

FlexWATCH®

Web Admin User Manual

For Camera Models with firmware version V4.48-XX or above

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

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2. Introduction

This manual covers the FlexWATCH® camera models with firmware version 4.48-B0 or above.

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

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.

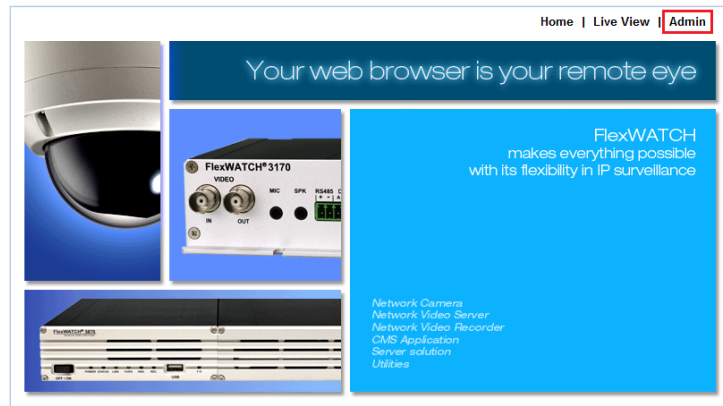
3.1 Entering to Web Admin Page

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

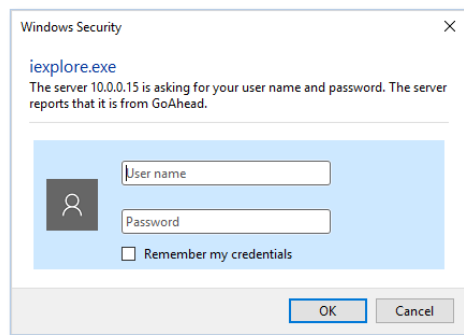
- 1) Enter the **IP Address** or **Domain Name** of the FlexWATCH® device at the address bar on your web browser .

*Note: We recommend Internet Explorer as a web browser for using FlexWATCH devices.
The initial IP setting for the FlexWATCH® device can be done through **IP Installer** software which can be found in the enclosed CD or software download page at FlexWATCH® Web Site (<http://www.FlexWATCH.com/support/download/software.asp>).*

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



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



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

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

The screenshot displays the Web Admin interface. On the left is a navigation menu with the following categories and items:

- Basic Setup**
 - » IP Address
 - » Web Ports
 - » RTP/RTSP
 - » Video Streams
 - » Primary Stream
 - » Secondary Stream
 - » Tertiary Stream
- Video & Device**
 - » Video Streams
 - » Camera Settings
 - » Text OSD
 - » Primary Stream
 - » Secondary Stream
 - » Tertiary Stream
 - » Motion Detection
 - » Audio Detection
 - » ROI
 - » PTZ
 - » PTZ OSD Menu
 - » PTZ Preset
 - » Serial Ports
 - » Serial Input Mode
 - » Serial Output Mode
 - » Transparent Mode
 - » PTZ Mode
 - » DI/DO
 - » DI Status/DO Control
- Recording**
 - » Disk Setting
 - » Recording Setting
 - » Recording Profile
 - » Clear Setting
 - » Delete Recorded Data
- Network**
 - » IP Address
 - » Web Ports
 - » RTP/RTSP
 - » Network Status
 - » DDNS
 - » UPnP
 - » SNMP
 - » IP Filtering
 - » Management White List
 - » FTP/Telnet Control
 - » FCM Push Service
 - » ZeroConf
 - » Relay Server
- System**
 - » Name
 - » Hostname
 - » Date & Time
 - » Admin. Password
 - » Access Level
 - » User
 - » Add On Services
- Advanced**
 - » Advanced Services
 - » E-mail
 - » FTP(Buffered)
 - » FTP(Periodic)
 - » Sensor Notification
 - » Alarm Output
- Utilities**
 - » Log
 - » Reboot
 - » Restore Default
 - » Update

On the right, the 'Basic Setup' configuration page is shown. It features a title bar 'Basic Setup' and a sub-header 'This category shows the detailed method for Quick Configuration.' Below this is a table:

| Basic Setup | |
|--|--|
| This category shows the detailed method for Quick Configuration. | |
| » IP Address | Configuration of Network (IP, Netmask, gateway, DNS). |
| » Web Ports | Modification of HTTP and other application network port numbers. |
| » RTP/RTSP | Configuration of RTP/RTSP. |
| » Video Streams | Configuration of video mode and the details. |
| » Primary Stream | Configuration of primary stream. |
| » Secondary Stream | Configuration of secondary stream. |
| » Tertiary Stream | Configuration of tertiary stream. |

The detailed Menu of Web 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 |
|------------------------------|---|--|----------------------------------|
| Basic Setup | IP Address Web Port RTP/RTSP Video Stream Primary Stream Secondary Stream Tertiary Stream | N/A | N/A |
| | Video Stream | Camera Settings Primary Stream Secondary Stream Tertiary Stream | N/A |
| Video & Device | Text OSD | N/A | N/A |
| | PTZ Text OSD (Option) | N/A | N/A |
| | Motion Detection | N/A | N/A |
| | Audio Detection | N/A | N/A |
| | ROI | N/A | N/A |
| | PTZ or PTZ OSD Control (Option) | | |
| | Privacy Zone (Option) | N/A | N/A |
| | Serial Ports | Serial Input Mode Serial Output Mode Transparent Mode PTZ Mode | |
| | DI/DO (Option) | N/A | N/A |
| | DI Status/DO Control (Option) | N/A | N/A |
| | Edgehandler Adapter (EHA200) | HDMI Resolution USB Refresh Mouse Config | N/A |
| Edgehandler Adapter (EHA300) | HDMI Resolution File Upload/Download Remote USB Format Remote USB Information Mouse Config | N.A | |
| Recording | Disk Setting | Disk Status & Format Disk Information Disk Circulation Disk Status Report | N/A |
| | Recording Setting | Built-in Module 0 | Camera 1 Camera 2 Camera 3 |
| | Recording Profile | N/A | N/A |
| | Clear Setting | N/A | N/A |
| | Delete Recorded Data | N/A | N/A |
| Network | IP Address | N/A | N/A |

| | | | |
|-----------|-----------------------|--|----------------------------------|
| | Web Port | N/A | N/A |
| | RTP/RTSP | N/A | N/A |
| | Network Status | N/A | N/A |
| | Network Status | N/A | N/A |
| | DDNS | N/A | N/A |
| | UPnP | N/A | N/A |
| | SNMP | N/A | N/A |
| | IP Filtering | N/A | N/A |
| | Management White List | N/A | N/A |
| | FTP/Telnet Control | N/A | N/A |
| | FCM Push Service | N/A | N/A |
| | ZeroConf | N/A | N/A |
| | Relay Server | N/A | N/A |
| System | Name | N/A | N/A |
| | Hostname | N/A | N/A |
| | Date & Time | N/A | N/A |
| | Admin. Password | N/A | N/A |
| | Access Level | N/A | N/A |
| | User | N/A | N/A |
| | Add On Service | N/A | N/A |
| Advanced | Advanced Services | Email FTP (Buffered) FTP (Periodic) Sensor Notification Alarm Output | Camera 1 Camera 2 Camera 3 |
| Utilities | Log | N/A | N/A |
| | Reboot | N/A | N/A |
| | Restore Default | N/A | N/A |
| | Update | N/A | N/A |

4. Basic Setup

Basic Setup is a Menu that allows you to operate the system with only the most basic settings when using the product.

Click the below link then go to that Menu.

4.1 Network

4.1.1 [IP Address](#)

4.1.2 [Web Port](#)

4.1.3 [RTP/RTSP](#)

4.2 Video & Device

4.2.1 [Video Streams](#)

4.2.2 [Primary Stream](#)

4.2.3 [Secondary Stream](#)

4.2.4 [Tertiary Stream](#)

5. Video & Device

Video, Audio, Motion Detection, Streaming and External device related settings are available in this menu.

Note: Video streaming settings page may vary depending on the model number of firmware version. Please check the device model number first before you read the information below.

5.1 Video Streams

Camera model with firmware version “ra”

| Video Streams | | |
|---------------------------------------|--|--|
| Max Frame Rate | <input checked="" type="radio"/> 30 fps <input type="radio"/> 25 fps | |
| Video with Flexible Extra System data | <input type="checkbox"/> Enable | |
| Video with user defined message | <input type="checkbox"/> Enable | |
| Video with PPP status | <input type="checkbox"/> Enable | |
| Video with camera name | <input type="checkbox"/> Enable | |
| Video with server name | <input type="checkbox"/> Enable | |
| Video with IP address | <input type="checkbox"/> Enable | |
| Time Stamp | Off <input type="checkbox"/> On <input type="checkbox"/> | |
| Audio Codec | G.711 μ -LAW <input type="checkbox"/> G.726 <input type="checkbox"/> | |
| Primary Stream | Frame Rate | 30 fps <input type="checkbox"/> 25 fps <input type="checkbox"/> |
| | Image Size | 1920 x 1080 <input type="checkbox"/> 1280 x 720 <input type="checkbox"/> |
| | Encoding Standard | <input type="radio"/> M-JPEG <input checked="" type="radio"/> H.264 |
| | Audio | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Secondary Stream | Frame Rate | 30 fps <input type="checkbox"/> 25 fps <input type="checkbox"/> |
| | Image Size | 720 x 480 <input type="checkbox"/> 640 x 480 <input type="checkbox"/> |
| | Encoding Standard | <input checked="" type="radio"/> M-JPEG <input type="radio"/> H.264 |
| | Audio | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Tertiary Stream | Frame Rate | 30 fps <input type="checkbox"/> 25 fps <input type="checkbox"/> |
| | Image Size | 320 x 240 <input type="checkbox"/> 320 x 180 <input type="checkbox"/> |
| | Encoding Standard | <input type="radio"/> M-JPEG <input checked="" type="radio"/> H.264 |
| | Audio | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |

[» Camera Settings](#)
[» Primary Stream](#)
[» Secondary Stream](#)
[» Tertiary Stream](#)

Camera model with firmware version “rp”

| Video Streams | | |
|---------------------------------------|--|--|
| Max Frame Rate | <input checked="" type="radio"/> 30 fps <input type="radio"/> 25 fps | |
| Video with Flexible Extra System data | <input type="checkbox"/> Enable | |
| Video with user defined message | <input type="checkbox"/> Enable | |
| Video with PPP status | <input type="checkbox"/> Enable | |
| Video with camera name | <input type="checkbox"/> Enable | |
| Video with server name | <input type="checkbox"/> Enable | |
| Video with IP address | <input type="checkbox"/> Enable | |
| Time Stamp | Off <input type="checkbox"/> On <input type="checkbox"/> | |
| TV Out | <input checked="" type="radio"/> Enable <input type="radio"/> Disable | |
| Audio Codec | G.711 μ -LAW <input type="checkbox"/> G.726 <input type="checkbox"/> | |
| Primary Stream | Frame Rate | 30 fps <input type="checkbox"/> 25 fps <input type="checkbox"/> |
| | Image Size | 1920 x 1080 <input type="checkbox"/> 1280 x 720 <input type="checkbox"/> |
| | Encoding Standard | H.264 <input type="checkbox"/> H.265 <input type="checkbox"/> |
| | Audio | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Secondary Stream | Frame Rate | 30 fps <input type="checkbox"/> 25 fps <input type="checkbox"/> |
| | Image Size | 720 x 480 <input type="checkbox"/> 640 x 480 <input type="checkbox"/> |
| | Encoding Standard | H.264 <input type="checkbox"/> H.265 <input type="checkbox"/> |
| | Audio | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Tertiary Stream | Frame Rate | 30 fps <input type="checkbox"/> 25 fps <input type="checkbox"/> |
| | Image Size | 320 x 240 <input type="checkbox"/> 320 x 180 <input type="checkbox"/> |
| | Encoding Standard | H.264 <input type="checkbox"/> H.265 <input type="checkbox"/> |
| | Audio | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |

[» Camera Settings](#)
[» Primary Stream](#)
[» Secondary Stream](#)
[» Tertiary Stream](#)

- **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 UART Flexible Extra System Data:** If Enabled, video data will contain UART sensor data from COM port. (This menu requires the integration program using FlexWATCH SDK.)
- **Video with User defined message:** If Enabled, video data will contain the user-defined message data. (This menu requires the integration program using FlexWATCH SDK.)
- **Video with PPP status:** If enabled, video data will contain PPP connection status. (This menu requires the integration program using FlexWATCH SDK.)
- **Video with Camera name:** If enabled, video data will contain the camera name defined by user. (This menu requires the integration program using FlexWATCH SDK.)
- **Video with IP address:** If enabled, video data will contain the IP address of the FlexWATCH® device.. (This menu requires the integration program using FlexWATCH 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
- **Frame Rate:** Set Frame Rate of Primary, Secondary and Tertiary Stream respectively
The possible FPS settings are as follows: 1 fps to 30 fps or 1 fps to 60 fps (displayed differently depending on the model).
- **Encoding Standard:** Select the compression type (CODEC) for each stream.
 - Camera model with firmware version “ra” : **supports MJPEG / H.264**
 - Camera model with firmware version “rP” : **supports MJPEG / H.264 / H.265**
- **Image Size:** : Select the image size for each video stream. In case of Primary Stream, it supports the maximum resolution supported by the product, but Secondary Stream only supports resolutions of D1 (VGA) or lower. Tertiary Stream supports resolution of CIF. Please refer to the table below for the resolution table.
- **Audio:** Enable if Audio function is to be used. Bi-directional (two-way) Audio is supported.
 - Audio codec supports G.711 u-LAW / G.711 A-LAW / SPEEX / AAC-LC.

✂ **Supported Resolution table**

| Primary Stream | | | | | |
|-----------------------|-----------|-----------|-----------|-----------|-----------------------|
| Camera Model | 5M | 4M | 3M | 2M | 1M |
| 2.0 Megapixel Series | - | | | 1920x1080 | 1280x1024 1280x720 |
| 3.0 Megapixel Series | - | - | 2048x1536 | 1920x1080 | 1280x1024 1280x720 |
| 4.0 Megapixel Series | | 2688x1520 | | 1920x1080 | 1280x1024 1280x720 |
| 5.0 Megapixel Series | 2592x1944 | 2304x1728 | - | 1920x1080 | 1280x1024 1280x720 |

| Secondary Stream | | | |
|-------------------------|------------------------|------------------------|---------|
| Camera Model | D1 | VGA | CIF |
| 2.0 Megapixel Series | 720 x 480 704 x 480 | 640 x 480 640 x 352 | 320x240 |
| 3.0 Megapixel Series | 720 x 480 704 x 480 | 640 x 480 640 x 352 | 320x240 |
| 4.0 Megapixel Series | 720 x 480 704 x 480 | 640 x 480 640 x 352 | 320x240 |
| 5.0 Megapixel Series | 720 x 480 704 x 480 | 640 x 480 640 x 352 | 320x240 |

| Tertiary Stream | | |
|------------------------|---------|------|
| Camera Model | CIF | QCIF |
| All cameras | 320x240 | - |

5.1.1 Camera Settings

This is a Menu for video-related settings on the product.

The camera settings Menu is displayed differently depending on the Model.

