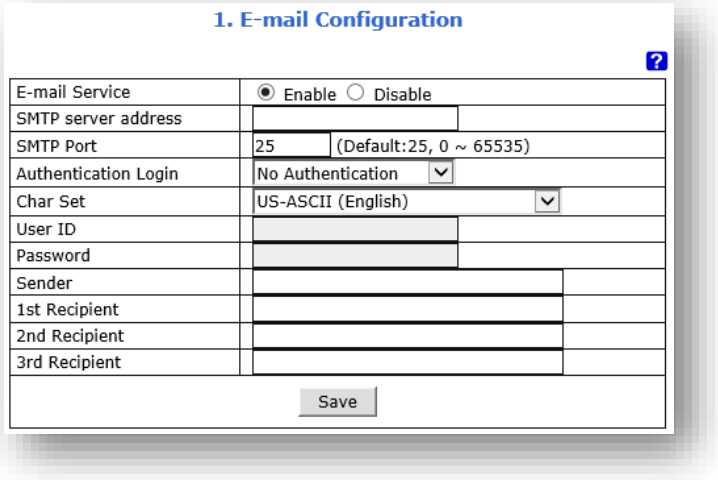
When an event occurs in the product, a message with an image can be notified via e-mail..
In order to use the function of sending images by using Email, FTP, etc., the codec of the corresponding channel must be set as MJEPG



9.2.1 E-mail Configuration

The settings required for sending mail are performed in the menu below.

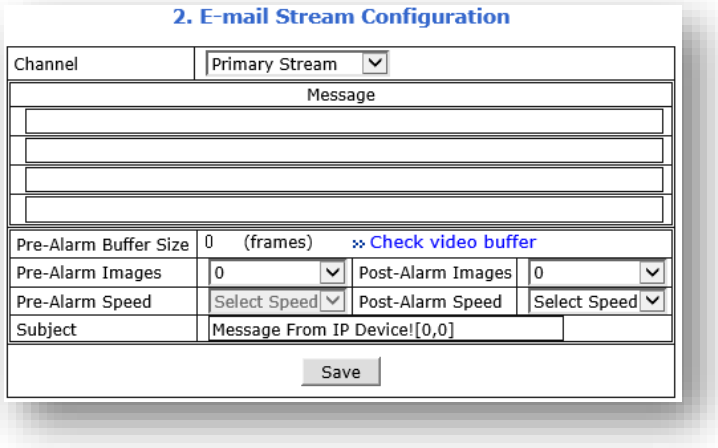
Enter SMTP, Outgoing Address, and Incoming Address.



- 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 : Choose the language of the message.
- User ID : Enter your user ID. Must be an account belonging to SMTP.
- Password : Enter your password. Must be an account belonging to SMTP.
- Sender : Enter the sender's email address. Must be an account belonging to SMTP.
- 1st, 2nd, 3rd Recipients : Enter the recipient's email address.
- When the setting is complete, click the Save button.

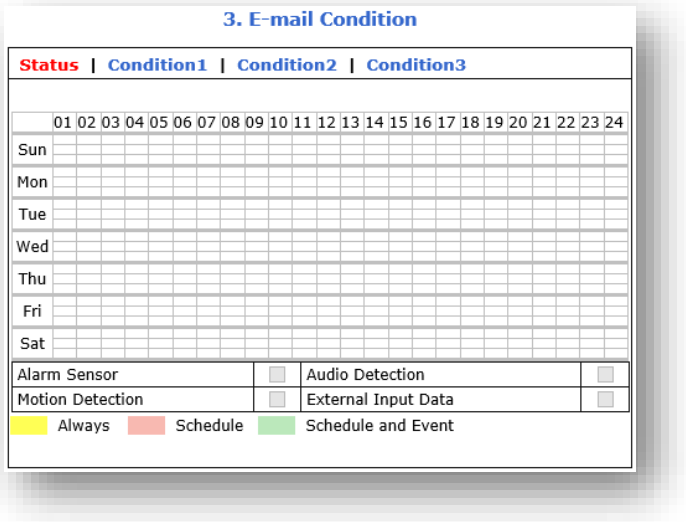
9.2.2 E-mail Stream Configuration

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. (Primary Stream / Secondary Stream / Tertiary Stream)
- Message : Enter the message to be included in the mail content. You can send up to 4 columns.
- Pre-Alarm Image / Speed : Image and speed before the event occurs.
- Post-Alarm Image / Speed : Image and speed after the event occurred.
- Subject : Mail subject.
- When the setting is complete, click the Save button..

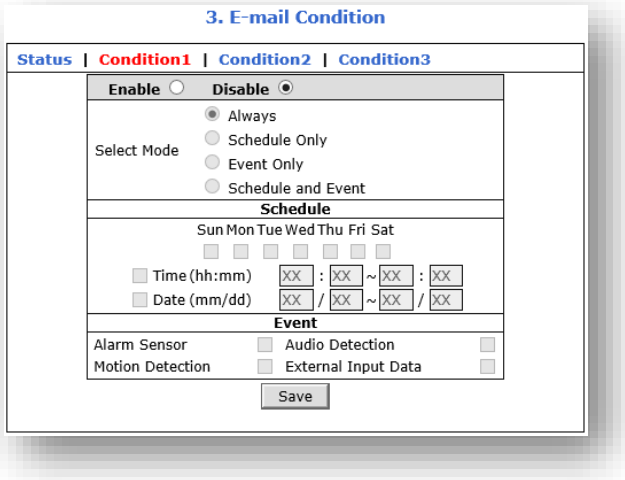
9.2.3 E-mail Condition



This is the menu to set the conditions to be sent to the e-mail.

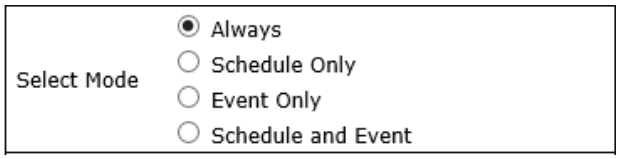
Mail service is suitable for use as an event or schedule & event condition.

Always or by schedule conditions are not used.



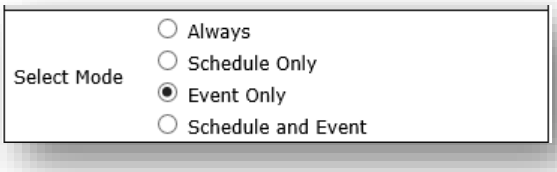
1) Enable / Disable: This is a menu to activate each condition.

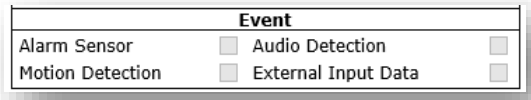
2) Select Mode: This is a menu to select the mail transmission mode.



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

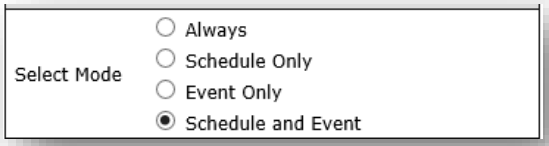
3) Select Event Only if you want action by event. If you select Event Only, the Event window at the bottom is activated.

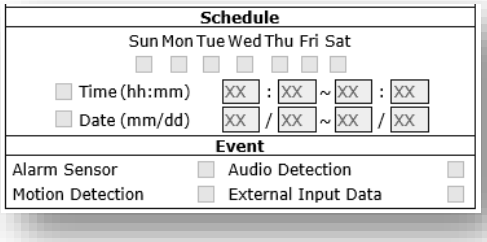




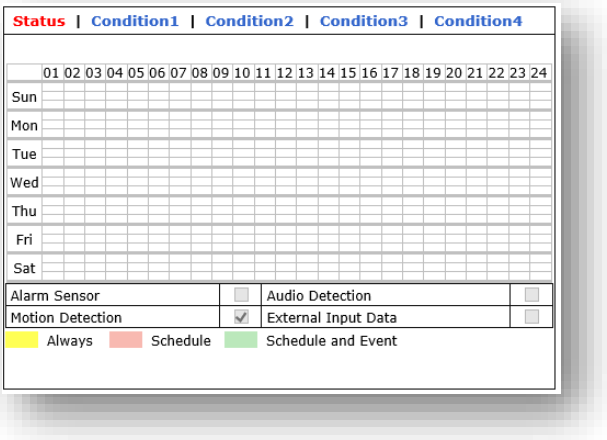
- Event conditions are as follows.
  - Alarm Sensor: Operates by DI sensor
  - Audio Detection: Operates by audio detection.
  - Motion Detection: Executes motion by motion detection.
  - External Input Data : Executes operation by external input such as FES / POS. A separate development is required to use this condition

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 any combination of schedules and events you want.