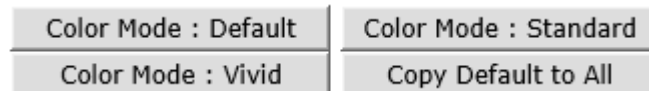
5.1.1.1 Supported Model as below : PSM, PXM, TVM, TVF, GXM, FTM, FTF, FVVetc.

| Default(Day) Night Mode DI Mode Motion Mode | |
|---|---|
| Event Control Mode | |
| Mode | Day ▾ |
| Exposure | |
| DC IRIS Enable | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| AE Metering Mode | Center ▾ |
| Shutter Control | <input type="radio"/> Manual <input checked="" type="radio"/> Auto |
| Max AGC gain | 36 (Default:36, 0 ~ 72) |
| Sense Up Level | Off ▾ |
| Back Light Compensation | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Auto Exposure Weight | 100 % (Default:100, 25 ~ 400) |
| DOL WDR Enable | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| D-WDR | 0 (Default:0, 0 ~ 128) |
| Image Filter | |
| Brightness | 0 (Default:0, -255 ~ 255) |
| Contrast | 64 (Default:64, 0 ~ 128) |
| Hue | 2 (Default:2, -15 ~ 15) |
| Saturation | 80 (Default:80, 0 ~ 255) |
| Sharpness | 6 (Default:6, 0 ~ 11) |
| White Balance & Noise Filter | |
| White Balance | Auto ▾ |
| 3DNR | 6 (Default:6, 0 ~ 11) |
| Day/Night & IR-LED Illumination | |
| Day & Night Control | Auto(Night B/W) ▾ |
| Day to Night Dwelling Time | 3 (0 ~ 6) |
| Night to Day Dwelling Time | 3 (0 ~ 6) |
| Day to night threshold | 1800 (1 ~ 4096) |
| Night to day threshold | 3000 (1 ~ 4096) |
| Image Direction | |
| Vertical Flip | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Horizontal Flip | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Corridor Mode | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Color Mode : Default | |
| Color Mode : Standard | |
| Color Mode : Vivid | |
| Copy Default to All | |

- **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
- **Event Control Mode**
 - **Mode** : Displays the current set mode. The default setting is DayMode, and Night Mode, DI Mode, Motion Mode can be set On/Off.
- **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° vertically .
 - **Horizontal Flip:** Rotate the image 180° horizontally.
 - **Corridor Mode :** Rotate the image 90° 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.

5.1.1.2 Supported Model as below : HSM etc.

Lens

| Lens | Exposure | Back Light | Day & Night | White Balance | Image |
|------------------------|--|-------------------|------------------------|----------------------|--------------|
| Lens Type | <input checked="" type="radio"/> ELC <input type="radio"/> ALC | | | | |
| AF Mode | <input checked="" type="radio"/> Auto <input type="radio"/> Manual | | | | |
| One Push AF | <input type="button" value="Start"/> | | | | |
| Day & Night Auto Focus | <input checked="" type="radio"/> Off <input type="radio"/> On | | | | |
| Lens Reset | <input type="button" value="Start"/> | | | | |

- **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

| Lens | Exposure | Back Light | Day & Night | White Balance | Image |
|----------------------|--|----------------------|------------------------|----------------------|--------------|
| Brightness | 10 | (Default:10, 0 ~ 20) | | | |
| Shutter | Auto | ▼ | | | |
| Lens ELC Mode | <input checked="" type="radio"/> Normal <input type="radio"/> Deblur | | | | |
| Lens ALC Mode | Indoor ▼ | | | | |
| Manual Shutter Speed | 1/30 ▼ | | | | |
| Sens Up | Off ▼ | | | | |
| Agc | 10 | (Default:10, 0 ~ 10) | | | |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | |
|---|-------------------------|
| BackLight Mode | Off ▾ |
| Hlc Level | 10 (Default:10, 0 ~ 20) |
| Hlc Mask Color | Black ▾ |
| Blc H-Pos | 8 (Default:8, 0 ~ 20) |
| Blc V-Pos | 7 (Default:7, 0 ~ 20) |
| Blc H-Size | 3 (Default:3, 0 ~ 20) |
| Blc V-Size | 3 (Default:3, 0 ~ 20) |
| WDR Weight | Middle ▾ |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | |
|---|---|
| Day & Night Mode | Extern ▾ |
| Smart IR | <input type="radio"/> Off <input checked="" type="radio"/> On |
| Anti Saturation | 0 (Default:0, 0 ~ 20) |
| AGC Threshold | 10 (Default:10, 0 ~ 20) |
| AGC Margin | 10 (Default:10, 0 ~ 20) |
| Delay | 1Sec ▾ |
| Extern S/W | <input type="radio"/> High <input checked="" type="radio"/> Low |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | |
|---|-------------------------|
| White Balance Mode | Auto ▼ |
| Preset | Start |
| Kelvin | 3000K ▼ |
| Manual RGain | 10 (Default:10, 0 ~ 20) |
| Manual BGain | 10 (Default:10, 0 ~ 20) |
| Color Gain | 10 (Default:10, 0 ~ 20) |
| DNR Level | Middle ▼ |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | |
|--|--|
| Sharpness | 5 (Default:5, 0 ~ 10) |
| Gamma | 0.55 ▾ |
| Mirror | <input checked="" type="radio"/> Off <input type="radio"/> On |
| Flip | <input checked="" type="radio"/> Off <input type="radio"/> On |
| D-Zoom | 0 (Default:0, 0 ~ 70) |
| D-WDR | Off ▾ |
| Defog | <input checked="" type="radio"/> Off <input type="radio"/> On |
| Defog Mode | <input type="radio"/> Manual <input checked="" type="radio"/> Auto |
| Defog Level | High ▾ |
| Shading | <input checked="" type="radio"/> Off <input type="radio"/> On |
| Shading Weight | 100 (Default:100, 0 ~ 100) |
| Color Bar | <input checked="" type="radio"/> Off <input type="radio"/> On |
| Digital Image Stabilizer | <input checked="" type="radio"/> Off <input type="radio"/> On |
| Digital Image Stabilizer Range | 10% ▾ |
| Digital Image Stabilizer Filter | Middle ▾ |
| Digital Image Stabilizer Auto C | Half ▾ |

- **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 Range 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)

5.1.1.3 Supported Model as below : GSM etc.

Lens

| Lens Exposure Back Light Day & Night White Balance Image | |
|--|--|
| Lens Type | <input checked="" type="radio"/> ELC <input type="radio"/> ALC |
| AF Mode | <input checked="" type="radio"/> Auto <input type="radio"/> Manual |
| Scanning | <input type="radio"/> Half <input checked="" type="radio"/> Full |
| Day & Night Auto Focus | <input checked="" type="radio"/> Off <input type="radio"/> On |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | | |
|--|------------------------------|---|
| Brightness | 10 | (Default:10, 0 ~ 20) |
| Shutter | Auto | ▼ |
| Lens ELC Mode | <input type="radio"/> Normal | <input checked="" type="radio"/> Deblur |
| Lens ALC Mode | Outdoor | ▼ |
| Manual Shutter Speed | 1/1000 | ▼ |
| Auto Shutter Min Speed | 1/1000 | ▼ |
| Auto Shutter Max Speed | 1/5000 | ▼ |
| Sens Up | Off | ▼ |
| Agc | 5 | (Default:5, 0 ~ 10) |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | |
|---|---|
| BackLight Mode | Off <input type="button" value="v"/> |
| Hlc Level | 10 (Default:10, 0 ~ 20) |
| Hlc Mask Color | Black <input type="button" value="v"/> |
| Blc H-Pos | 8 (Default:8, 0 ~ 20) |
| Blc V-Pos | 7 (Default:7, 0 ~ 20) |
| Blc H-Size | 3 (Default:3, 0 ~ 20) |
| Blc V-Size | 3 (Default:3, 0 ~ 20) |
| WDR Weight | Middle <input type="button" value="v"/> |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | |
|---|---|
| Day & Night Mode | Extern <input type="button" value="v"/> |
| Anti Saturation | 0 (Default:0, 0 ~ 20) |
| AGC Threshold | 10 (Default:10, 0 ~ 20) |
| AGC Margin | 10 (Default:10, 0 ~ 20) |
| Delay | Low <input type="button" value="v"/> |
| Extern S/W | <input checked="" type="radio"/> High <input type="radio"/> Low |
| Day to Night Threshold | 9 (Default:9, 0 ~ 20) |
| Night to Day Threshold | 7 (Default:7, 0 ~ 20) |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | |
|---|-------------------------|
| White Balance Mode | Auto ▼ |
| Preset | Start |
| Kelvin | 3000K ▼ |
| Manual RGain | 10 (Default:10, 0 ~ 20) |
| Manual BGain | 10 (Default:10, 0 ~ 20) |
| Color Gain | 10 (Default:10, 0 ~ 20) |
| DNR Level | Middle ▼ |

- **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

| Lens Exposure Back Light Day & Night White Balance Image | | |
|--|--|------------------------|
| Sharpness | 5 | (Default:5, 0 ~ 10) |
| Gamma | 0.55 | ▼ |
| Mirror | <input checked="" type="radio"/> Off <input type="radio"/> On | |
| Flip | <input checked="" type="radio"/> Off <input type="radio"/> On | |
| D-Zoom | 0 | (Default:0, 0 ~ 70) |
| D-WDR | Off | ▼ |
| Defog | <input checked="" type="radio"/> Off <input type="radio"/> On | |
| Defog Mode | <input type="radio"/> Manual <input checked="" type="radio"/> Auto | |
| Defog Level | High | ▼ |
| Shading | <input checked="" type="radio"/> Off <input type="radio"/> On | |
| Shading Weight | 100 | (Default:100, 0 ~ 100) |
| Color Bar | <input checked="" type="radio"/> Off <input type="radio"/> On | |
| Digital Image Stabilizer | <input checked="" type="radio"/> Off <input type="radio"/> On | |
| Digital Image Stabilizer Range | 10% | ▼ |
| Digital Image Stabilizer Filter | Middle | ▼ |
| Digital Image Stabilizer Auto C | Half | ▼ |

- **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 Range 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)

5.1.2 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.

| | | | | | |
|-------------|----------|---|--------|--------------|---------|
| Text Line 0 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Position | X: 100 | Y: 50 | | |
| | Font | Color | Bold | Size(15~250) | Outline |
| | | Black ▼ | Off ▼ | 80 | Off ▼ |
| Content | | | | | |
| Text Line 1 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Position | X: 100 | Y: 150 | | |
| | Font | Color | Bold | Size(15~250) | Outline |
| | | Black ▼ | Off ▼ | 80 | Off ▼ |
| Content | | | | | |
| Text Line 2 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Position | X: 100 | Y: 250 | | |
| | Font | Color | Bold | Size(15~250) | Outline |
| | | Black ▼ | Off ▼ | 80 | Off ▼ |
| Content | | | | | |

Menu screen for ra firmware

| | | | | | |
|-------------|---------|---|--------------|-------------------|-----------------|
| Text Line 1 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |
| Text Line 2 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |
| Text Line 3 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |
| Text Line 4 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |
| Text Line 5 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |
| Text Line 6 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |
| Text Line 7 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |
| Text Line 8 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |
| Text Line 9 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | | |
| | Font | Color : Black ▼ | Bold : Off ▼ | Size(15~250) : 80 | Outline : Off ▼ |
| | Content | | | | |
| | Content | | | | |

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.

5.1.3 PTZ Text OSD (FW7707 / FW7709 / FW8707 / FW8709)

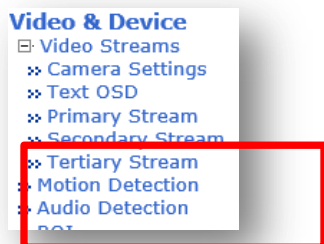
For PTZ cameras, the OSD can be displayed according to the PAN coordinate value.. Basically, it can be set in 8 areas based on 45° angle, and 9 OSD can be displayed per area. PAN angle can be modified by the user.

| Position Num. 1 2 3 4 5 6 7 8 | | Pan : 256 ° | | Refresh | |
|---|---------|---|------------|-----------------------|---------------|
| Position 1 | | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | 0 ° ~ 45 ° (0 ~ 360)° | |
| Text Line 1 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |
| Text Line 2 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |
| Text Line 3 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |
| Text Line 4 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |
| Text Line 5 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |
| Text Line 6 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |
| Text Line 7 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |
| Text Line 8 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |
| Text Line 9 | Enable | <input checked="" type="radio"/> Disable <input type="radio"/> Enable | | X: 100 | (0 ~ 1000) |
| | Font | Color : Black | Bold : Off | Size(7~250) : 80 | Outline : Off |
| | Content | | | | |

- 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.

5.1.4 Primary Stream / Secondary Stream / Tertiary Stream

Camera Models that support triple streams: (ra / rp same)



There are many advantages to supporting triple streams from an IP camera.

The primary stream can record video in FHD or higher resolution, and at the same time, use secondary stream to support real-time monitoring or viewing on mobile. This feature allows NVR servers or customers to view multiple cameras, enabling low bandwidth and low CPU usage.

The Video Stream Configuration Menu will be displayed as shown below depending on the Compression Type and Rate Control Mode.

H.264 / H.265

| | | |
|-------------------|---|--------|
| Camera Name | Primary Stream | |
| H.264 Profile | <input type="radio"/> Base <input type="radio"/> Main <input checked="" type="radio"/> High | |
| Rate Control Mode | CBR Mode ▾ | |
| Target Bitrate | 4.0 Mbps ▾ | |
| GOP Structure | 16 | [1~64] |

MJPEG

| | | |
|---------------|----------------|--|
| Camera Name | Primary Stream | |
| Image Quality | High ▾ | |

- **Camera Name:** Enter the name of the Stream or channel up to 21 alphanumeric or up to 10 Unicode characters..
- **H.264/H.265 Profile :** Select a profile for the stream.
(*H.265doesn't support Base Profile.)
- **Rate Control Mode:**
 - **VBR (Variable Bit Rate):** VBR allows higher quality images regardless of the amount of bandwidth used. Insufficient bandwidth may cause video pause, jumping or loss.
 - **Image Quality:** Select image quality
 - **Available Image Quality:** Lowest, Low, Normal, High, Highest, Low Compression (Best Quality).
 - **CBR (Constant Bit Rate):** The image is transmitted based on the bandwidth set by the user. When the bandwidth is set low, the image quality may deteriorate when there is a lot of movement...
 - **Target Bitrate :** Select maximum bitrate
 - 32Kbps, 64Kbps, 128Kbps, 256Kbps, 512Kbps, 1.0Mbps, 1.5Mbps, 2.0Mbps, 3.0Mbps, 4.0Mbps, 5.0Mbps, 6.0Mbps, 8.0Mbps, 10Mbps, 12Mbps
 - **AVBR(Adaptive Variable Bit Rate) :** The image is transmitted based on the bandwidth range set by the user. If there is a lot of movement, the bandwidth rises to the set range.
 - **ACBR(Adaptive Constant Bit Rate) :** The image is transmitted by changing the frame based on the bandwidth set by the user. When there is little movement, the number of frames decreases.
- **GOP Structure:** Abbreviation of Group Of Picture, I Frame and P Frame are calculated and image is transmitted. A high GOP value can significantly help with bandwidth, but it may lower the image quality..

5.2 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.

The screenshot shows two separate web forms. The top form is titled "Audio Detection Setting" and contains a table with two rows: "Audio Detection Enable" with radio buttons for "Disable" (selected) and "Enable", and "Audio Detection Sensitivity" with a text input field containing "20" and a note "(Default:30, 1 ~ 50)". Below the table are "Back" and "Apply" buttons. The bottom form is titled "Mic Volume Setting" and contains a table with one row: "Mic Volume" with a text input field containing "25" and a note "(Default:25, 1 ~ 50)". Below the table are "Back" and "Apply" buttons.

- 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.

5.3 Motion Detection

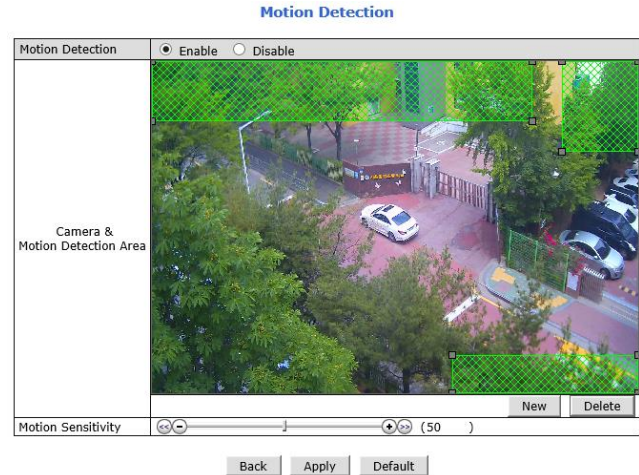
This menu is for setting the motion detection area. By default, the entire screen is divided into 4 motion detection zones and all zones are enabled. The user can select and set the desired area in this menu.

5.3.1 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.

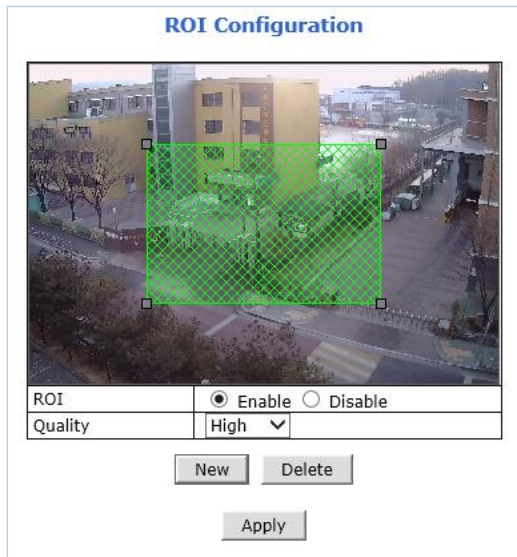
5.4 ROI (Region of Interest)

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

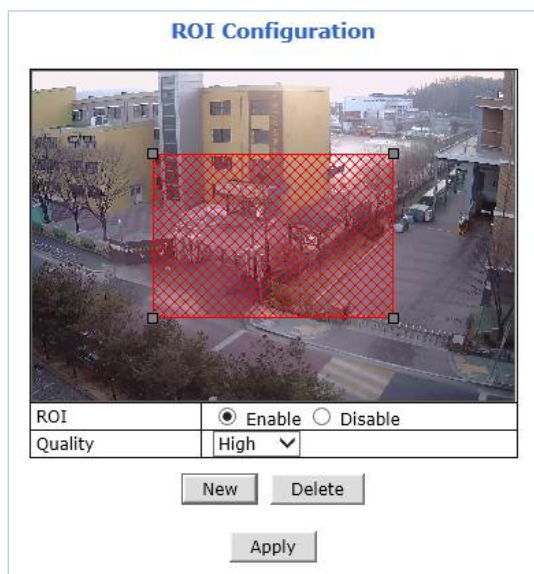
image quality is set in the region of interest and low image quality is set in the region of non-interest to provide high image quality to the region of interest without increasing the overall data volume. ROI can be set up to 8 areas.

To add ROI, do the following:.

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

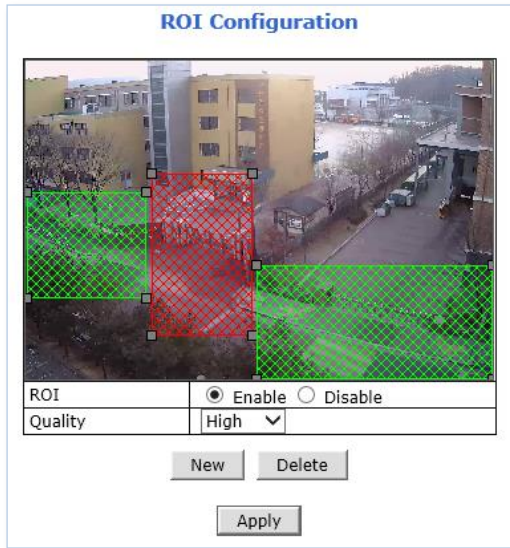


- 4) Click on the green box, place it in the desired location and resize it.
 - . Resize : Click and hold any corner and drag to desired size
 - . Relocate : Click and hold anywhere inside the box and drag to desired location.



- 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..



5.5 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 Configuration



Privacy Zone Setup screen



Live View screen

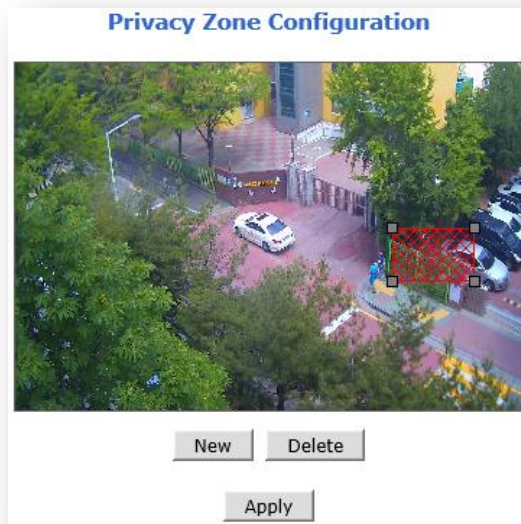
When adding a new privacy area, set as below..

- 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. .



5.6 Serial Ports

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

5.6.1 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 an over speeding car is detected, data can be sent via e-mail or FTP, including images, along with the data received from this device..

Click the Serial Port in the Video & Device menu on the Web Admin page as shown below..

Serial Ports Configuration

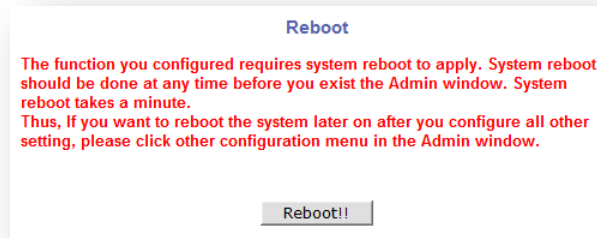
| | | |
|----------|---------|---|
| COM Port | Console | ▼ |
| AUX Port | PTZ | ▼ |

Back Apply

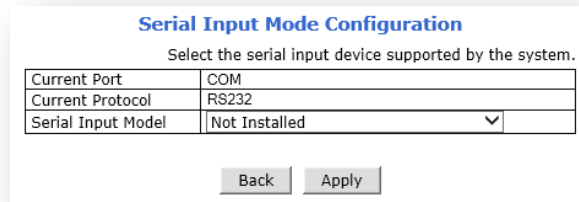
Click a link below to configure additional settings.

| | |
|--------------------|--|
| Serial Input Mode | When COM or AUX port is connected to serial input device. |
| Serial Output Mode | When COM or AUX port is connected to serial output device. |
| Transparent Mode | When COM or AUX port is connected to UART device. |
| PTZ Mode | When COM or AUX port is connected to PTZ devices. |

- 1) Select Serial Input for **COM** or **AUX** port and click **Apply**.
- 2) Click **Reboot** when reboot message appears as shown below.



- 3) When reboot is completed, login to the **Web Admin Page** again.
- 4) Video & Device Configuration -> Serial Ports -> **Serial Input Mode**.



- 5) Select a **Sensor Model** from the Serial Input Model drop down menu.
- 6) Enter the **sensor information** if necessary.
- 7) Click **Apply** to finish.

*Note: For other than listed sensor or input unit, please contact our technical support team.
Integration process may require.*

5.6.2 Serial Output Mode

Specific commands can be sent from FlexWATCH 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.

| Serial Output Mode Configuration | |
|--|---|
| Current Port | None |
| Line Mode | RS-232 ▼ |
| Baud Rate | 38400 ▼ |
| Data Bit | 8 ▼ bit |
| Stop Bit | 1 ▼ bit |
| Parity Bit | None ▼ |
| Mode | <input checked="" type="radio"/> By-Pass <input type="radio"/> X10 <input type="radio"/> Z256 |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | |

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

5.6.3 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)..

| Transparent Mode Configuration | |
|--|---|
| Current Port | None |
| Line Mode | RS-485 ▼ |
| Baud Rate | 9600 ▼ |
| Data Bit | 8 ▼ bit |
| Stop Bit | 1 ▼ bit |
| Parity Bit | None ▼ |
| Network Protocol | UDP ▼ |
| Peer IP | 127.0.0.1 |
| Network Port | 32000 (Default:32000, 10000 ~ 65535) |
| Data Start Pattern | <input type="checkbox"/> <input type="text"/> |
| Data Size | 0 <input type="text"/> |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | |

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)

5.6.4 PTZ Mode

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

| PTZ Mode Configuration | | |
|--|---|--------------------------|
| Current Port | AUX | |
| Dummy Data | <input type="radio"/> On <input checked="" type="radio"/> Off | |
| Current Protocol | RS485 ▼ | |
| Current Baudrate | 9600 ▼ | |
| PTZ Model | Built-in PTZ ▼ | |
| Base Address | PTZ Install Flag | |
| | Ch 1 | Ch 2 |
| 0 (0~255) | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | | |

To configure **Serial Input Mode**, please follow the steps below:

- 1) Select connection type from the **Current Protocol** drop down menu.
- 2) Select connection speed from the **Current Baud rate** drop down menu.
- 3) Select PTZ protocol from the **PTZ Model** drop down menu.
- 4) Enter **Base Address** to assign PTZ ID to the camera channels
ID number for each channel will be assigned by sum of base address and channel number..
- 5) Check the desired **channel number(s)** to connect with PTZ. Click **Apply**.

Note: Protocol (PTZ Model), Baudrate, ID number must be matched on both PTZ and FlexWATCH® device.

FlexWATCH® Supports 58 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 : Spectra Dome | Pelco-D-AUX : Cynix |

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

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

| DI(Sensor Input) / DO(Alarm Output) Setup | | |
|---|-------------------|-------------------|
| No | Sensor Input Name | Alarm Output Name |
| 1 | Di 1 | Do 1 |

| No | Sensor Input Type | Alarm Output Type |
|----|---|---|
| 1 | <input type="radio"/> Normal Open <input checked="" type="radio"/> Normal Close | <input checked="" type="radio"/> Normal Open <input type="radio"/> Normal Close |

- 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.

5.8 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.

| DO(Alarm Output) Control | |
|------------------------------|--|
| DO(Alarm Output) Port Number | On / Off |
| 1 | <input type="button" value="On"/> <input type="button" value="Off"/> |

| DI(Sensor Input) Status | |
|------------------------------|-------------------------------------|
| DI(Sensor Input) Port Number | 1 |
| Check (On) | <input checked="" type="checkbox"/> |

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.

5.9 Edgehandler Adpater (EHA200 / EHA300)

This is a description of Edgehandler Adapter products (EHA200 / EHA 300) . You can set and / or check the HDMI resolution connected to the adapter or set the mouse action..

In case of EHA300 model, you can upload or download files after inserting Micro SD card.

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



EHA200



EHA300

5.9.1 HDMI Resolution (EHA300 / EHA200 same)

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.

| HDMI Resolution | |
|--------------------------|--------------------|
| HDMI Input Resolution | ▼ 1920x1080p 60fps |
| Apply | |
| Detected HDMI Resolution | 1920x1080 |
| Back Detect | |

- 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.

5.9.2 USB Refresh (EHA200)

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.

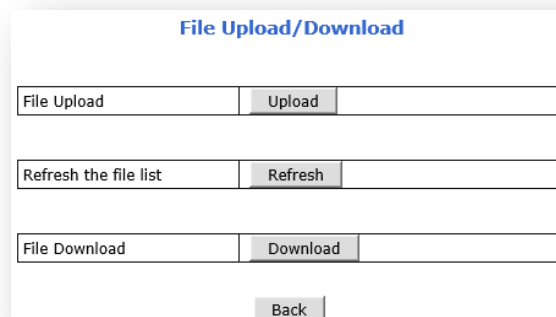


5.9.3 File Upload / Download (EHA300)

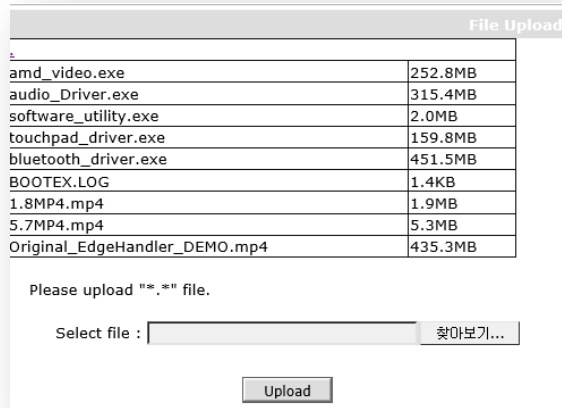
You can upload or download files using the Micro SD inserted in the adapter (EHA300).

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.



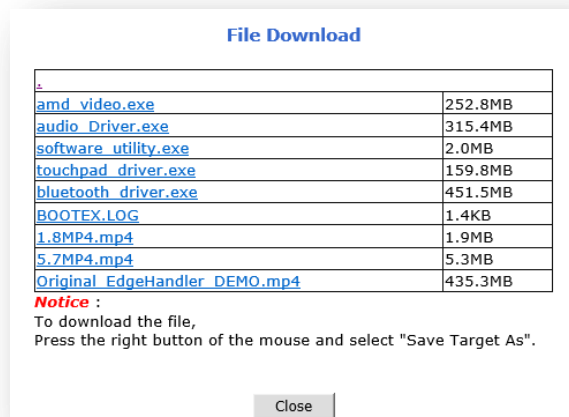
If there is a file that has been uploaded in advance, it is displayed. After selecting the desired file using the Browse button, click the Upload button to complete the upload.

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..

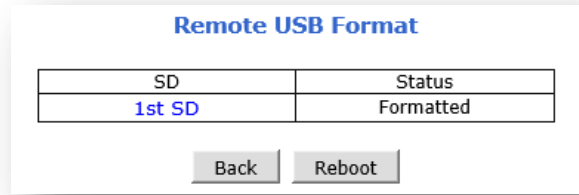
3) File Download : Download the file saved in Micro SD to PC(NVR).

Click the Download button to see the list of saved files. Click on the file to download it.

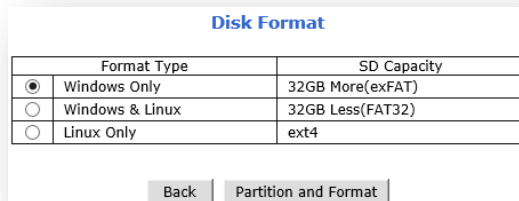


5.9.4 Remote USB Format (EHA300)

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.