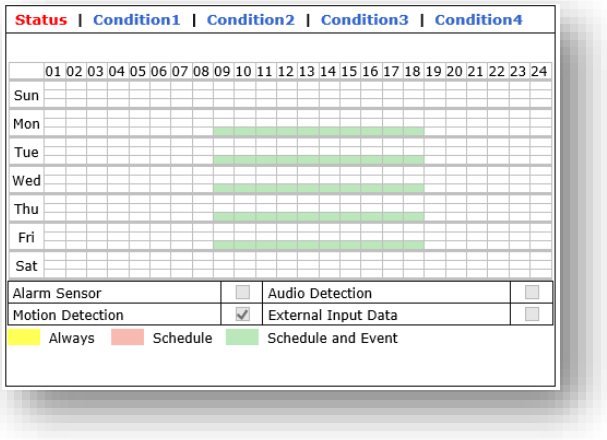




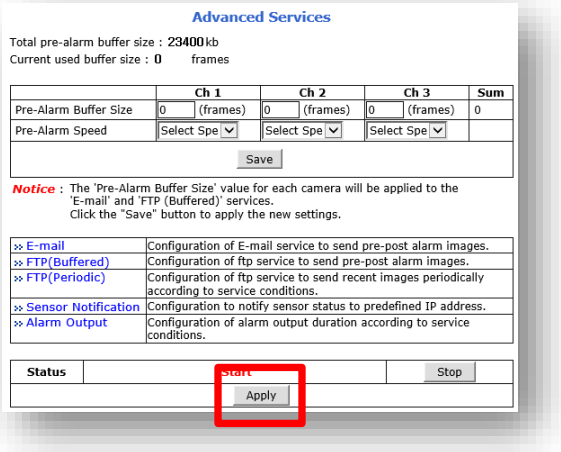
5) When the condition setting is completed, click the Save button at the bottom of the window.
   A. In case of setting as Event: Event setting is displayed in the checkbox at the bottom. For example, if it is set to operate when there is motion detection, Motion Detection is checked.



B. In case of setting as Schedule and Event : The setting information is displayed the same as when setting Schedule and Event. It is displayed in yellow green on the calendar. For example, if it is set to save only when there is movement from Monday to Friday, 9:00 to 18:00, it will appear as shown below.

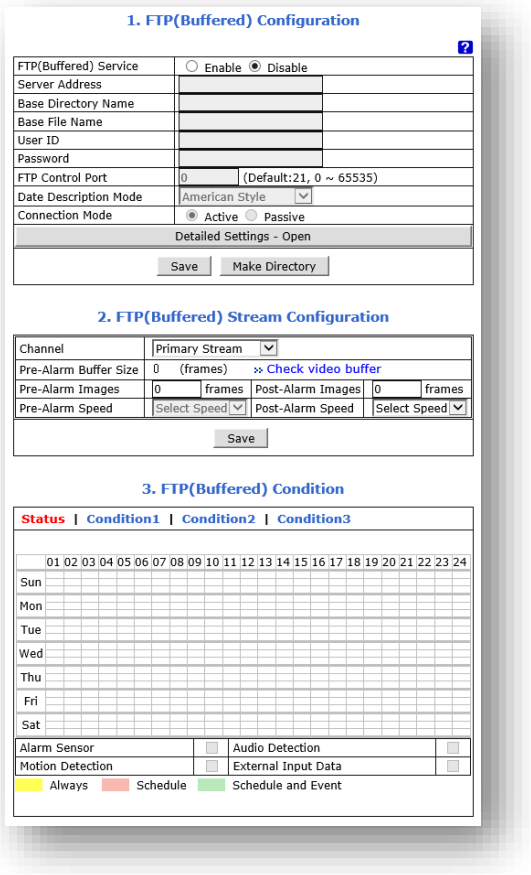


6) When the setting is complete, go to the Advanced Service menu as shown in the figure below and click Apply. After clicking the Apply button, the set conditions are reflected and the service starts.
If the condition setting has been changed, you must click the Apply button in this menu to be reflected.



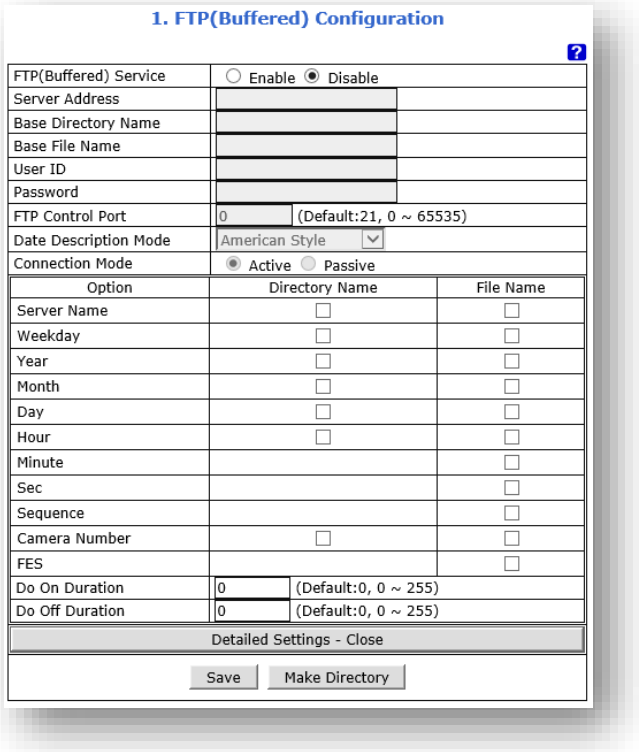
9.3 FTP (Buffered)

This function is used to send an image to a designated FTP server when an event occurs. To use this function, the channel to be transmitted must be set to MJPEG.



9.3.1 FTP (Buffered) Configuration

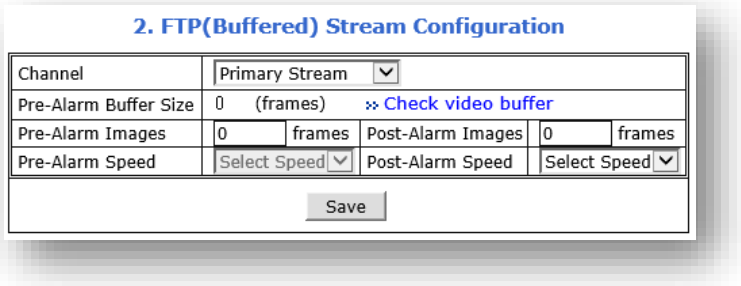
This is the menu to designate the FTP server to send the image to.



- FTP (Buffered) Service: This menu enables or disables FTP Service.
- Server Address: This is a menu to enter the FTP server address.
- Base Directory Name: This is a menu to designate the path to send the image. (Enter the absolute path.)
- Base File Name: Gives a fixed name to the beginning of the file.
- User ID: Enter an ID that can 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 port of the FTP server. (The default is 21, 0 works as 21.)
- Date Description Mode: Set the style to display the date.
- Connection Mode:
  Active - Used when the FTP server is in the local network or there is no firewall.
  Passive – Used when firewall or FTP server settings require a passive connection.
- Detailed Setting – Open / Close : Used to create a directory or file to be registered on the FTP server.
- DO On Duration: Activates DO after a certain period of time after the event occurs.
- DO Off Duration : After DO is activated, it is deactivated after a certain period of time.
- Save : Saves the currently specified settings.
- Make Directory: Creates a directory on the FTP server with a check (set) in Directory Name.

9.3.2 FTP (Buffered) Stream Configuration

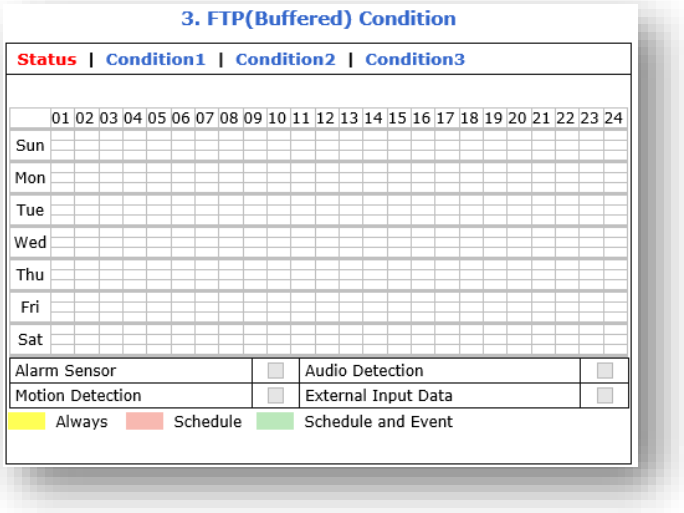
Set the number of channels and images to be transferred to the FTP server.



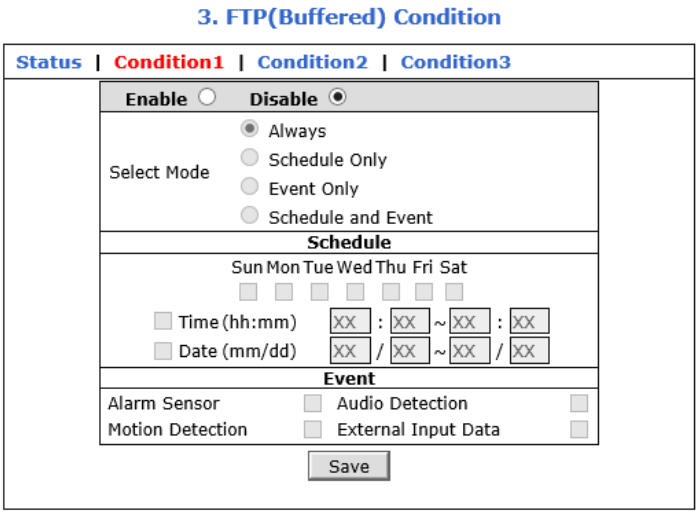
- Channel : Select the camera channel to be transmitted to the FTP server. (The selected channel must have MJPEG codec.)
- Pre-Alarm Buffer Size: Displays the number of frames set in Advanced Service.
- Pre-Alarm Images / Speed : Set the number and speed of images before the event occurs.
- Post-Alarm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

9.3.3 FTP (Buffered) Condition

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

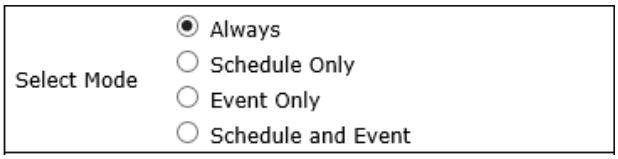


The contents of the condition setting are as follows.