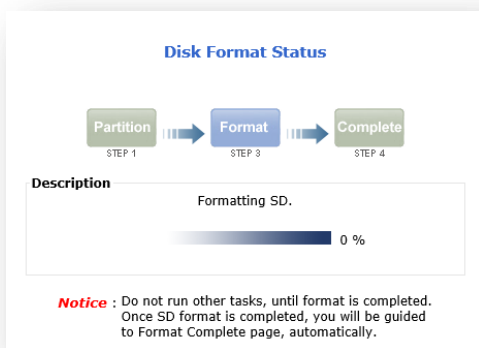


2) Select the file system to format.

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.



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.

5.9.5 Remote USB Information (EHA300)

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.)

| Remote USB Information | |
|------------------------|----------------------------|
| File System | FAT32 (Windows Compatible) |
| Total Disk Size | 7.27 GB |
| Free Disk Size | 4.62 GB |
| Usage | 36.51 % |
| Oldest Image | -None- |
| Last Image | -None- |

5.9.6 USB Config (EHA300 / EHA200)

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.

| Mouse Config | |
|--------------------|--|
| Mode | <input checked="" type="radio"/> Compatibility Enhanced <input type="radio"/> Precision Improved |
| Auto Calibration | <input checked="" type="radio"/> Disable <input type="radio"/> Enable |
| Expiration Minutes | None ▼ |

- 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..

6. 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.).

6.1 Disk Setting

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..*

6.1.1 Disk Status & Format

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.

Disk Status & Format (Normal)

| SD | Status |
|--------|--------|
| 1st SD | No SD |

No SD

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

Disk Status & Format (Normal)

| SD | Status |
|------------------------|-------------|
| 1st SD | Unformatted |

Unformatted

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

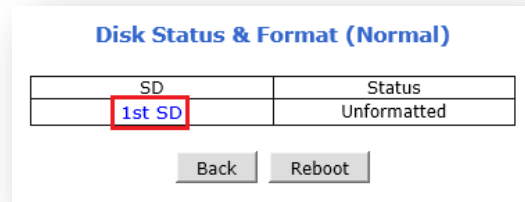
Disk Status & Format (Normal)

| SD | Status |
|------------------------|-----------|
| 1st SD | Formatted |

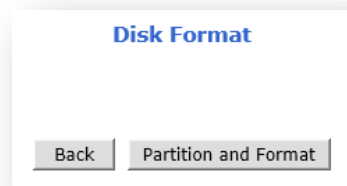
Formatted

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

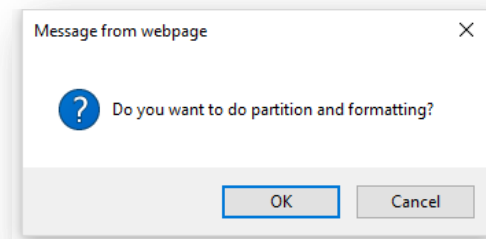
- 1) Select desired Micro SD card to format. (1st SD)



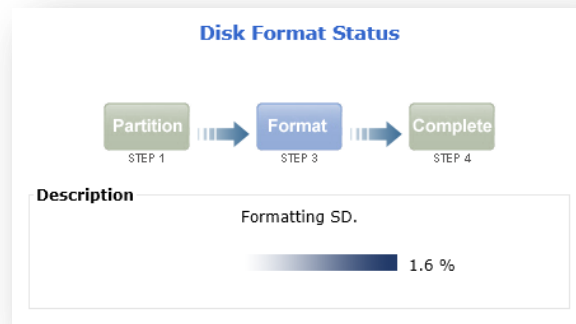
- 2) Click Partition and Format button



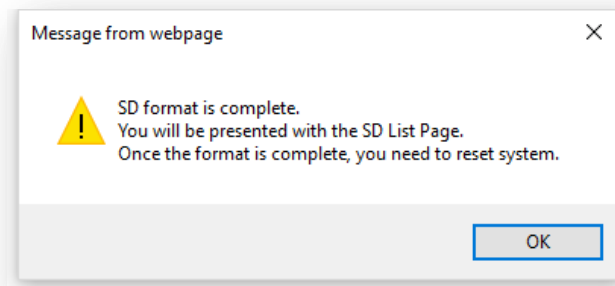
- 3) Click **OK** to continue when confirmation window appears.



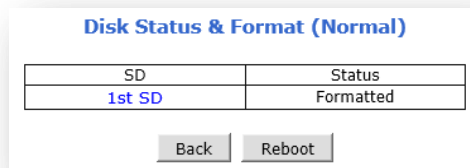
Note: Do not leave HDD format Status page during the formatting. If an abnormal termination is happened during the formatting process, it is possible for SD card to be defected. Make sure to complete the process properly



- 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.

6.1.2 Disk Information

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

| Disk Information | |
|------------------|--|
| File System | ext4 |
| Total Disk Size | 118.59 GB |
| Free Disk Size | 118.33 GB |
| Usage | 0.22 % |
| Oldest Image | Wed May 27 16:31:06 2020 (2020/ 5/27 07:31:06 UTC) |
| Last Image | Thu Jun 4 16:52:09 2020 (2020/ 6/ 4 07:52:09 UTC) |

[Detail Stored Image Information](#)

- **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

| Detail Stored Image Information | | |
|---------------------------------|---|--|
| File | Start Time | End Time |
| /mnt/C/fimage/fi_0000.fjp | Wed May 27 16:31:06 2020 (2020/ 5/27 07:31:06 UTC) | Thu Jun 4 16:59:59 2020 (2020/ 6/ 4 07:59:59 UTC) |

6.1.3 Disk Circulation

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

Disk Circulation

Circulation

Restrict Duration

Days (Default:90, 1 ~ 3650)

Pause at full

- **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.

6.1.4 Disk 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.

| Disk Status Report | |
|--|--|
| Disk Full Notification | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Periodic Notification | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Day | SUN <input type="checkbox"/> MON <input type="checkbox"/> TUE <input type="checkbox"/> WED <input type="checkbox"/> THU <input type="checkbox"/> FRI <input type="checkbox"/> SAT <input type="checkbox"/> |
| Time (hh:mm) | 00 : 00 |
| SD Error Notification | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| SMTP Server | <input type="text"/> |
| Security Type | None ▾ |
| Server Port | 25 |
| User ID | <input type="text"/> |
| Password | <input type="text"/> |
| Sender | <input type="text"/> |
| 1st Recipient | <input type="text"/> |
| 2nd Recipient | <input type="text"/> |
| 3rd Recipient | <input type="text"/> |
| ===== User-Defined Message ===== | |
| <input type="text"/> | |
| <input type="text"/> | |
| <input type="text"/> | |
| <input type="text"/> | |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | |

- 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.

6.2 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..

Recording Setting

Click a camera name to configure the recording conditions.

| Recording Setting | | | | | | |
|---------------------------|-------------------|-------------------|------|----------|----------------------------------|--------------|
| VS Module ID (IP Devices) | Name | IP Address | Port | Vendor | Camera Name | REC. Config. |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Primary Stream | Disable |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Secondary Stream | Disable |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Tertiary Stream | Disable |

Recording

For recording setting, set as below steps.

- 1) Select the channel (Stream) which you want to setup the recording

Recording Setting

Click a camera name to configure the recording conditions.

| Recording Setting | | | | | | |
|---------------------------|-------------------|-------------------|------|----------|----------------------------------|--------------|
| VS Module ID (IP Devices) | Name | IP Address | Port | Vendor | Camera Name | REC. Config. |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Primary Stream | Disable |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Secondary Stream | Disable |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Tertiary Stream | Disable |

Recording

- 2) Condition setup menu appears as per below.

Recording Setting (VS Module ID 0, Camera 1)

» Display current recording settings
Click a link below to configure the recording conditions

i)

| | |
|---------------|------------|
| » Condition 1 | [Not Used] |
| » Condition 2 | [Not Used] |
| » Condition 3 | [Not Used] |
| » Condition 4 | [Not Used] |

ii)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Sun | | | | | | | | | | | | | | | | | | | | | | | | |
| Mon | | | | | | | | | | | | | | | | | | | | | | | | |
| Tue | | | | | | | | | | | | | | | | | | | | | | | | |
| Wed | | | | | | | | | | | | | | | | | | | | | | | | |
| Thu | | | | | | | | | | | | | | | | | | | | | | | | |
| Fri | | | | | | | | | | | | | | | | | | | | | | | | |
| Sat | | | | | | | | | | | | | | | | | | | | | | | | |

iii)

| | | | | | | | | | |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Motion Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Camera Disconnected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Common Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | External Input Data | <input type="checkbox"/> | | | |

Always Schedule Schedule and Event

iv)

| | | | |
|-------------------|---|-------------------|---------|
| Recording Service | <input checked="" type="radio"/> Enable <input type="radio"/> Disable | | |
| Server Module ID | 0 | Camera Number | 1 |
| Camera Name | Primary Stream | | |
| Pre-Alarm Images | 0 | Post-Alarm Images | 0 |
| Pre-Alarm Speed | fastest | Post-Alarm Speed | fastest |
| I Frame Recording | <input type="radio"/> On <input checked="" type="radio"/> Off | | |

Back Save

- i) Set the recording condition. Up to 4 recording conditions can be set
- ii) Displayed in different colors depending on each setting (Always, Schedule Only, Schedule and Event)



iii) If recording by Event is set, a check mark is displayed in the box..

iv) Supports recording service and other settings.

-**Recording Service** : Set up recording service. Even if the condition is set, it is not recorded if the Recording Service is disabled. (The default setting is Enable.)

-**Server Module ID, Camera Number** : Displays Module ID and Camera number. Cannot be changed by user

-**Camera Name** : Displays camera name. (change of camera name cannot be available in this menu.)

-**Pre-Alarm Images / Post-Alarm Images** : When recording by event is set, This menu is to select how many additional images to be recorded before/after the event occurs. .

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

-**I Frame Recording** : It works only when the codec type is H.264 or H.265. When Event only or Schedule and Event is set, I frame is continuously recorded even if an event does not occur. If only I Frame is saved without an event, the data display does not appear in the Player.

3) Click Condition 1 to setup the recording condition

※Notice

- Each condition operates in OR method.

(Even if only one condition is satisfied, it will be recorded..)

- If multiple conditions are set in each condition, it operates in AND method.

(Recording starts only when all the multiple conditions are satisfied.)

| Condition 1 | | | | |
|--|--|--------------------------|--------------------------|--------------------------|
| Service | Recording | | | |
| Module ID | 0 | | | |
| Camera ID | 1 | | | |
| <input checked="" type="radio"/> Enable <input type="radio"/> Disable | | | | |
| Select Mode | <input checked="" type="radio"/> Always <input type="radio"/> Schedule Only <input type="radio"/> Event Only <input type="radio"/> Schedule and Event | | | |
| Schedule | | | | |
| Sun Mon Tue Wed Thu Fri Sat | | | | |
| <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | | | | |
| <input type="checkbox"/> Time (hh:mm) | XX | : | XX | ~ XX : XX |
| <input type="checkbox"/> Date (mm/dd) | XX | / | XX | ~ XX / XX |
| Event | | | | |
| | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Audio Detection | | | <input type="checkbox"/> | |
| Motion Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Disconnected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| External Input Data | | | <input type="checkbox"/> | |
| <input type="button" value="Back"/> <input type="button" value="Save"/> | | | | |
| <p>Notice : Motion Detection can be set at Video & Device -> Video Streams -> Camera</p> <p>Alarm Sensor can be set at Video & Device -> DI/DO</p> | | | | |

4) Select **Enable** to set the condition.

Enable Disable

5) **Select Moden**

Select Mode

- Always
- Schedule Only
- Event Only
- Schedule and Event

- Always: [Please do not use this mode for Email notification.]
- Schedule Only: [Please do not use this mode for Email notification.]
- Event Only: Send email when selected event occurred
- Schedule and Event: Send email when selected event occurs in specified time

6) Select Schedule Only if you want to set up recording by schedule. If you select Schedule Only, the Schedule menu at the bottom appears. It is recommended to set the day of the week, time or a combination of time and date

(If the day, time, and date are all set, the recording may not be executed if the conditions are not met..)

Select Mode

- Always
- Schedule Only
- Event Only
- Schedule and Event

Schedule

Sun Mon Tue Wed Thu Fri Sat

Week

Time (hh:mm) 09 : 00 ~ 17 : 00

Date (mm/dd) XX / XX ~ XX / XX

7) Select Event only if you want to setup recording by event. If you select Event Only, the event menu at the bottom appears.

Select Mode

- Always
- Schedule Only
- Event Only
- Schedule and Event

| Event | | | | |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Audio Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Motion Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Disconnected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| External Input Data | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- Event conditions are as follows.
 - Alarm Sensor : Recording by Di sensor input.
 - Audio Detection : Recording by Audio detection.
 - Motion Detection : Recording by Motion detection
 - Camera Connected : This menu is used by the video server, and when the camera is connected, recording started (Not used with IP cameras.)
 - Camera Disconnected : This menu is used by the video server, and when the camera is dis-connected, recording started (Not used with IP cameras.)

- External Input Data : Recording by external input such as FES / POS. An additional integration is required to use this condition..

8) Recording by combination of Schedule and Event. When you select the Schedule and Event menu, the Schedule Menu & Event menu appears as shown below. You can set the desired schedule and events in combination.

Select Mode

Always

Schedule Only

Event Only

Schedule and Event

| Schedule | | | | | | |
|--------------------------|--------------------------|---------------------------------|--------------------------|---------------------------------|--------------------------|---------------------------------|
| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Time (hh:mm) | | <input type="text" value="XX"/> | : | <input type="text" value="XX"/> | ~ | <input type="text" value="XX"/> |
| Date (mm/dd) | | <input type="text" value="XX"/> | / | <input type="text" value="XX"/> | ~ | <input type="text" value="XX"/> |

| Event | | | | |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Audio Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Motion Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Disconnected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| External Input Data | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

9) Details of each Condition

- Always : Condition is marked as Always and yellow bar is displayed on the bottom calendar..

| | |
|-------------|------------|
| Condition 1 | [Always] |
| Condition 2 | [Not Used] |
| Condition 3 | [Not Used] |
| Condition 4 | [Not Used] |

| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Sun | | | | | | | | | | | | | | | | | | | | | | | | |
| Mon | | | | | | | | | | | | | | | | | | | | | | | | |
| Tue | | | | | | | | | | | | | | | | | | | | | | | | |
| Wed | | | | | | | | | | | | | | | | | | | | | | | | |
| Thu | | | | | | | | | | | | | | | | | | | | | | | | |
| Fri | | | | | | | | | | | | | | | | | | | | | | | | |
| Sat | | | | | | | | | | | | | | | | | | | | | | | | |

- Schedule : For example, if conditions are set from 9 am to 6 pm on Saturdays and Sundays, [SUN, SAT,][09:00~18:00] is displayed in Condition, and the calendar is displayed in pink as shown below..

| | |
|-------------|-------------------------|
| Condition 1 | [SUN,SAT,][09:00~18:00] |
| Condition 2 | [Not Used] |
| Condition 3 | [Not Used] |
| Condition 4 | [Not Used] |

| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Sun | | | | | | | | | | | | | | | | | | | | | | | | |
| Mon | | | | | | | | | | | | | | | | | | | | | | | | |
| Tue | | | | | | | | | | | | | | | | | | | | | | | | |
| Wed | | | | | | | | | | | | | | | | | | | | | | | | |
| Thu | | | | | | | | | | | | | | | | | | | | | | | | |
| Fri | | | | | | | | | | | | | | | | | | | | | | | | |
| Sat | | | | | | | | | | | | | | | | | | | | | | | | |

- Event : If it is set as an event, the check mark will be displayed as per below. Condition is displayed as follows. [M] for motion detection, [D] for sensor, [cC] for Camera Connected, [dC] for Camera Disconnected, and [FES] for External Input Data. Recording by event does not appear on the calendar and is marked with a check box for each event at the bottom. (The number attached to each event setting is the channel number.)

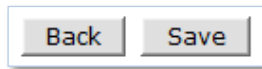
| | |
|-------------|-----------------------|
| Condition 1 | [M1,][D1,][dC1,][FES] |
| Condition 2 | [Not Used] |
| Condition 3 | [Not Used] |
| Condition 4 | [Not Used] |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Sun | | | | | | | | | | | | | | | | | | | | | | | | |
| Mon | | | | | | | | | | | | | | | | | | | | | | | | |
| Tue | | | | | | | | | | | | | | | | | | | | | | | | |
| Wed | | | | | | | | | | | | | | | | | | | | | | | | |
| Thu | | | | | | | | | | | | | | | | | | | | | | | | |
| Fri | | | | | | | | | | | | | | | | | | | | | | | | |
| Sat | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | |
|---------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|---------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 | | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Motion Detection | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Camera Disconnected | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Common Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | External Input Data | | <input checked="" type="checkbox"/> | | |

- Schedule and Event : When Schedule and Event are selected, the setting information appears the same as when Schedule and Event were set. The calendar is displayed in light green.

10) If recording settings are completed, click the Save button at the bottom to save..



11) When the recording setting is completed, the REC Config. of the selected channel is changed to Enable. Click the Apply button to apply the current settings and start recording.

Recording Setting

Click a camera name to configure the recording conditions.

| Recording Setting | | | | | | |
|---------------------------|-------------------|-------------------|------|----------|----------------------------------|--------------|
| VS Module ID (IP Devices) | Name | IP Address | Port | Vendor | Camera Name | REC. Config. |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Primary Stream | Enable |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Secondary Stream | Disable |
| 0 | Built-in Module 0 | Built-in Module 0 | 0 | Not Used | Tertiary Stream | Disable |

12) If you want to setup other channels, repeats all steps again. If the setup is completed, you must click Apply button to apply the recording setting.

6.3 Recording Profile

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

Recording Profile

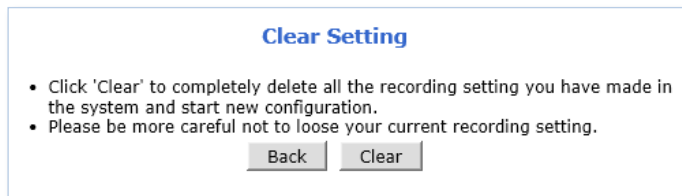
| Server | Camera | REC. Config. | Status | Start Date | | End Date | | Start Time | | End Time | | Week | | | |
|---------------------------------------|------------------|--------------|-------------------------------------|------------|-----|----------|-----|------------|-----|----------|-----|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | | | Month | Day | Month | Day | Hour | Min | Hour | Min | Sun | Mon | Tue | Wed |
| Built-in Module 0 (Built-in Module 0) | Primary Stream | Enable | <input checked="" type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | Secondary Stream | Disable | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | Tertiary Stream | Disable | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | | | <input type="checkbox"/> | XX | XX | XX | XX | XX | XX | XX | XX | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

6.4 Clear Setting

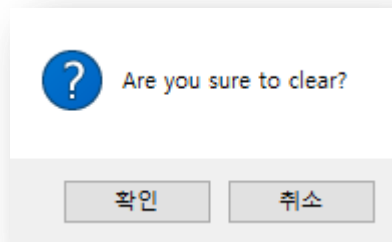
Clear Setting is a menu to initialize the recording settings. Does not affect recorded data.

To clear recording setting

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



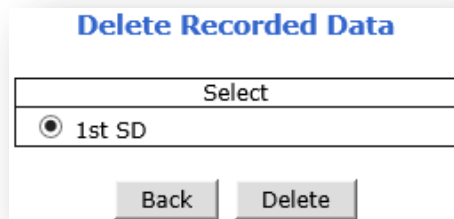
- 2) Click **OK** when confirmation message appears as shown below.



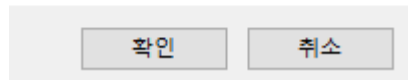
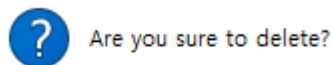
6.5 Delete Recorded Data

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 (1st SD)



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



7. Network

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

Video & Device

Recording

Network

- » IP Address
- » Web Ports
- » RTP/RTSP
- » Network Status
- » DDNS
- » UPnP
- » SNMP
- » IP Filtering
- » Management White List
- » FTP/Telnet Control
- » FCM Push Service
- » ZeroConf
- » Relay Server

System

Advanced

Network

This category shows the detailed method for network system.

| | |
|-------------------------|--|
| » IP Address | Configuration of Network (IP, Netmask, DNS). |
| » Web Ports | Modification of HTTP and other application network port numbers. |
| » RTP/RTSP | Configuration of RTP/RTSP. |
| » Network Status | View of Network Status. |
| » DDNS | Configuration of dynamic IP registration of Network Video System. |
| » UPnP | Configuration of Port Forwarding & UPnP (Universal Plug and Play). |
| » SNMP | Configuration of SNMP. |
| » IP Filtering | Configuration of ip filtering. |
| » Management White List | Configuration of White List. |
| » FTP/Telnet Control | Configuration of FTP/Telnet. |
| » FCM Push Service | Configuration of FCM Push Service. |
| » ZeroConf | Configuration of ZeroConf. |
| » Relay Server | Configuration of Relay Server. |

7.1 IP Address

IP Address

IPv4

| | | |
|------------|--|--|
| Service | <input checked="" type="radio"/> Static <input type="radio"/> DHCP | |
| IP Address | 192.168.225.155 | |
| NetMask | 255.255.0.0 | |
| GateWay | 192.168.0.1 | |
| DNS 1 | 168.126.63.1 | |
| DNS 2 | 168.126.63.2 | |

Wireless (Wi-Fi)

| | | |
|-----------|----------------------|--|
| ESSID | <input type="text"/> | <input type="button" value="Scan AP"/> |
| Auth Mode | Open system ▼ | |

IPv6

| | | |
|-----------------|---|--|
| Service | <input type="radio"/> Static <input checked="" type="radio"/> DHCP <input type="radio"/> None | |
| IP Address | <input type="text"/> (Ex) fec0:1234::abcd:abcd/64 | |
| GateWay | <input type="text"/> (Ex) fec0:1234::abcd:1 | |
| IPv6 Link-Local | fe80::230:6fff:fe20:3d3e/64 | |

7.1.1 IPv4

7.1.1.1 Static

| IP Address | | |
|------------|--|--|
| IPv4 | | |
| Service | <input checked="" type="radio"/> Static <input type="radio"/> DHCP | |
| IP Address | 192.168.225.155 | |
| NetMask | 255.255.0.0 | |
| GateWay | 192.168.0.1 | |
| DNS 1 | 168.126.63.1 | |
| DNS 2 | 168.126.63.2 | |

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.

7.1.1.2 DHCP

| IP Address | | |
|------------|--|--|
| IPv4 | | |
| Service | <input type="radio"/> Static <input checked="" type="radio"/> DHCP | |
| IP Address | 192.168.225.155 | |
| NetMask | 255.255.0.0 | |
| GateWay | 192.168.0.1 | |
| DNS 1 | 168.126.63.1 | |
| DNS 2 | 168.126.63.2 | |

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.

7.1.2 Wireless (Wi-Fi)

| Wireless (Wi-Fi) | |
|------------------|---|
| ESSID | <input type="text"/> <input type="button" value="Scan AP"/> |
| Auth Mode | Open system <input type="button" value="Apply"/> |

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 AP button.
- 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.

7.1.3 IPv6

| IPv6 | |
|-----------------|---|
| Service | <input type="radio"/> Static <input checked="" type="radio"/> DHCP <input type="radio"/> None |
| IP Address | <input type="text"/> Ex) fec0:1234::abcd:abcd/64 |
| GateWay | <input type="text"/> Ex) fec0:1234::abcd:1 |
| IPv6 Link-Local | fe80::230:6fff:fe20:3d3e/64 |

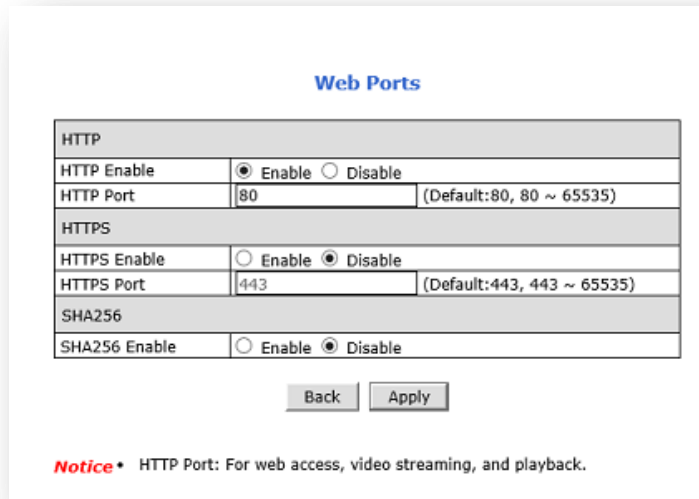
The FlexWATCH® devices support IP version 6 (IPv6).

To use IP version 6, enable the IPv6 service first, and then enter IPv6 IP address and Gateway.

IPv6 can be used simultaneously with IPv4.

7.2 Web Ports

This menu is used for setting of the product's Network Port (HTTP 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. The default value is 80



| Web Ports | |
|---------------|---|
| HTTP | |
| HTTP Enable | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| HTTP Port | <input type="text" value="80"/> (Default:80, 80 ~ 65535) |
| HTTPS | |
| HTTPS Enable | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| HTTPS Port | <input type="text" value="443"/> (Default:443, 443 ~ 65535) |
| SHA256 | |
| SHA256 Enable | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |

Notice • HTTP Port: For web access, video streaming, and playback.

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 . For example, when an IP address of FlexWATCH® camera is 192.168.1.100 and HTTP port / HTTP Port is changed 8080/ 4430, you will have to enter <http://192.168.1.100:8080> or <https://192.168.1.100:4430> at the address bar on your Web browser to connect to camera.

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

7.3 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

RTP/RTSP Setup

| | | |
|--------------------|---|---|
| Service | <input checked="" type="radio"/> Enable <input type="radio"/> Disable | |
| RTSP Port | 554 | (Default:554, 554 ~ 65534) |
| Packet Size | 1 | (Default:1, 1 ~ 12) |
| Keep-Alive | <input checked="" type="radio"/> On <input type="radio"/> Off | |
| RTP Auth Algorithm | <input checked="" type="radio"/> MD5 <input type="radio"/> SHA256 | |
| Camera 1 | Multicast Address | 0.0.0.0 (Disable:0.0.0.0 ~ 225.0.0.0 ~ 239.255.255.255) |
| | Multicast Port | 0 (Disable:0, 2048 ~ 65534) |
| Camera 2 | Multicast Address | 0.0.0.0 (Disable:0.0.0.0 ~ 225.0.0.0 ~ 239.255.255.255) |
| | Multicast Port | 0 (Disable:0, 2048 ~ 65534) |
| Camera 3 | Multicast Address | 0.0.0.0 (Disable:0.0.0.0 ~ 225.0.0.0 ~ 239.255.255.255) |
| | Multicast Port | 0 (Disable:0, 2048 ~ 65534) |

- 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.

7.3.1 RTSP URL

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

- 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

7.4 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..

The screenshot displays the 'Network Status' page with the following sections and values:

| Common Status | |
|----------------|-------------|
| Gateway | 192.168.0.1 |
| Gateway Device | eth0 |
| DNS1 | |
| DNS2 | |

| LAN Status | |
|-------------------------|-----------------------------|
| IP Address | 192.168.225.155 |
| Netmask | 255.255.0.0 |
| MAC Address | 00:30:6F:20:3D:3E |
| IPv6 Link-Local Address | fe80::230:6fff:fe20:3d3e/64 |

| Zeroconf Status | |
|-----------------|----------------|
| IP Address | 169.254.203.57 |

| Wireless LAN Status | |
|---------------------|--------------|
| Connection Status | DISCONNECTED |
| IP Address | |
| Netmask | |

At the bottom of the interface, there are 'Back' and 'Refresh' buttons.

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

7.5 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.

| DDNS Setup | |
|--|--|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| DNS Server IP | <input type="text" value="www.ipcctvdns.com"/> <input type="button" value="Go"/> |
| Mac Address | <input type="text" value=""/> |
| Product-Key | <input type="text" value=""/> |
| IP-CCTV DNS Registration verification | <input type="button" value="Confirm"/> |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | |

- 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.

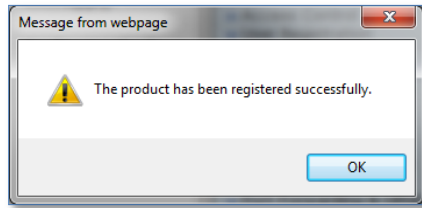
- 3) Click **Sign Up** to create an account if you do not have one
If you have one, proceed from the step 6
- 4) Select "I Agree" and click **Next** as shown below.

- 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.
- Name is the name displayed on DDNS.
 - 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.

| Num | Name | Mac Address | External IP | External Port | Internal IP | Internal Port | DDNS Host Name |
|-----|-------|-------------|----------------|---------------|-----------------|---------------|----------------|
| 1 | test1 | [REDACTED] | [REDACTED] 235 | 9080 | 192.168.225.155 | 80 | fw203d3e |

- 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

| Num | Name | Mac Address | External IP | External Port | Internal IP | Internal Port | DDNS Host Name |
|-----|-------|-------------|----------------|---------------|-----------------|---------------|----------------|
| 1 | test1 | [REDACTED] | [REDACTED] 235 | 9080 | 192.168.225.155 | 80 | fw203d3e |

- ii. Click Edit as shown below.

Product List - Detail Information

| Num | Name | Mac Address | External IP | External Port | Internal IP | Internal Port | Last Refresh Time | IP-sharer model | DDNS Host Name | System Version | Edit | Del |
|-----|-------|--------------|---------------|---------------|-----------------|---------------|-------------------|-----------------|----------------|----------------|------|-----|
| 1 | test1 | 00306F203D3E | 115.93.45.235 | 9080 | 192.168.225.155 | 80 | 2020/6/5 11:58 | Unknown | fw203d3e | 4.48 | Edit | Del |

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

Product Info

Product Information

| | |
|----------------|--------------|
| Name | test1 |
| DDNS Host Name | fw203d3e |
| Mac_address | 00306F203D3E |

Only lowercase letters, arabic number, '-', and '.' can be inputted.)

Apply Back

iv. Enter Host Name and Click Apply

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

Do you really want to apply for the new configuration?

OK Cancel

The product information has been modified successfully.

Prevent this page from creating additional dialogs.