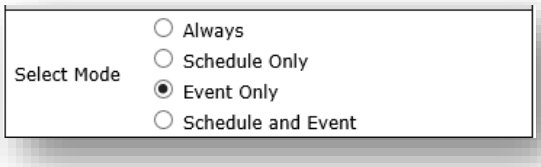
1) Enable / Disable: This is a menu to activate each condition.

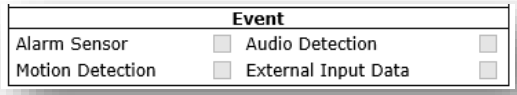
2) Select Mode: This is a menu to select the FTP transfer mode



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

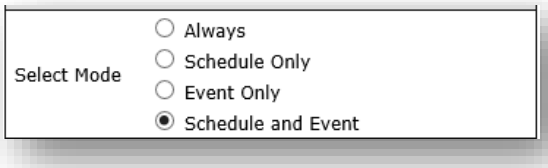
3) Select Event Only if you want action by event. If you select Event Only, the Event window at the bottom is activated.

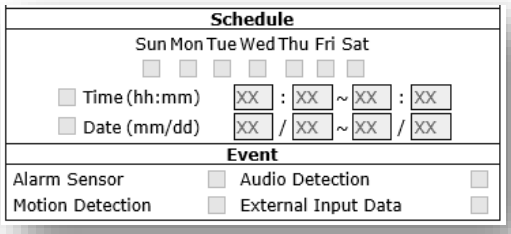




- Event conditions are as follows.
  - Alarm Sensor: Operates by DI sensor
  - Audio Detection: Operates by audio detection.
  - Motion Detection: Executes motion by motion detection.
  - External Input Data : Executes operation by external input such as FES / POS. A separate development is required to use this condition

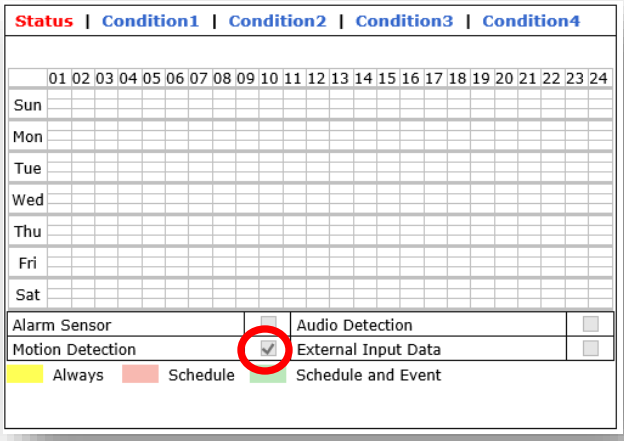
4) It is used when operating in combination by schedule and event. If you select the Schedule and Event menu, the Schedule and Event menus are activated together. You can set up any combination of schedules and events you want.



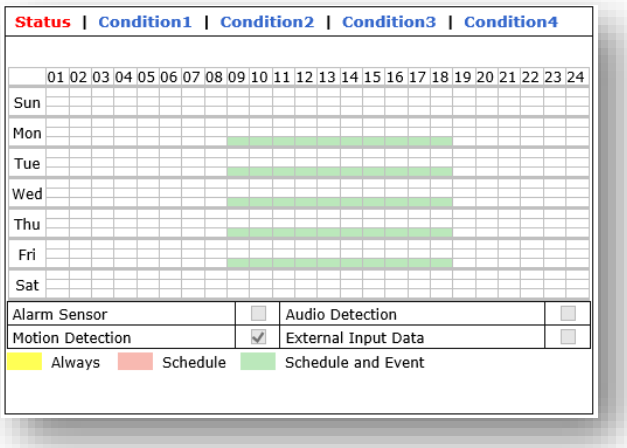


5) When the condition setting is completed, click the Save button at the bottom of the window.

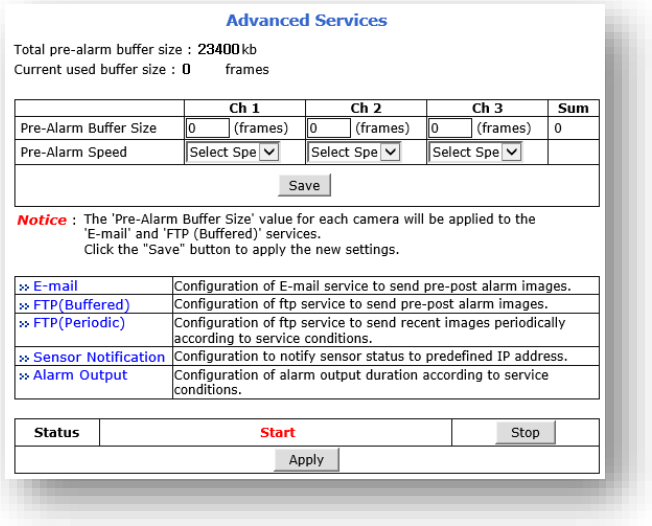
A. In case of setting as Event: Event setting is displayed in the checkbox at the bottom. For example, if it is set to operate when there is motion detection, Motion Detection is checked.



B. In case of setting as Schedule and Event : The setting information is displayed the same as when setting Schedule and Event. It is displayed in yellow green on the calendar. For example, if it is set to save only when there is movement from 9:00 am to 18:00 am on Monday to Friday, it will appear as shown in the figure below.



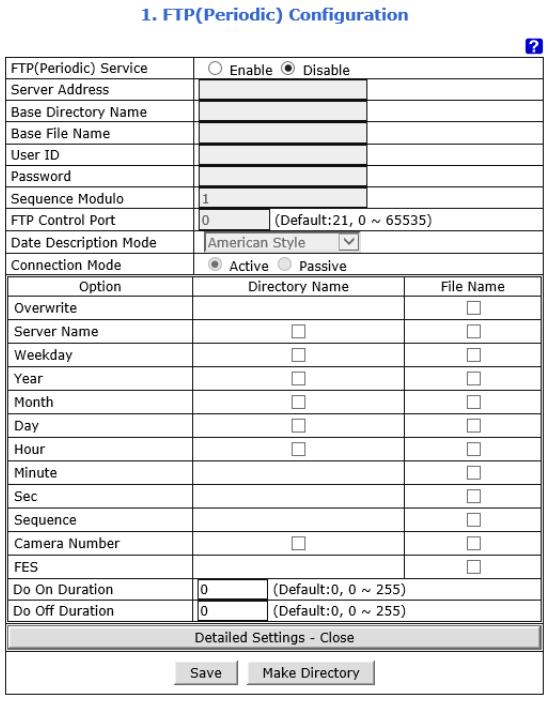
6) When the setting is complete, go to the Advanced Service menu as shown in the figure below and click Apply. After clicking the Apply button, the set conditions are reflected and the service starts. If the condition setting has been changed, you must click the Apply button in this menu to be reflected.



9.4 FTP (Periodic)

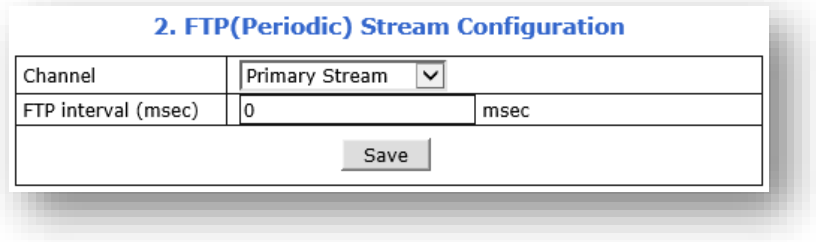
The FTP (Periodic) service is a function used to periodically transmit image data one by one to the FTP server. This function is suitable for action by schedule, rather than event always. To use this function, the channel you want to transmit must be set to MJPEG.

9.4.1 FTP (Buffered) 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 is a menu to designate the path to send the image. (Enter the absolute path.)
- Base File Name: Gives a fixed name to the beginning of the file.
- User ID: Enter an ID that can 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 port of the FTP server. (The default is 21, 0 works as 21.)
- Date Description Mode: Set the style to display the date.
- Connection Mode:
  Active - Used when the FTP server is in the local network or there is no firewall.
  Passive – Used when firewall or FTP server settings require a passive connection.
- Detailed Setting – Open / Close : Used to create a directory or file to be registered on the FTP server.
- DO On Duration: Activates DO after a certain period of time after the event occurs.
- DO Off Duration : After DO is activated, it is deactivated after a certain period of time.
- Save : Saves the currently specified settings.
- Make Directory: Creates a directory on the FTP server with a check (set) in Directory Name.