OK

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

Product List

Product List - Simple Information

| Num | Name | Mac Address | External IP | External Port | Internal IP | Internal Port | DDNS Host Name |
|-----|-------|--------------|---------------|---------------|-----------------|---------------|----------------|
| 1 | test1 | 00306F203D3E | 115.93.45.235 | 9080 | 192.168.225.155 | 80 | manual_test |

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.

7.6 UPnP

7.6.1 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 external port number set in Port Forwarding is displayed in the External Port No of IPCCTVDNS..

UPnP

| | | |
|--|---|------|
| Port Forwarding | <input checked="" type="radio"/> Manual : User Assigned port | 9080 |
| | <input type="radio"/> UPnP : User Assigned port | 9080 |
| | <input type="radio"/> UPnP : Auto selected port | |
| Display shortcut Icon in My Network Places | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |

UPnP Status

| | |
|--|---------------------|
| Status | Success |
| External Port No. | 9080 |
| Router Global Address | |
| System's IP address for Local Network Access | http://10.0.0.15:80 |
| System's IP address for Access via Internet | |

- 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.

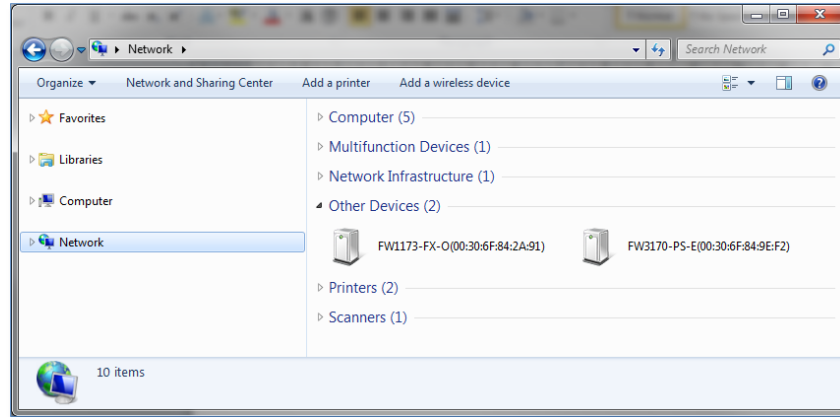
UPnP Status

| | |
|--|---------------------|
| Status | Success |
| External Port No. | 9080 |
| Router Global Address | |
| System's IP address for Local Network Access | http://10.0.0.15:80 |
| System's IP address for Access via Internet | |

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

7.6.2 Display Shortcut Icon in My Network Place

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



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

7.7 SNMP

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

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

To setup SNMP, the below SNMP setup page appears.

| SNMP Setup | |
|--|---|
| SNMP V1/V2 | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Trap | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Destination IP Address | <input type="text"/> |
| Trap Community | <input type="text"/> |
| Available Traps | Cold Start / Authentication Failure |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | |

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.

7.8 IP Filtering

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

IP Filtering

| | |
|----------|---|
| Normal | |
| Service | <input checked="" type="radio"/> All Accept <input type="radio"/> Selected IP Accept <input type="radio"/> Selected IP Deny |
| IP Range | <input type="text"/> ~ <input type="text"/> <input type="button" value="Add"/> |
| IP List | <input type="button" value="Up"/> <input type="button" value="Down"/> <input type="button" value="Delete"/> |
| | |

Notice : When you select Deny policy, your PC IP should NOT be in the IP List.
 When you select Accept policy, your PC IP should Be in the IP List.

- 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.

IP Filtering

| | |
|--|--|
| Normal | |
| Service | <input type="radio"/> All Accept <input checked="" type="radio"/> Selected IP Accept <input type="radio"/> Selected IP Deny |
| IP Range | <input type="text" value="192.168.225.101"/> ~ <input type="text" value="192.168.225.103"/> <input type="button" value="Add"/> |
| IP List | <input type="button" value="Up"/> <input type="button" value="Down"/> <input type="button" value="Delete"/> |
| 192.168.225.1-192.168.225.10 192.168.225.50-192.168.225.50 192.168.225.101-192.168.225.103 | |

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

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

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

| Normal | |
|--|---|
| Service | <input type="radio"/> All Accept <input type="radio"/> Selected IP Accept <input checked="" type="radio"/> Selected IP Deny |
| IP Range | <input type="text" value="192.168.225.1"/> ~ <input type="text" value="192.168.225.10"/> <input type="button" value="Add"/> |
| IP List | <input type="button" value="Up"/> <input type="button" value="Down"/> <input type="button" value="Delete"/> |
| 192.168.225.1-192.168.225.10 192.168.225.50-192.168.225.50 192.168.225.101-192.168.225.103 | |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | |

- 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.

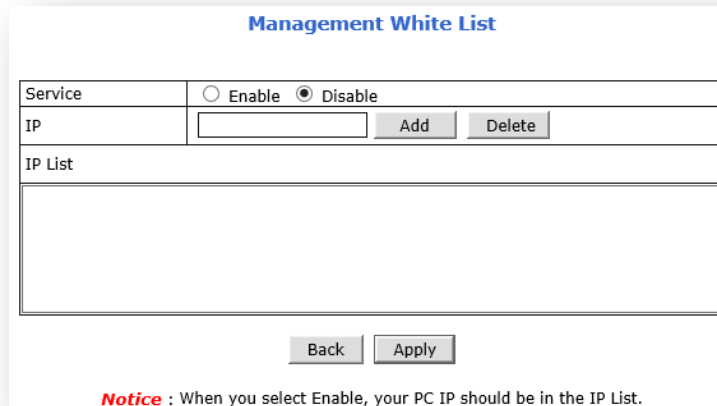
| Normal | |
|--|--|
| Service | <input type="radio"/> All Accept <input type="radio"/> Selected IP Accept <input checked="" type="radio"/> Selected IP Deny |
| IP Range | <input type="text" value="192.168.225.101"/> ~ <input type="text" value="192.168.225.103"/> <input type="button" value="Add"/> |
| IP List | <input type="button" value="Up"/> <input type="button" value="Down"/> <input style="border: 2px solid red;" type="button" value="Delete"/> |
| 192.168.225.50-192.168.225.50 192.168.225.101-192.168.225.103 | |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | |

- To disable IP Filtering function, select All Accept.

7.9 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)..

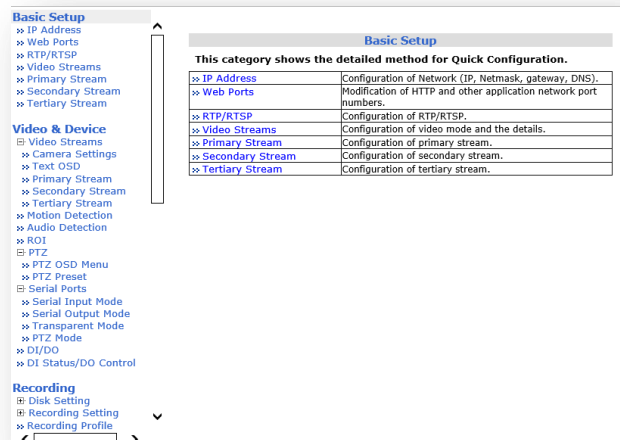


Management White List

| | | |
|---------|---|--|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| IP | <input type="text"/> | <input type="button" value="Add"/> <input type="button" value="Delete"/> |
| IP List | | |

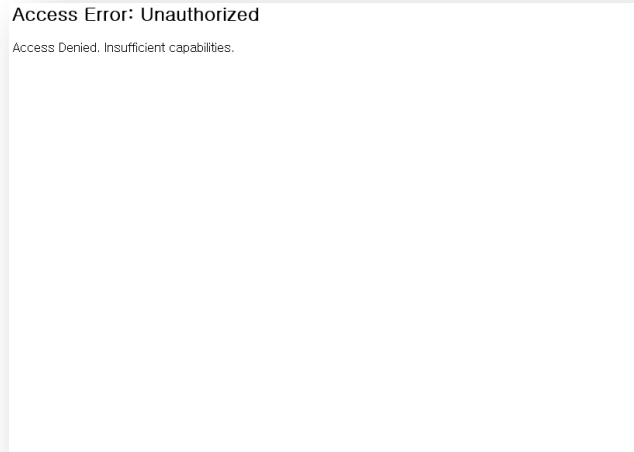
Notice : When you select Enable, your PC IP should be in the IP List.

- 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 버튼 : 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



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

7.10 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/Telnet Server Configuration

| | |
|----------------|---|
| FTP Service | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |
| Telnet Service | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |

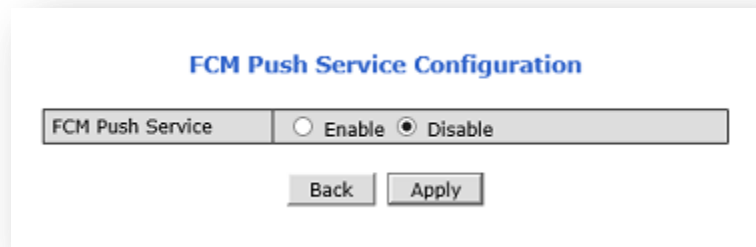
Back

Apply

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

7.11 FCM Push Service

FCM Push Service is used to deliver the push notification function in the FlexWatch Mobile App (app for smartphones). If this is Disabled, IP Camera does not send notifications to the smartphone.



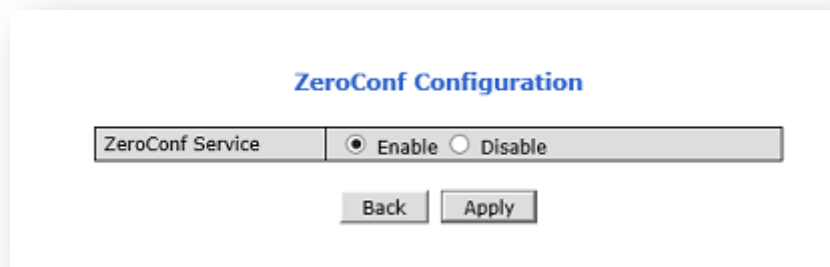
7.12 ZeroConf

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.



7.13 Relay Server

This function is used to connect the PC through the Relay Server, rather than directly connecting it to the camera.

Relay Server must be running to use this function..

Relay Server Configuration

| | |
|---------------|---|
| Relay Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
|---------------|---|

8. System

| System | |
|--|--|
| This category shows the detailed method for System Configuration. | |
| » Name | Configuration of Network Video System name. |
| » Hostname | Configuration of OS Hostname. |
| » Date & Time | Configuration of Network Video System Date & Time. |
| » Admin. Password | Change administrator's password. |
| » Access Level | Configuration to allow other users. |
| » User | Add, Edit, Delete User ID & Password. |
| » Add On Services | Add On Configuration |

8.1 Name

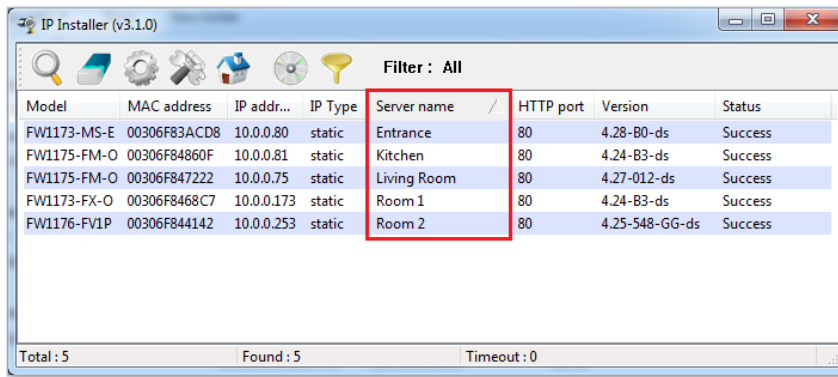
You can setup the camera name, and also you can check the model name, MAC address, firmware version, etc..

Name Setup

| | |
|--------------------|-------------------|
| Product model name | FW7901-PSM |
| Server name | IP System |
| Mac Address (S/N) | 00:30:6F:40:05:B3 |
| Firmware version | 4.48-B0-rp |
| Webimage version | FW |

Notice : The 'Server name' can be 21 alphanumeric or 10 unicode characters.

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



| Model | MAC address | IP addr... | IP Type | Server name | HTTP port | Version | Status |
|-------------|--------------|------------|---------|-------------|-----------|----------------|---------|
| FW1173-MS-E | 00306F83ACD8 | 10.0.0.80 | static | Entrance | 80 | 4.28-B0-ds | Success |
| FW1175-FM-O | 00306F84860F | 10.0.0.81 | static | Kitchen | 80 | 4.24-B3-ds | Success |
| FW1175-FM-O | 00306F847222 | 10.0.0.75 | static | Living Room | 80 | 4.27-012-ds | Success |
| FW1173-FX-O | 00306F8468C7 | 10.0.0.173 | static | Room 1 | 80 | 4.24-B3-ds | Success |
| FW1176-FVIP | 00306F844142 | 10.0.0.253 | static | Room 2 | 80 | 4.25-548-GG-ds | Success |

Total : 5 Found : 5 Timeout : 0

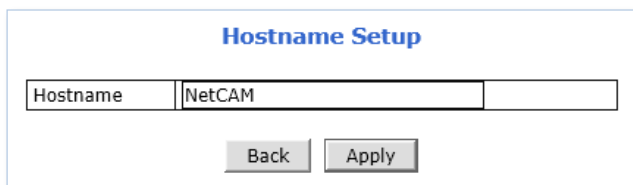
Enter the Server Name and click Apply to apply..

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.

8.2 Hostname

Hostname is a label that is assigned to a device connected to a network and that is used to identify the device in network communication such as email, telnet

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



Hostname Setup

Hostname

8.3 Date & Time

Applying the correct date and time is strongly recommended to avoid any confusion or errors caused by time difference between the FlexWATCH® device and client (remote access) PC

Click Date & Time then Local Date & Time Configuration Menu appears as shown below. You can setup the server's Date and Time information. After changing the date and time, click the Apply button to apply it directly to the system. In addition to this method, you can also synchronize the time using the Internet.

Local Date & Time Configuration

| | |
|----------------------|---|
| Date (yyyy/mm/dd) | 2020 / 6 / 5 |
| Time (hh:mm:ss) | 13 : 54 : 54 |
| Time Zone | <input type="checkbox"/> Change Time Zone Asia/Seoul |
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| NTP server address | pool.ntp.org |
| Period | 86400 Sec (Default:86400, 600~86400) |
| NTP sever time | Get NTP server time |

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

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

■ **When changing Date & Time manually**

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

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

- 1) Click Change Time Zone and select the correct Time Zone.
 - Default setting is Asia/Seoul.
 - If the Time Zone setting has been changed, must reboot the camera. (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.

8.4 Admin. Password

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

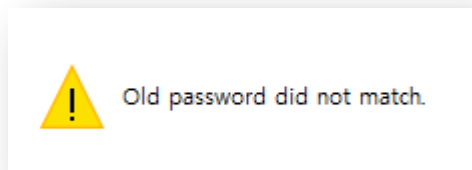
Administrator's password should be changed occasionally to secure the FlexWATCH® device

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

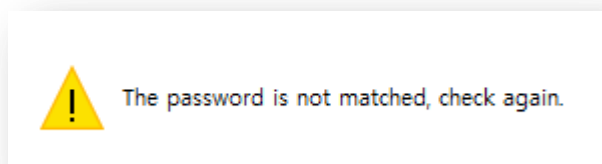
| Administrator's Password Configuration | |
|--|--------------------------|
| Administrator's ID | root |
| Old Password | <input type="password"/> |
| New Password | <input type="password"/> |
| Confirm Password | <input type="password"/> |
| <input type="button" value="Back"/> <input type="button" value="Apply"/> | |

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 =_ . ! @#\$%^&+=|.*

8.5 Access Level

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

Access permission

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

Authentication

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

8.6 User

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

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

User Registration (Add)

Add Edit Delete

| | |
|------------------|---------------------------|
| User ID | <input type="text"/> |
| Role | User <input type="text"/> |
| Password | <input type="text"/> |
| Confirm password | <input type="text"/> |
| Name | <input type="text"/> |

Notice : User ID must be within 23 alphanumeric characters, Password must be alphanumeric or special characters.
special character = -_!@#~%^&*+=|

| System Resource Access Permission | | | | | | |
|--|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="radio"/> All Channels Access | | | | | | |
| <input checked="" type="radio"/> General Access (only live viewing access) | | | | | | |
| <input type="radio"/> No Access | | | | | | |
| <input type="radio"/> Selective Access | | | | | | |
| Enable | VS Module ID | Camera No. | Alarm Control | PTZ Control | Audio Control | Playback |
| <input type="checkbox"/> | Built-in Module 0 <input type="text"/> | All <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 <input type="text"/> | All <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 <input type="text"/> | All <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 <input type="text"/> | All <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 <input type="text"/> | All <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 <input type="text"/> | All <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 <input type="text"/> | All <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 <input type="text"/> | All <input type="text"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Back Apply

8.6.1 Add

To add a new user, follow the below steps.

User Registration (Add)

Add Edit Delete

| | |
|------------------|---------------------------|
| User ID | <input type="text"/> |
| Role | User <input type="text"/> |
| Password | <input type="text"/> |
| Confirm password | <input type="text"/> |
| Name | <input type="text"/> |

- 1) Select Add.
- 2) Enter the new User ID you 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 Permission sets 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..

| System Resource Access Permission | | | | | | |
|---|-------------------|------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input checked="" type="radio"/> All Channels Access | | | | | | |
| <input type="radio"/> General Access (only live viewing access) | | | | | | |
| <input type="radio"/> No Access | | | | | | |
| <input type="radio"/> Selective Access | | | | | | |
| Enable | VS Module ID | Camera No. | Alarm Control | PTZ Control | Audio Control | Play back |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Back Apply

- **All Channels Access:** The user has authority to access all channels and features
- **General Access (only live viewing access):** Live monitoring is allowed only to the user
- **No Access:** The user is not permitted to access the device at all
- **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.

| System Resource Access Permission | | | | | | |
|---|-------------------|------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| <input type="radio"/> All Channels Access | | | | | | |
| <input type="radio"/> General Access (only live viewing access) | | | | | | |
| <input type="radio"/> No Access | | | | | | |
| <input checked="" type="radio"/> Selective Access | | | | | | |
| Enable | VS Module ID | Camera No. | Alarm Control | PTZ Control | Audio Control | Play back |
| <input checked="" type="checkbox"/> | Built-in Module 0 | 1 | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | Built-in Module 0 | All | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- 4) Select VS Module ID : The camera is fixed at Bulit-in Module 0. It is impossible to change.
- 5) Camera No. : Select a channel to allow. Select All to allow all channels.
- 6) Alarm Control : Allows DO control authority.
- 7) PTZ Control : Allows PTZ control authority.
- 8) Audio Control : Allows Audio control authority.
- 9) Playback : Allows Playback control authority
- 10) After setting is complete, click the Apply button to apply..

8.6.2 Edit

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

| User Registration (Edit) | |
|--|--------------------------|
| Add <input type="radio"/> Edit <input checked="" type="radio"/> Delete <input type="radio"/> | |
| User ID | Select UserId |
| Role | manager test test1 |
| Password | test1 |
| Confirm password | |
| Name | |

- 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.

8.6.3 Delete

This is a function to delete a registered account.

| User Registration (Delete) | |
|--|--|
| Add <input type="radio"/> Edit <input type="radio"/> Delete <input checked="" type="radio"/> | |
| UserID (GroupID) | |
| manager test test1 ----- | |
| <input type="button" value="Back"/> <input type="button" value="Delete"/> | |

- 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.

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 MJPEG as shown below.

| | | |
|------------------|-------------------|---|
| Primary Stream | Frame Rate | 30 fps |
| | Image Size | 1920 x 1080 |
| | Encoding Standard | <input checked="" type="radio"/> M-JPEG <input type="radio"/> H.264 |
| | Audio | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Secondary Stream | Frame Rate | 30 fps |
| | Image Size | 720 x 480 |
| | Encoding Standard | <input type="radio"/> M-JPEG <input checked="" type="radio"/> H.264 |
| | Audio | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Tertiary Stream | Frame Rate | 30 fps |
| | Image Size | 320 x 240 |
| | Encoding Standard | <input type="radio"/> M-JPEG <input checked="" type="radio"/> H.264 |
| | Audio | <input checked="" type="radio"/> Enable <input type="radio"/> Disable |

9.1 Advanced Services

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

Advanced Services

Total pre-alarm buffer size : 800 kb
Current used buffer size : 0 frames

| | Ch 1 | Ch 2 | Ch 3 | Sum |
|-----------------------|-------------|-------------|-------------|-----|
| Pre-Alarm Buffer Size | 0 (frames) | 0 (frames) | 0 (frames) | 0 |
| Pre-Alarm Speed | Select Spei | Select Spei | Select Spei | |

- **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 channel can be set with different values.

9.1.1 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 MJPEG

E-mail Service Configuration

Click a link below to configure E-mail services for each camera.

| | |
|----------------------------|----------------------------|
| » Camera 1 | » Camera 2 |
| » Camera 3 | |

| | | |
|----------------------|---|-------------------------|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| SMTP server address | | |
| SMTP Port | 25 | (Default:25, 0 ~ 65535) |
| Authentication Login | No Authentication | |
| Char Set | US-ASCII (English) | |
| User ID | | |
| Password | | |
| Sender | | |
| 1st Recipient | | |
| 2nd Recipient | | |
| 3rd Recipient | | |

To use E-mail notification service, follow the steps below.

- 1) Click a **desired channel** for the email notification service.

E-mail Service Configuration

Click a link below to configure E-mail services for each camera.

| | |
|----------------------------|----------------------------|
| » Camera 1 | » Camera 2 |
| » Camera 3 | |

| | | |
|----------------------|---|-------------------------|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| SMTP server address | | |
| SMTP Port | 25 | (Default:25, 0 ~ 65535) |
| Authentication Login | No Authentication | |
| Char Set | US-ASCII (English) | |
| User ID | | |
| Password | | |
| Sender | | |
| 1st Recipient | | |
| 2nd Recipient | | |
| 3rd Recipient | | |

- 2) Click the Condition 1 [Not Used] (Multiple conditions can be combined and used.)

E-mail Service Configuration at Camera 1

Please click below link to configure the service condition.

| |
|--|
| » Condition 1 [Not Used] |
| » Condition 2 [Not Used] |
| » Condition 3 [Not Used] |

Maximum 10 pre-post alarm images can be transmitted.

| | | |
|-----------------------|------------------------------|--------------------------------------|
| Pre-Alarm Buffer Size | 0 (frames) | » Check video buffer |
| Pre-Alarm Images | 0 | Post-Alarm Images 0 |
| Pre-Alarm Speed | Select Speed | Post-Alarm Speed Select Speed |
| Subject | Message From IP Device![0,0] | |

[?](#)

| Message | | Value Format | | | | | |
|---------|--|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | NONE | INT | HEX | BIN | IPA | EVT |
| 1 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3) Select Enable when setup page appears.

Enable Disable

4) Select **Mode**

Select Mode

- Always
- Schedule Only
- Event Only
- Schedule and Event

- Always: [Not used in Email notifications.]
- Schedule Only: [Not used in Email notifications.]
- Event Only: Send e-mail when the selected event occurs.
- Schedule and Event: Send e-mail when selected event occurs at specified time.

5) The schedule setting menu is as follows..

* It is recommended to avoid the combination of Day+Time+Date(mm/dd). This is because it does not work if the day and month/day do not match.

*Recommend to select Day+Time or Time +Date only.

| Schedule | | | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| Week | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Time (hh:mm) | 09 : 00 | | ~ 17 | | : 00 | | |
| <input type="checkbox"/> Date (mm/dd) | XX | / | XX | ~ | XX | / | XX |

6) Selection of **Event Type**

| Event | | | | |
|---------------------|------------------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Audio Detection | | | <input type="checkbox"/> | |
| Motion Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| External Input Data | | | <input type="checkbox"/> | |
| Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Disconnected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Boot Finished | <input type="checkbox"/> Enabled | | | |
| Serial Input | <input type="checkbox"/> Activated | | | |

- Event will be triggered by the followings.
 - Alarm Sensor (Alarm Input) : DI Sensor
 - Audio Detection
 - Motion Detection
 - External Input Data
 - Camera Connection : This Menu is not used for Camera
 - Connected : When camera is connected
 - Disconnected : when camera is not connected

- Boot Finished :
 - Serial Input :
- 7) Click **Save**.
 - 8) When the setting is completed, the set information appears as shown below..

E-mail Service Configuration at Camera 1

Please click [below link to configure the service condition](#)

| | |
|-------------|--|
| Condition 1 | [MON,TUE,WED,THU,FRI][09:00~17:00] [M1][cC1][] |
| Condition 2 | [SUN,SAT][08:00~22:00] [M1][] |
| Condition 3 | [Not Used] |

Maximum 10 pre-post alarm images can be transmitted.

| | | |
|-----------------------|------------------------------|--------------------|
| Pre-Alarm Buffer Size | 0 (frames) | Check video buffer |
| Pre-Alarm Images | 0 | Post-Alarm Images |
| Pre-Alarm Speed | Select Speed | Post-Alarm Speed |
| Subject | Message From IP Device![0,0] | |

| | Message | Value Format | | | | | |
|---|---------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | NONE | INT | HEX | BIN | IPA | EVT |
| 1 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- 9) Select number of **image frames** for Pre and Post Alarm Images, and its **speed**.
- 10) Enter **subject** of the email.
- 11) Enter **Messages** (Contents of the email).
- 12) Click **Save**.

- 13) Enable E-mail Service when the below E-mail Service Configuration screen appears.

E-mail Service Configuration

Please click the below link to configure E-mail service for each camera.

| | |
|------------|------------|
| » Camera 1 | » Camera 2 |
|------------|------------|

| | | |
|----------------------|---|--------------------------|
| Service | <input checked="" type="radio"/> Enable <input type="radio"/> Disable | |
| SMTP server address | smtp.google.com | |
| SMTP Port | 587 | (Default: 25, 0 ~ 65535) |
| Authentication Login | Authentication + TLS | ▼ |
| Char Set | US-ASCII (English) | ▼ |
| User ID | flexwatch@gmail.com | |
| Password | ••••• | |
| Sender | flexwatch@gmail.com | |
| 1st Recipient | test1@gmail.com | |
| 2nd Recipient | test2@yahoo.com | |
| 3rd Recipient | test3@live.com | |

- 14) Enter SMTP server address.
- 15) Enter SMTP Port number.
- 16) Select Authentication Login type.
- 17) Select Language for Character sets.
- ◆ If the email message is in Korean, set it to EUC-KR (Korean)..
- 18) Enter User ID : Must be SMTP account.
- 19) Enter Password : Must be SMTP account.
- 20) Sender : Enter sender's e-mail address. Must be SMTP account.
- 21) 1st, 2nd, 3rd Recipients : Enter the receiver's E-mail address.
- 22) Click Save.

23) When the following page appears, enter the Pre-Alarm buffer frame..

Advanced Services

Total pre-alarm buffer size : 800 kb
Current used buffer size : 0 frames

| | Ch 1 | Ch 2 | Ch 3 | Sum |
|-----------------------|---------------|---------------|---------------|-----|
| Pre-Alarm Buffer Size | 0 (frames) | 0 (frames) | 0 (frames) | 0 |
| Pre-Alarm Speed | Select Spe: ▾ | Select Spe: ▾ | Select Spe: ▾ | |

Notice : The 'Pre-Alarm Buffer Size' value for each camera will be applied to the 'E-mail' and 'FTP (Buffered)' services.
Click the "Save" button to apply the new settings.

| | |
|-----------------------|--|
| » E-mail | Configuration of E-mail service to send pre-post alarm images. |
| » FTP(Buffered) | Configuration of ftp service to send pre-post alarm images. |
| » FTP(Periodic) | Configuration of ftp service to send recent images periodically according to service conditions. |
| » Sensor Notification | Configuration to notify sensor status to predefined IP address. |
| » Alarm Output | Configuration of alarm output duration according to service conditions. |

| | | |
|--------|--------------|-------------------------------------|
| Status | Start | <input type="button" value="Stop"/> |
|--------|--------------|-------------------------------------|

24) Select Pre-Alarm Speed.

25) Click Save.

26) Click Apply.

Advanced Services

Total pre-alarm buffer size : 800 kb
Current used buffer size : 0 frames

| | Ch 1 | Ch 2 | Ch 3 | Sum |
|-----------------------|---------------|---------------|---------------|-----|
| Pre-Alarm Buffer Size | 0 (frames) | 0 (frames) | 0 (frames) | 0 |
| Pre-Alarm Speed | Select Spe: ▾ | Select Spe: ▾ | Select Spe: ▾ | |

Notice : The 'Pre-Alarm Buffer Size' value for each camera will be applied to the 'E-mail' and 'FTP (Buffered)' services.
Click the "Save" button to apply the new settings.

| | |
|-----------------------|--|
| » E-mail | Configuration of E-mail service to send pre-post alarm images. |
| » FTP(Buffered) | Configuration of ftp service to send pre-post alarm images. |
| » FTP(Periodic) | Configuration of ftp service to send recent images periodically according to service conditions. |
| » Sensor Notification | Configuration to notify sensor status to predefined IP address. |
| » Alarm Output | Configuration of alarm output duration according to service conditions. |

| | | |
|--------|--------------|-------------------------------------|
| Status | Start | <input type="button" value="Stop"/> |
|--------|--------------|-------------------------------------|

When the setting is completed as above, an email is sent whenever the conditions of the event are satisfied.

When the condition is changed, the changed value is applied only when you click the Apply button as in 26).

9.1.2 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.

To use the FTP (Buffered) service, set as follows.

- 1) Select a channel for the FTP buffer service.