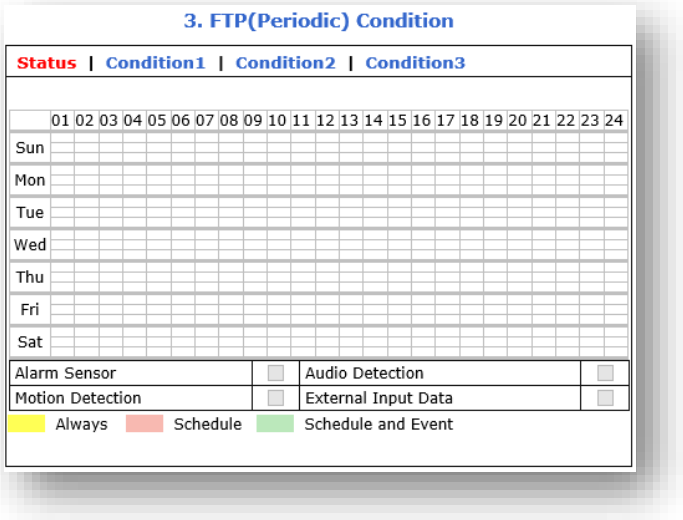
9.4.2 FTP (Periodic) Stream Configuration



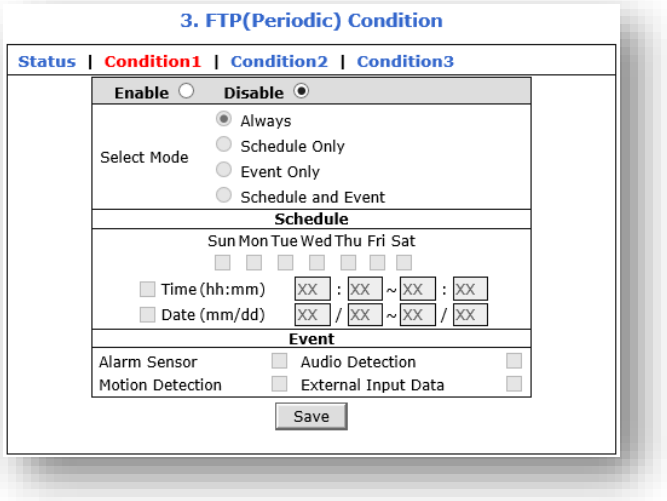
- Channel : Select the camera channel to be transmitted to the FTP server. (The selected channel must have MJPEG codec.)
- FTP interval (msec) : Set the interval for file transfer by FTP.
  - The unit is msec, which is 1/1000 of a second.
  - In case of sending every minute: 60000
  - When sending every 5 minutes: 300000
  - When sending every 10 minutes: 600000
  - When sending every 30 minutes: 1800000
  - When sending every 1 hours: 3600000
- Save : Saves the current settings.

9.4.3 FTP (Periodic) Condition

Set the conditions for transmission to the FTP server. FTP (Periodic) Service is suitable for always or scheduled operation.

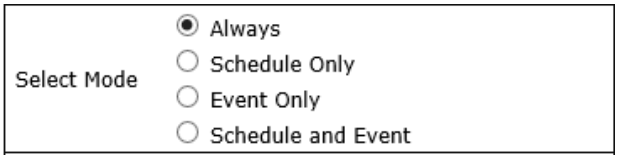


The contents of the condition setting are as follows.



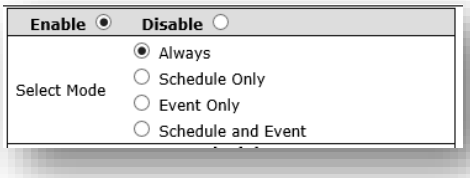
1) Enable / Disable: This is a menu to activate each condition.

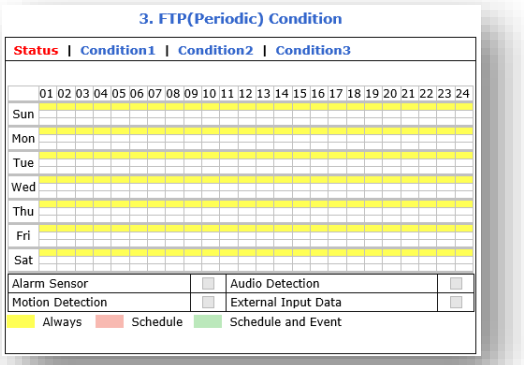
2) Select Mode: This is a menu to select the FTP transfer mode



- Always: Always transmit files according to the interval time.
- Schedule Only: If the schedule is applicable, the file is transmitted according to the Interval time..
- Event Only: Not used for FTP (Periodic).
- Schedule and Event: Not used for FTP (Periodic)..

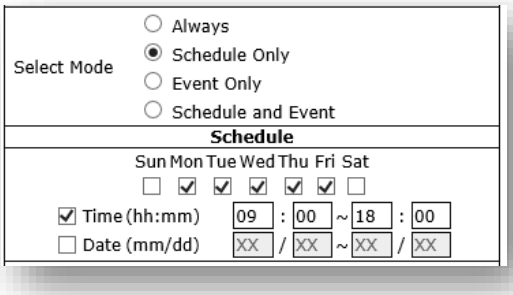
3) If you want to always transmit data according to the interval time, set as follows.
   - When set to Always, the timetable is displayed in yellow.

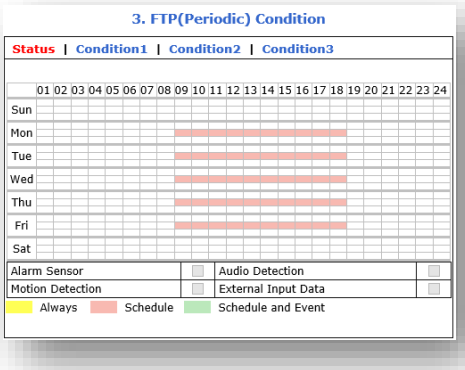




4) If you want to designate a schedule and transmit data according to the interval time, set as follows. The example below is a setting that transmits data from 9:00 am to 6:00 pm Monday to Friday.

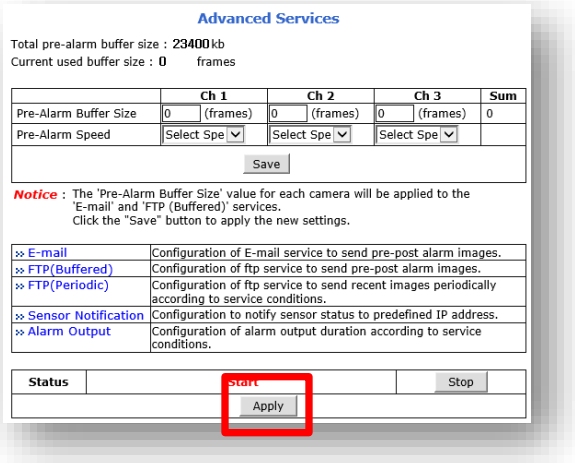
- If it is set to Schedule, it is displayed in pink according to the day and time.





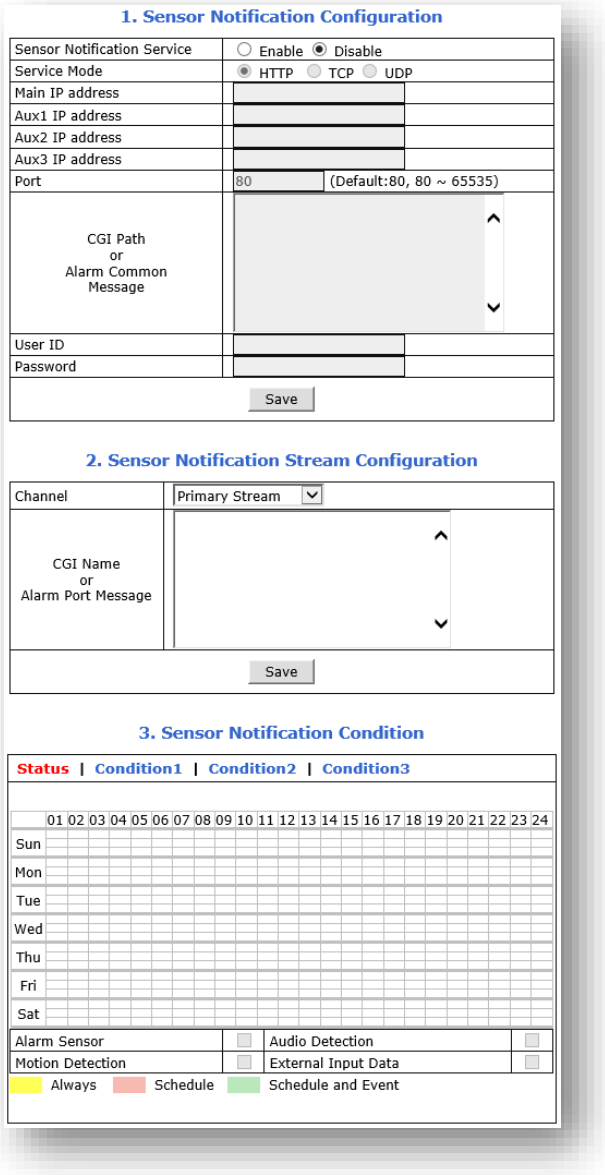
- If it is set to Schedule, it is displayed in pink according to the day and time.

5) When the condition setting is completed, click the Save button at the bottom of the window. When the setting is complete, go 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 setting has been changed, you must click the Apply button in this menu to be reflected.



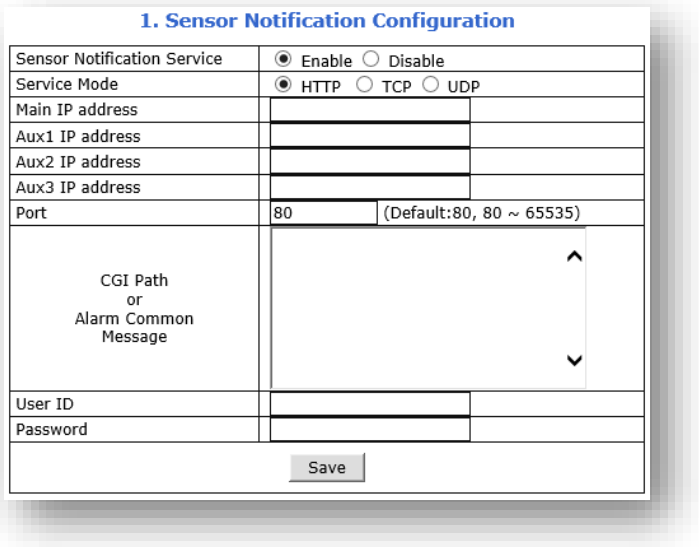
9.5 Sensor Notification

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



9.5.1 Sensor Notification Configuration

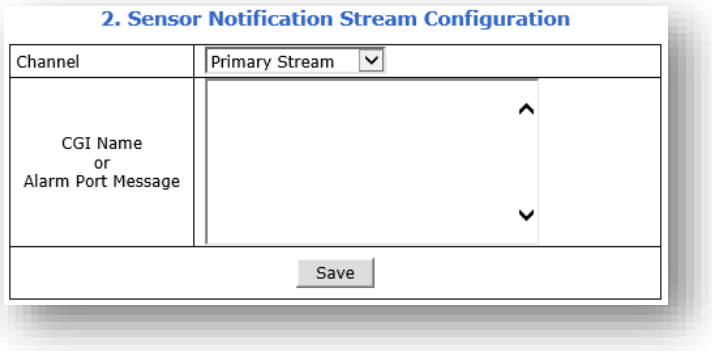
This is a menu to set basic contents to use Sensor Notification.



- 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 can be entered)
- User ID: Enter an ID that can log in to the target server.
- Password: Enter the password to log in to the target server.
- Save : Save the entered information.

9.5.2 Sensor Notification Configuration

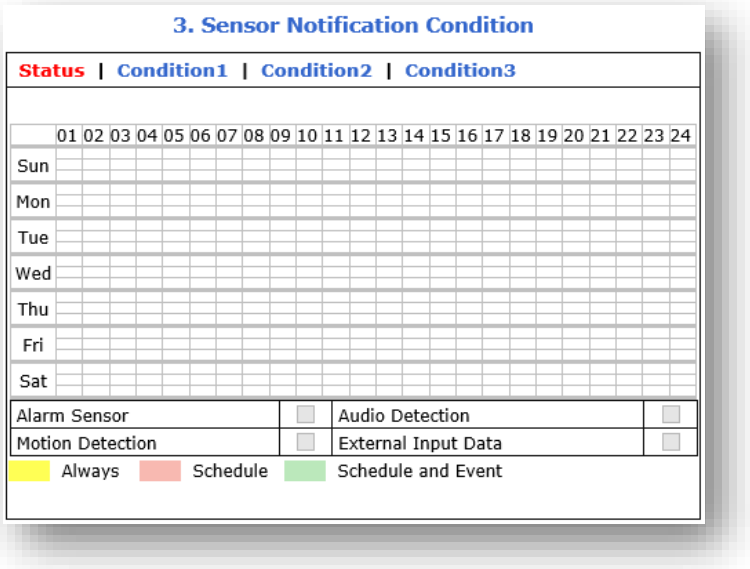
This is the menu to add the corresponding channel and CGI.



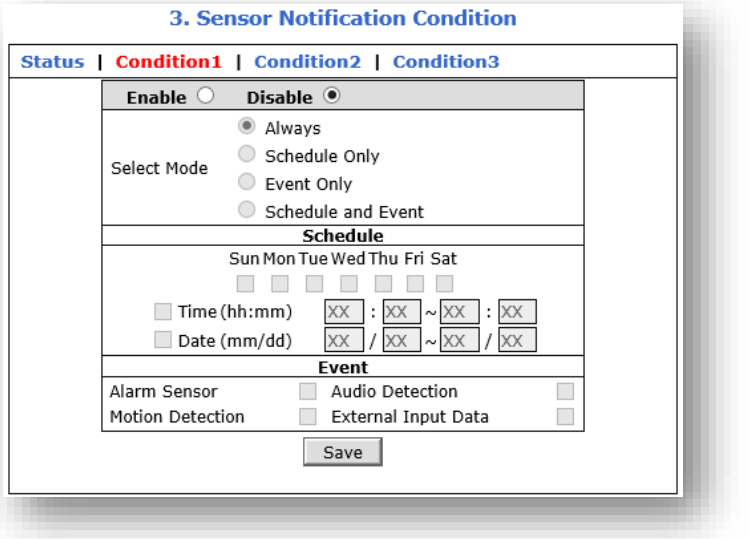
- Channel : Select a channel.
- CGI Path or Alarm Common Message: If the first input field exceeds 255 characters or is cut off, you can enter additional input in this window.
- Save : Save the entered information.

9.5.3 Sensor Notification Condition

This is a menu to set conditions to use Sensor Notification.

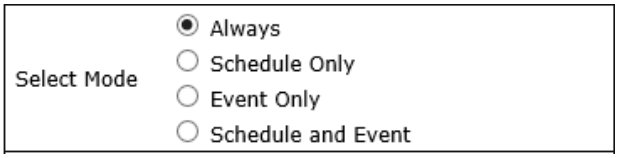


The contents of the condition setting are as follows.



1) Enable / Disable: This is a menu to activate each condition.

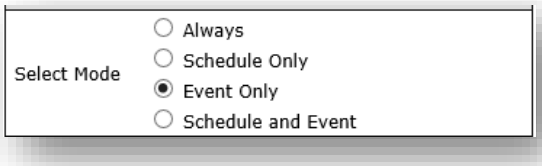
2) Select Mode: This is a menu to select the command transmission mode

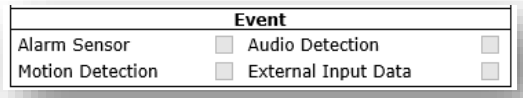


- Always: Not used for Sensor Notification Service..
- Schedule Only: Not used for Sensor Notification Service.

- Event Only: It operates when an event such as alarm sensor, audio detection, or motion detection occurs.
- Schedule and Event: Operates when a specified day, time, and event occurs.

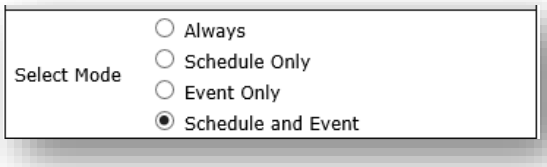
3) Select Event Only if you want action by event. If you select Event Only, the Event window at the bottom is activated.

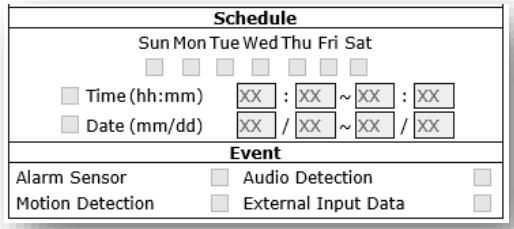




- Event conditions are as follows.
  - Alarm Sensor: Operates by DI sensor
  - Audio Detection: Operates by audio detection.
  - Motion Detection: Executes motion by motion detection.
  - External Input Data : Executes operation by external input such as FES / POS. A separate development is required to use this condition

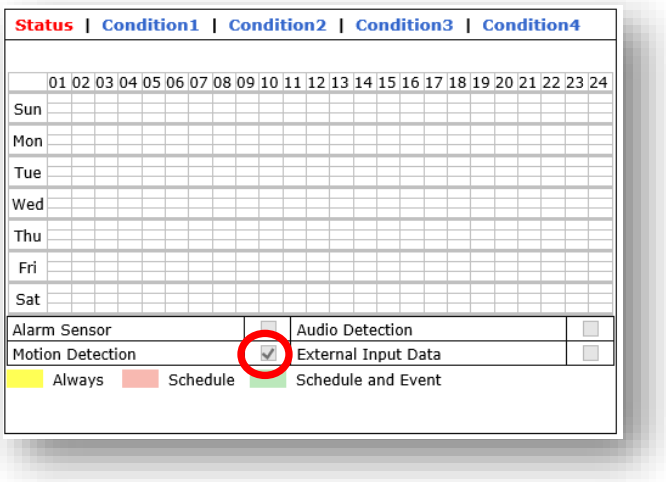
4) It is used when operating in combination by schedule and event. If you select the Schedule and Event menu, the Schedule and Event menus are activated together. You can set up any combination of schedules and events you want.



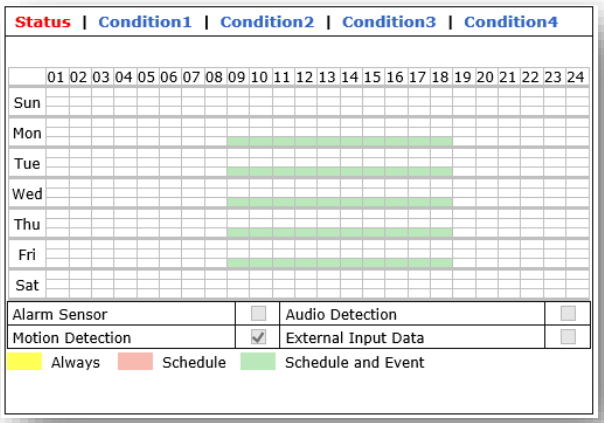


5) When the condition setting is completed, click the Save button at the bottom of the window.

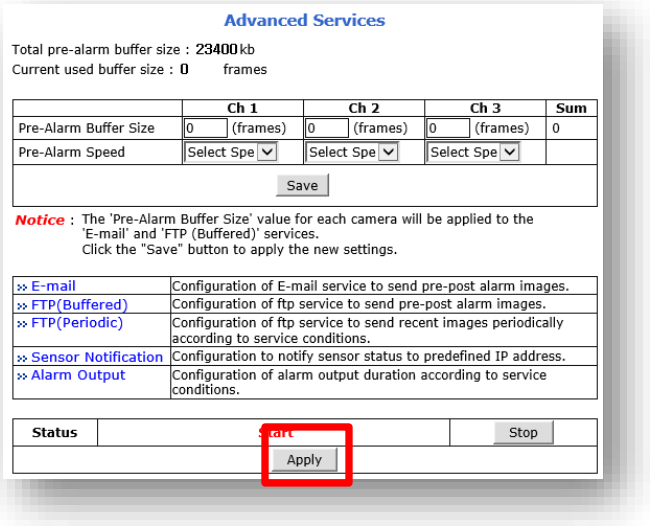
A. In case of setting as Event: Event setting is displayed in the checkbox at the bottom. For example, if it is set to operate when there is motion detection, Motion Detection is checked.



B. In case of setting as Schedule and Event : The setting information is displayed the same as when setting Schedule and Event. It is displayed in yellow green on the calendar. For example, if it is set to save only when there is movement from 9:00 am to 18:00 am on Monday to Friday, it will appear as shown in the figure below.

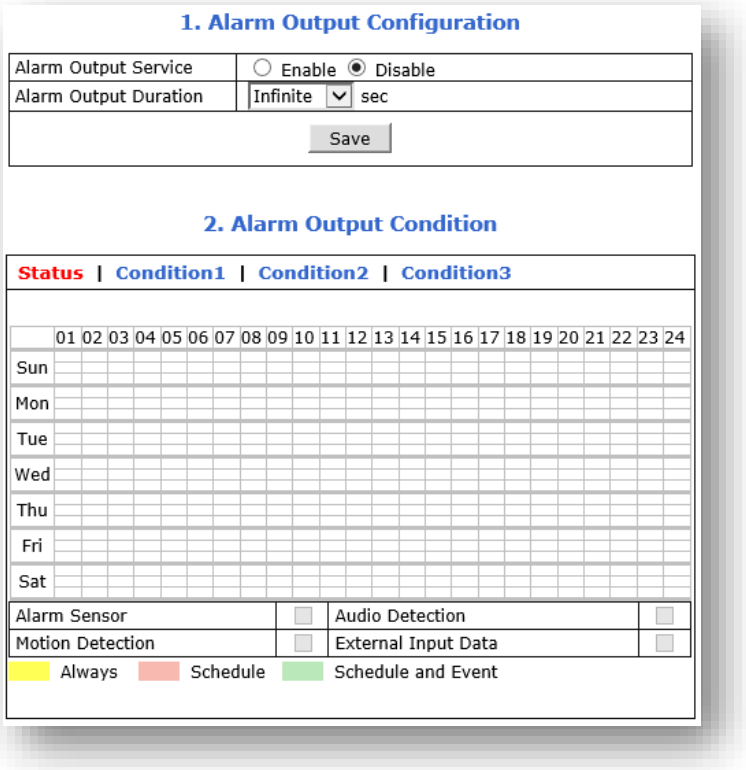


6) When the setting is complete, go to the Advanced Service menu as shown in the figure below and click Apply. After clicking the Apply button, the set conditions are reflected and the service starts. If the condition setting has been changed, you must click the Apply button in this menu to be reflected.



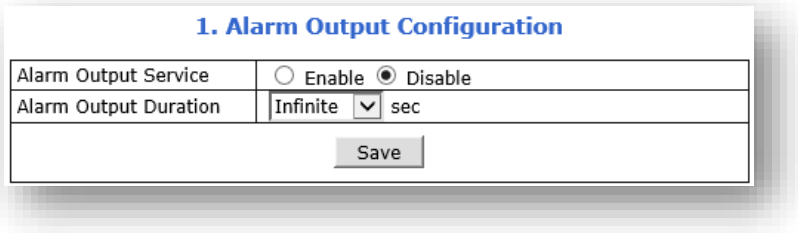
9.6 Alarm Output

This is a function to operate DO when an event occurs.



9.6.1 Alarm Notification Configuration

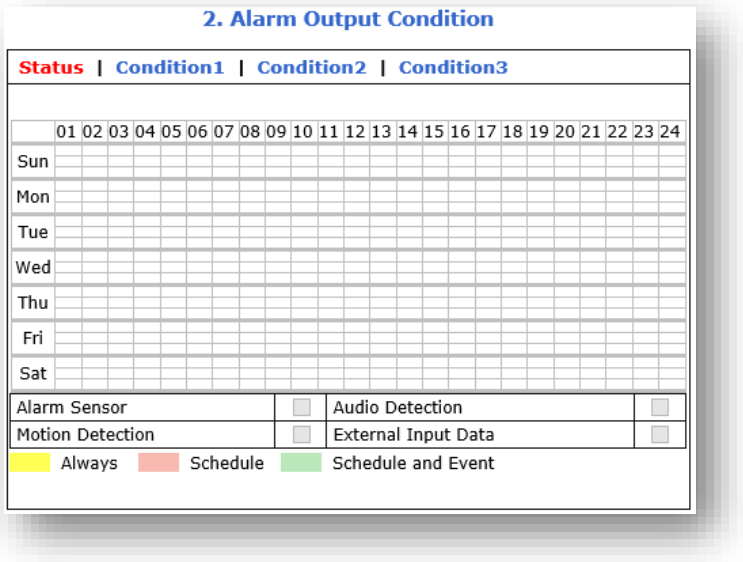
This is the menu to set whether to use the Alarm Output function and the operation time.



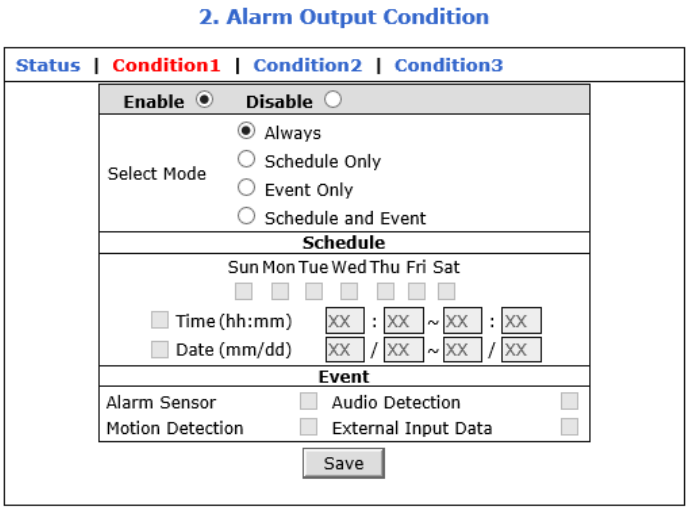
- Alarm Output Service: Set whether to use this function.
- Alarm Output Duration : Designate the duration of DO operation.
  - 1~30 : It is automatically released after operating as set from 1 to 30 seconds.
  - Infinite : It continues to operate until the user cancels it.

9.6.2 Alarm Notification Condition

This is a menu to set conditions to use Sensor Output

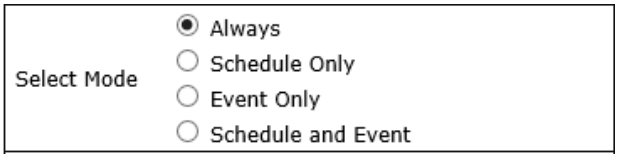


The contents of the condition setting are as follows.



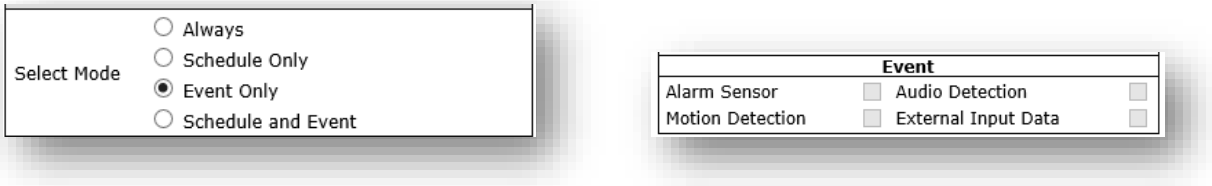
1) Enable / Disable: This is a menu to activate each condition.

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



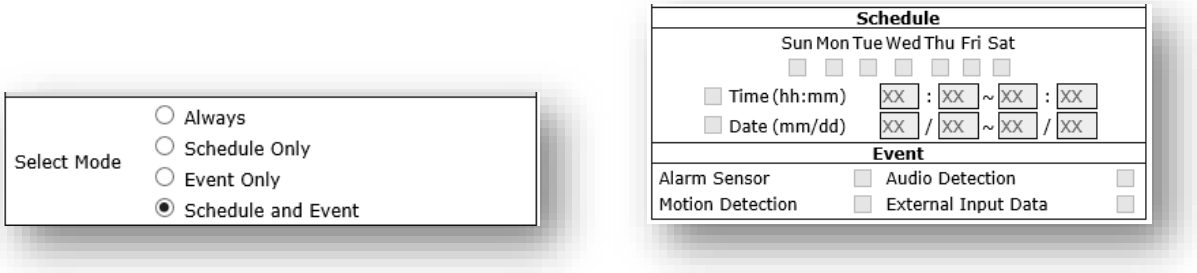
- Always: Not used for Alarm Output Service..
- Schedule Only: Not used for Alarm Output Service.
- Event Only: It operates when an event such as alarm sensor, audio detection, or motion detection occurs.
- Schedule and Event: Operates when a specified day, time, and event occurs.

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



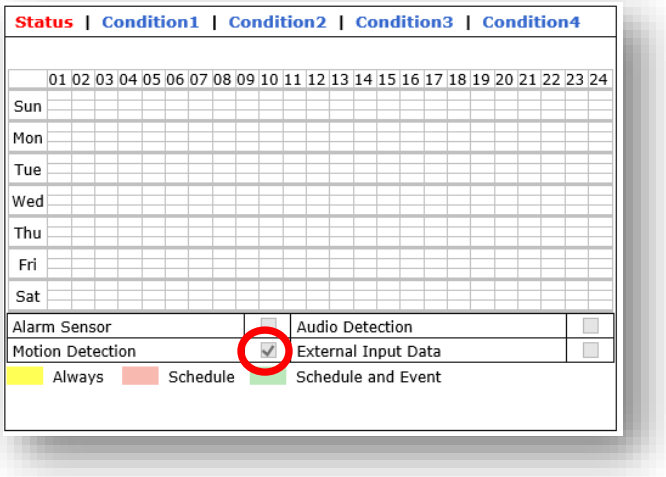
- Event conditions are as follows.
  - Alarm Sensor: Operates by DI sensor
  - Audio Detection: Operates by audio detection.
  - Motion Detection: Executes motion by motion detection.
  - External Input Data : Executes operation by external input such as FES / POS. A separate development is required to use this condition

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 up any combination of schedules and events you want.

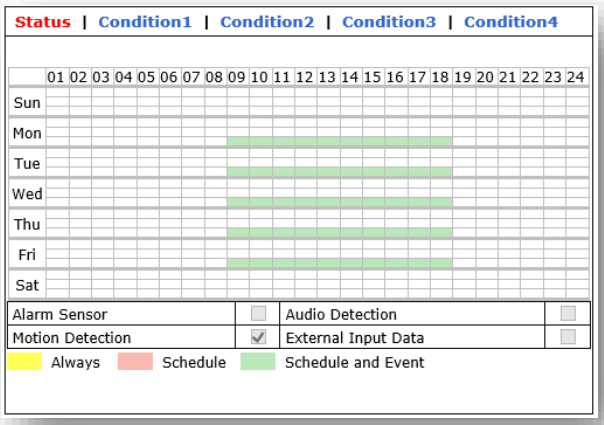


5) When the condition setting is completed, click the Save button at the bottom of the window.

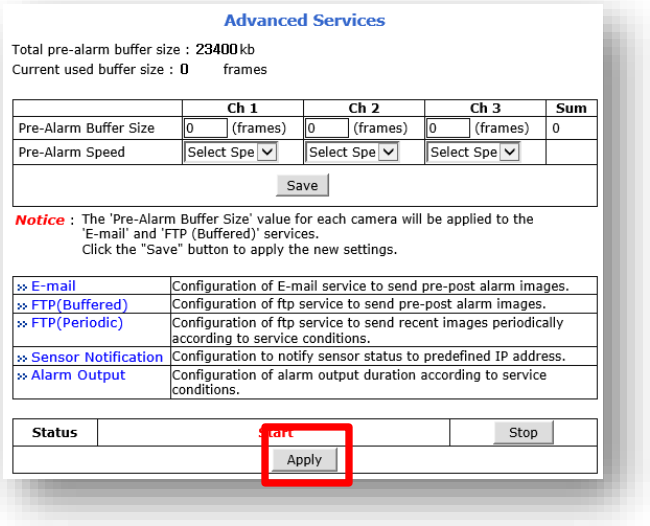
A. In case of setting as Event: Event setting is displayed in the checkbox at the bottom. For example, if it is set to operate when there is motion detection, Motion Detection is checked.



B. In case of setting as Schedule and Event : The setting information is displayed the same as when setting Schedule and Event. It is displayed in yellow green on the calendar. For example, if it is set to save only when there is movement from 9:00 am to 18:00 am on Monday to Friday, it will appear as shown in the figure below.



6) When the setting is complete, go 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 setting has been changed, you must click the Apply button in this menu to be reflected.



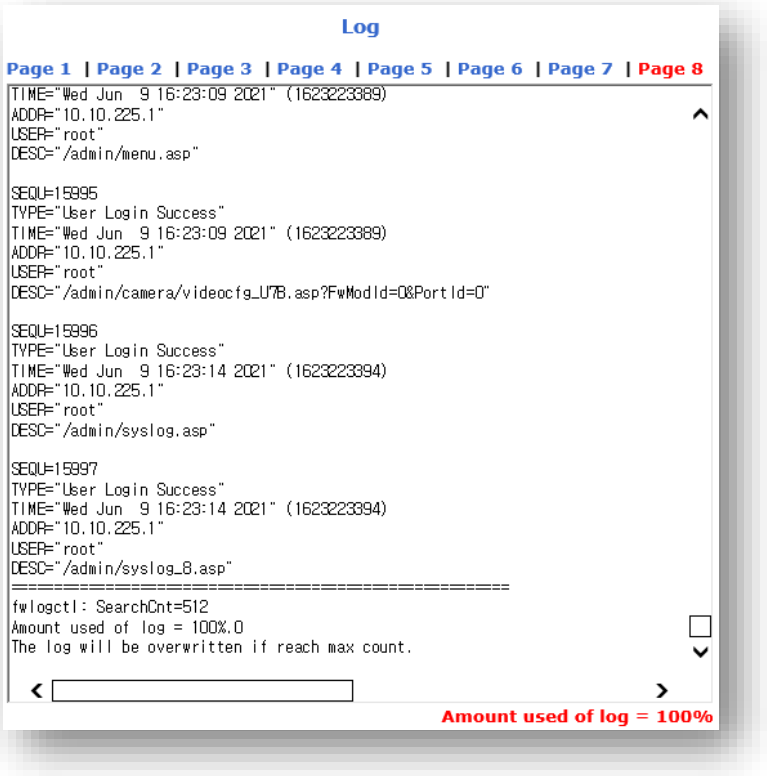
10. Utilities

In this menu, you can check the system log, reboot, reset settings, and update the system.

10.1 Log

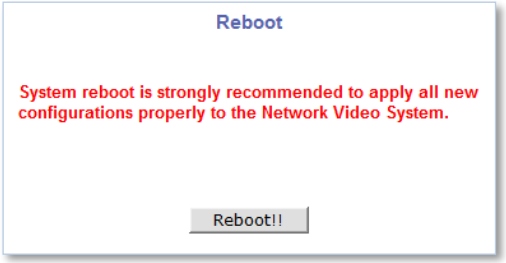
By looking at the system log, it is possible to check what devices were connected to the camera and what operation was performed on the camera.

This log consists of a total of 8 pages, and the old log is automatically deleted and a new log is recorded.



10.2 Reboot

This function reboots the camera using a web browser. After clicking the Reboot button, press the OK button to start rebooting.



To reboot, click the Reboot button shown in the figure below.
Restart your web browser and connect.

10.3 Restore Default

This is a menu to initialize all the settings except IP address, Port number, and whether to use DDNS among all settings in the camera. If you execute Restore Default in Admin, network information remains after initialization so you can continue watching the live view or setting by connecting to the existing IP without any other IP setting..

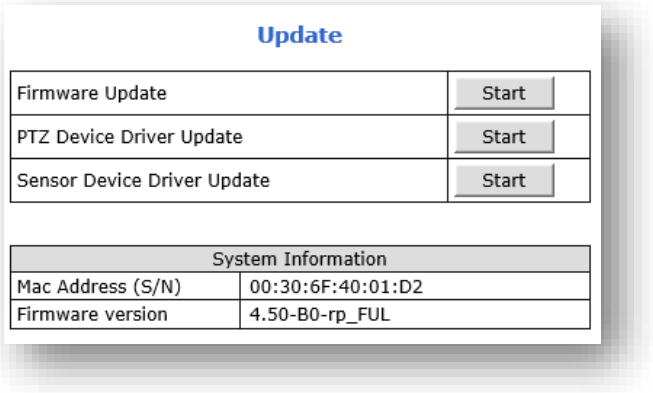
If the password is changed, it will be initialized as root, which is the default password after restore default..

You must connect to the camera by entering root. If necessary, it can be changed to a new password..

10.4 System Update

This menu is used to update the camera firmware, PTZ driver, or sensor device..

Note : System update uses pop-up function. If popup blocking is enabled in the web browser, the firmware update window will not appear. Be sure to turn off'pop-up blocking' before proceeding with the update.In this case, disable the pop-up blocker in Tools → Pop-up blocker menu.

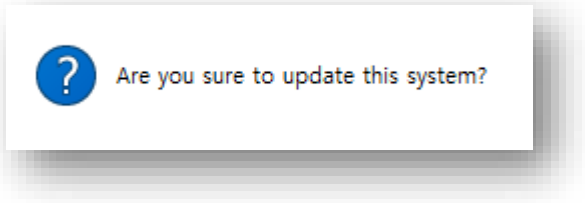


- **Firmware Update**: update the camera's firmware.
- **PTZ Device Driver Update**: update PTZ driver.
- **Sensor Device Driver Update**: update Sensor Device Driver.
- **System Information :** Check the camera's MAC address and firmware version.

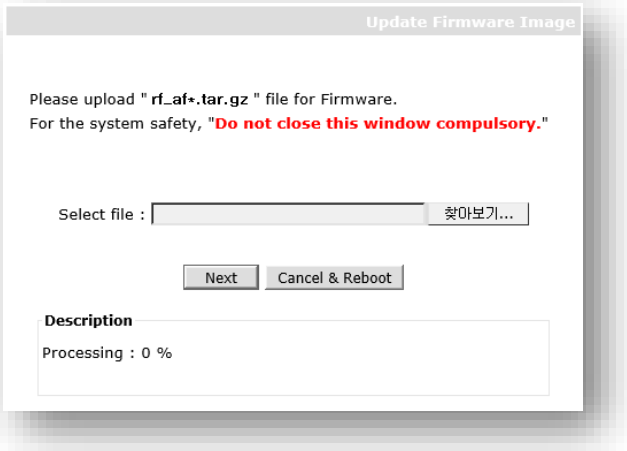
■ Firmware Update

Camera firmware update can be done as follows..

1) Click the Start button on the right side of the Firmware Update.
2) When the update confirmation window appears as shown below, click the OK button.

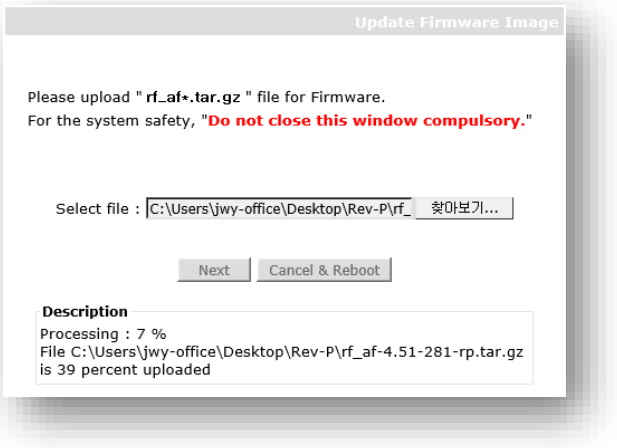


3) The Firmware Update window appears. Click the Browse button to select the firmware.

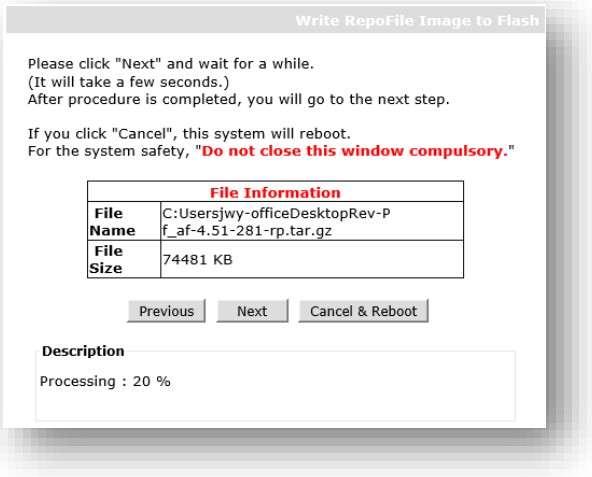


A. If you want to cancel the update at this time, click the Cancel & Reboot button to cancel it.
B. Click the Cancel & Reboot button to cancel the update mode and reboot the camera.

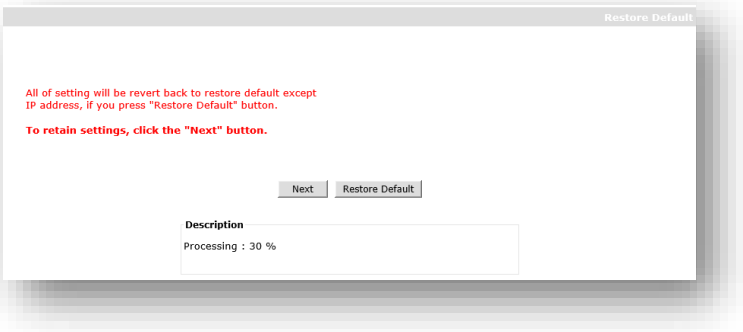
4) After selecting the update file and clicking the Next button, the firmware is uploaded to the camera.



5) When the firmware upload to the camera is completed, the following message appears. Click the Next button to continue.

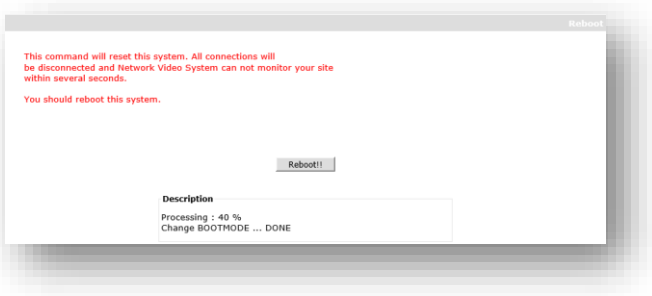


6) Select whether to update firmware only while maintaining the current settings or to perform firmware update after initializing to factory default state.

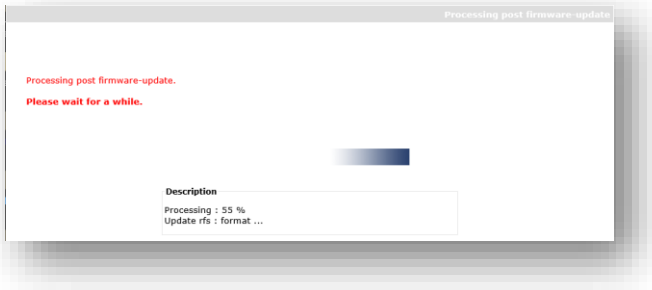


- Next : Keep current settings and proceed with firmware update.
- Restore Default : . Initialize the current settings and proceed with the firmware update

7) After a while, the Reboot message appears. Click the Reboot button to update the firmware.

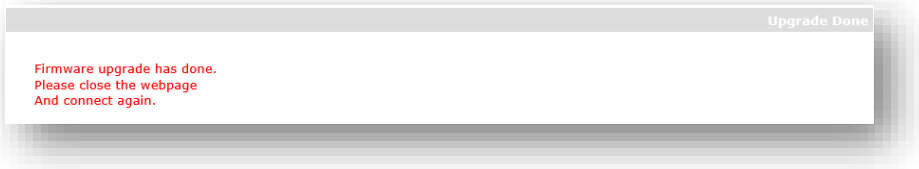


8) After rebooting, firmware update is automatically performed. Progress is expressed in %.



- Please keep the camera powered on during firmware update.
- If power is off during firmware update process, the firmware may be seriously damaged..
- If the firmware is damaged, please contact Seyeon Tech..

9) When the firmware update is completed, a web browser is automatically launched to access the camera.



- After reconnection, check the information of Firmware Ver at the bottom.
- If the firmware information is displayed normally, it is completed.

- Occasionally, the firmware update was successful, but it may be displayed as old firmware information due to a cookie in the web browser. In this case, press CTRL + F5 to delete the cookie of the corresponding IP and check the reconnected information.

If the firmware update is performed on the remote, or if the camera is DHCP, the connection with the PC will be disconnected after the camera is rebooted. In this case, wait about 10 minutes, close the update window, and access again to check the update status.

You can update PTZ Device Driver and Sensor Device Driver in the same way as firmware update.