FTP(Buffered) Service Configuration

Please click the below link to configure FTP(Buffered) service for each camera.

| | |
|----------------------------|----------------------------|
| » Camera 1 | » Camera 2 |
| » Camera 3 | |

| | | |
|-----------------------|---|-------------------------|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| Server Address | <input type="text"/> | |
| Base Directory Name | <input type="text"/> | |
| Base File Name | <input type="text"/> | |
| User ID | <input type="text"/> | |
| Password | <input type="text"/> | |
| FTP Control Port | <input type="text" value="0"/> | (Default:21, 0 ~ 65535) |
| Date Description Mode | American Style <input type="button" value="v"/> | |
| Connection Mode | <input checked="" type="radio"/> Active <input type="radio"/> Passive | |

| Option | Directory Name | File Name |
|---------------|--------------------------|--------------------------|
| Server Name | <input type="checkbox"/> | <input type="checkbox"/> |
| Weekday | <input type="checkbox"/> | <input type="checkbox"/> |
| Year | <input type="checkbox"/> | <input type="checkbox"/> |
| Month | <input type="checkbox"/> | <input type="checkbox"/> |
| Day | <input type="checkbox"/> | <input type="checkbox"/> |
| Hour | <input type="checkbox"/> | <input type="checkbox"/> |
| Minute | | <input type="checkbox"/> |
| Sec | | <input type="checkbox"/> |
| Sequence | | <input type="checkbox"/> |
| Camera Number | <input type="checkbox"/> | <input type="checkbox"/> |

Notice : This service is valid for M-JPEG only.
If the value of the 'FTP Control Port' is 0, it will be set via system configuration.
The following are values of 'Date Description Mode'.
American Style -> Feb28th2009
European Style -> 28thFeb2009
ISO Standard -> 20090228

- 2) Select Condition 1. (Multiple conditions are available.)

E-mail Service Configuration at Camera 1

Please click below link to configure the service condition.

| | |
|-------------|------------|
| Condition 1 | [Not Used] |
| Condition 2 | [Not Used] |
| Condition 3 | [Not Used] |

Maximum 10 pre-post alarm images can be transmitted.

| | | |
|-----------------------|------------------------------|--|
| Pre-Alarm Buffer Size | 0 (frames) | <input checked="" type="checkbox"/> Check video buffer |
| Pre-Alarm Images | 0 | Post-Alarm Images 0 |
| Pre-Alarm Speed | Select Speed | Post-Alarm Speed Select Speed |
| Subject | Message From IP Device![0,0] | |

[?](#)

| | Message | Value Format | | | | | |
|---|---------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | NONE | INT | HEX | BIN | IPA | EVT |
| 1 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4 | | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- 3) Select Enable.

Enable
 Disable

- 4) Select **Mode**

Select Mode

- Always
- Schedule Only
- Event Only
- Schedule and Event

- Always: [Please do not use this mode for Email notification.]
- Schedule Only: [Please do not use this mode for Email notification.]
- Event Only: Send email when selected event occurred
- Schedule and Event: Send email when selected event occurs in specified time

- 5) Schedule setup Menu.

* It is recommended to avoid the combination of Day+Time+Date(mm/dd). This is because it does not work if the day and month/day do not match.

*Recommend to select Day+Time or Time +Date only

Schedule

Sun Mon Tue Wed Thu Fri Sat

Week

Time (hh:mm) 09 : 00 ~ 17 : 00

Date (mm/dd) XX / XX ~ XX / XX

6) Selection of **Event Type**

| Event | | | | |
|---------------------|------------------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Audio Detection | | | <input type="checkbox"/> | |
| Motion Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| External Input Data | | | <input type="checkbox"/> | |
| Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Disconnected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Boot Finished | <input type="checkbox"/> Enabled | | | |
| Serial Input | <input type="checkbox"/> Activated | | | |

- Event will be triggered by the followings.
 - Alarm Sensor (Alarm Input) : DI Sensor
 - Audio Detection
 - Motion Detection
 - External Input Data
 - Camera Connection : This Menu is not used for Camera
 - Connected : When camera is connected
 - Disconnected : when camera is not connected
 - Boot Finished :
 - Serial Input :

7) **Click Save.**

8) When the following page appears, enable FTP (Buffered) service.

FTP(Buffered) Service Configuration

Please click the below link to configure FTP(Buffered) service for each camera.

[» Camera 1](#) [» Camera 2](#)
[» Camera 3](#)

| | | |
|-----------------------|---|-------------------------|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| Server Address | <input type="text"/> | |
| Base Directory Name | <input type="text"/> | |
| Base File Name | <input type="text"/> | |
| User ID | <input type="text"/> | |
| Password | <input type="text"/> | |
| FTP Control Port | <input type="text" value="0"/> | (Default:21, 0 ~ 65535) |
| Date Description Mode | American Style <input type="button" value="v"/> | |
| Connection Mode | <input checked="" type="radio"/> Active <input type="radio"/> Passive | |

| Option | Directory Name | File Name |
|---------------|--------------------------|--------------------------|
| Server Name | <input type="checkbox"/> | <input type="checkbox"/> |
| Weekday | <input type="checkbox"/> | <input type="checkbox"/> |
| Year | <input type="checkbox"/> | <input type="checkbox"/> |
| Month | <input type="checkbox"/> | <input type="checkbox"/> |
| Day | <input type="checkbox"/> | <input type="checkbox"/> |
| Hour | <input type="checkbox"/> | <input type="checkbox"/> |
| Minute | | <input type="checkbox"/> |
| Sec | | <input type="checkbox"/> |
| Sequence | | <input type="checkbox"/> |
| Camera Number | <input type="checkbox"/> | <input type="checkbox"/> |

- 9) Server Address : Enter FTP Server address.
- 10) Base Directory Name: Enter the path to the actual directory on the FTP server.)
- 11) Base File Name : This is the name that precedes the file when it is transferred..
- 12) User ID : Enter User ID of FTP Server.
- 13) Password : Enter password of FTP Server.
- 14) FTP Control Port : Enter port number of FTP Server.
- 15) Data Description Mode: Select Data description Mode.
- 16) Connection mode : Set the connection mode for the camera and FTP server to connect..
- 17) Option : This function creates a directory or file name with the name specified for the FTP server to which the file is to be transferred. It operates according to the item checked by the user.
- 18) Click Make Directory to create a directory on the FTP server..
(If no message appears, the directory has been successfully created on the FTP server. If an error message appears, check the setting information again.)
- 19) When settings are complete, click Apply.
- 20) When the following page appears, enter the Pre-Alarm buffer frame..

Advanced Services

Total pre-alarm buffer size : 800 kb
Current used buffer size : 0 frames

| | Ch 1 | Ch 2 | Ch 3 | Sum |
|-----------------------|---------------|---------------|---------------|-----|
| Pre-Alarm Buffer Size | 0 (frames) | 0 (frames) | 0 (frames) | 0 |
| Pre-Alarm Speed | Select Spe: ▾ | Select Spe: ▾ | Select Spe: ▾ | |

Notice : The 'Pre-Alarm Buffer Size' value for each camera will be applied to the 'E-mail' and 'FTP (Buffered)' services.
Click the "Save" button to apply the new settings.

| | |
|-----------------------|--|
| ⌘ E-mail | Configuration of E-mail service to send pre-post alarm images. |
| ⌘ FTP(Buffered) | Configuration of ftp service to send pre-post alarm images. |
| ⌘ FTP(Periodic) | Configuration of ftp service to send recent images periodically according to service conditions. |
| ⌘ Sensor Notification | Configuration to notify sensor status to predefined IP address. |
| ⌘ Alarm Output | Configuration of alarm output duration according to service conditions. |

| | | |
|--------|--------------|-------------------------------------|
| Status | Start | <input type="button" value="Stop"/> |
|--------|--------------|-------------------------------------|

- 21) Select Pre-Alarm Speed.
- 22) Click Save.

23) Click Apply.

Advanced Services

Total pre-alarm buffer size : 800 kb
Current used buffer size : 0 frames

| | Ch 1 | Ch 2 | Ch 3 | Sum |
|-----------------------|---------------|---------------|---------------|-----|
| Pre-Alarm Buffer Size | 0 (frames) | 0 (frames) | 0 (frames) | 0 |
| Pre-Alarm Speed | Select Spe: ▾ | Select Spe: ▾ | Select Spe: ▾ | |

Notice : The 'Pre-Alarm Buffer Size' value for each camera will be applied to the 'E-mail' and 'FTP (Buffered)' services.
Click the "Save" button to apply the new settings.

| | |
|-----------------------|--|
| » E-mail | Configuration of E-mail service to send pre-post alarm images. |
| » FTP(Buffered) | Configuration of ftp service to send pre-post alarm images. |
| » FTP(Periodic) | Configuration of ftp service to send recent images periodically according to service conditions. |
| » Sensor Notification | Configuration to notify sensor status to predefined IP address. |
| » Alarm Output | Configuration of alarm output duration according to service conditions. |

| | | |
|--------|-------|-------------------------------------|
| Status | Start | <input type="button" value="Stop"/> |
|--------|-------|-------------------------------------|

When the setting is completed as above, the file is transferred to the FTP server whenever the conditions of the event are satisfied..

24) When the condition is changed, the changed value is applied only when you click the Apply button as in 23).

9.1.3 FTP (Periodic)

The FTP (Periodic) service is a function used to regularly transfer image data to an FTP server. This function does not work by event. To use this function, the channel to be transmitted must be set to MJPEG.

To use FTP (Periodic) service, set as follows..

- 1) Select a channel for FTP (Periodic) service.

FTP(Periodic) Service Configuration

Click a link below to configure the FTP (Periodic) service for each camera.

[» Camera 1](#) [» Camera 2](#)
[» Camera 3](#)

| | | |
|-----------------------|---|-------------------------|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| Server Address | | |
| Base Directory Name | | |
| Base File Name | | |
| User ID | | |
| Password | | |
| Sequence Modulo | 1 | |
| FTP Control Port | 0 | (Default:21, 0 ~ 65535) |
| Date Description Mode | American Style | |
| Connection Mode | <input checked="" type="radio"/> Active <input type="radio"/> Passive | |

| Option | Directory Name | File Name |
|---------------|--------------------------|--------------------------|
| Overwrite | | <input type="checkbox"/> |
| Server Name | <input type="checkbox"/> | <input type="checkbox"/> |
| Weekday | <input type="checkbox"/> | <input type="checkbox"/> |
| Year | <input type="checkbox"/> | <input type="checkbox"/> |
| Month | <input type="checkbox"/> | <input type="checkbox"/> |
| Day | <input type="checkbox"/> | <input type="checkbox"/> |
| Hour | <input type="checkbox"/> | <input type="checkbox"/> |
| Minute | | <input type="checkbox"/> |
| Sec | | <input type="checkbox"/> |
| Sequence | | <input type="checkbox"/> |
| Camera Number | <input type="checkbox"/> | <input type="checkbox"/> |

Notice : This service is valid for M-JPEG only.
 If the value of the 'FTP Control Port' is 0, it will be set by using the system configuration. It is usually the same as port number 21.
 The following are values of 'Date Description Mode'.
 American Style -> Feb28th2009
 European Style -> 28thFeb2009
 ISO Standard -> 20090228

- 2) Click Condition 1.

FTP (Periodic) Service Configuration for Camera 1

Click a link below to configure the service conditions.

[» Condition 1](#) [Not Used]
[» Condition 2](#) [Not Used]
[» Condition 3](#) [Not Used]

FTP interval (msec) | 0 | msec

Notice : The 'FTP interval' is the time interval between each image upload.
 If you enter a number, the last numeric digit will be truncated to zero.
 For example, if you type 154 or 17, it becomes 150msec and 10msec.
 If the number is lower than 10, the 'FTP Interval' becomes 0 and the FTP service is executed without any time interval.

- 3) When the setting page appears, select Enable.

Enable Disable

4) Select **Mode**

| | |
|-------------|--|
| Select Mode | <input checked="" type="radio"/> Always |
| | <input type="radio"/> Schedule Only |
| | <input type="radio"/> Event Only |
| | <input type="radio"/> Schedule and Event |

- Always : Use it to keep sending regularly.
- Schedule Only : Set when sending regularly within the specified time.
- Event Only : Not used in FTP (Periodic).
- Schedule and Event : Not used in FTP (Periodic).

5) The schedule setting menu is as follows.

* It is recommended to avoid the combination of Day+Time+Date(mm/dd). This is because it does not work if the day and month/day do not match.

*Recommend to select Day+Time or Time +Date only..

| Schedule | | | | | | | |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| Week | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Time (hh:mm) | 09 : 00 | | ~ | 17 : 00 | | | |
| <input type="checkbox"/> Date (mm/dd) | XX / XX | | ~ | XX / XX | | | |

6) When setting is completed, click Save at the bottom..

7) Set the FTP Interval time (msec) to send regularly to FTP.

| FTP (Periodic) Service Configuration for Camera 1 | |
|---|--------------|
| Click a link below to configure the service conditions. | |
| Condition 1 | [Always] |
| Condition 2 | [Not Used] |
| Condition 3 | [Not Used] |
| FTP interval (msec) | 3600000 msec |
| <input type="button" value="Back"/> <input type="button" value="Save"/> | |

The time input unit is msec, which is 1/1000 second..

When 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 60 minutes : 3600000

8) When the time is set, click the Save button.

- 9) Enable FTP(Periodic) service when the following page appears..

FTP(Periodic) Service Configuration

Click a link below to configure the FTP (Periodic) service for each camera.

| | |
|----------------------------|---|
| ↔ Camera 1 | ↔ Camera 2 |
| ↔ Camera 3 | |
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
| Server Address | <input type="text"/> |
| Base Directory Name | <input type="text"/> |
| Base File Name | <input type="text"/> |
| User ID | <input type="text"/> |
| Password | <input type="text"/> |
| Sequence Modulo | <input type="text" value="1"/> |
| FTP Control Port | <input type="text" value="0"/> (Default:21, 0 ~ 65535) |
| Date Description Mode | American Style <input type="text"/> |
| Connection Mode | <input checked="" type="radio"/> Active <input type="radio"/> Passive |

| Option | Directory Name | File Name |
|---------------|--------------------------|--------------------------|
| Overwrite | | <input type="checkbox"/> |
| Server Name | <input type="checkbox"/> | <input type="checkbox"/> |
| Weekday | <input type="checkbox"/> | <input type="checkbox"/> |
| Year | <input type="checkbox"/> | <input type="checkbox"/> |
| Month | <input type="checkbox"/> | <input type="checkbox"/> |
| Day | <input type="checkbox"/> | <input type="checkbox"/> |
| Hour | <input type="checkbox"/> | <input type="checkbox"/> |
| Minute | | <input type="checkbox"/> |
| Sec | | <input type="checkbox"/> |
| Sequence | | <input type="checkbox"/> |
| Camera Number | <input type="checkbox"/> | <input type="checkbox"/> |

Notice : This service is valid for M-JPEG only.
 If the value of the 'FTP Control Port' is 0, it will be set by using the system configuration. It is usually the same as port number 21.
 The following are values of 'Date Description Mode'.
 American Style -> Feb28th2009
 European Style -> 28thFeb2009
 ISO Standard -> 20090228

- 10) Server Address : Enter FTP Server address.
- 11) Base Directory Name: Enter the path to the actual directory on the FTP server.)
- 12) Base File Name : This is the name that precedes the file when it is transferred..
- 13) User ID : Enter User ID of FTP Server.
- 14) Password : Enter password of FTP Server.
- 15) FTP Control Port : Enter port number of FTP Server.
- 16) Data Description Mode: Select Data description Mode.
- 17) Connection mode : Set the connection mode for the camera and FTP server to connect..
- 18) Option : This function creates a directory or file name with the name specified for the FTP server to which the file is to be transferred. It operates according to the item checked.
- 19) Click Make Directory to create a directory on the FTP server..
- (If no message appears, the directory has been successfully created on the FTP server. If an error message appears, check the setting information again.)
- 20) When settings are complete, click Apply.
- 21) When the following page appears, click the Apply button to apply..

Advanced Services

Total pre-alarm buffer size : 800 kb
Current used buffer size : 0 frames

| | Ch 1 | Ch 2 | Ch 3 | Sum |
|-----------------------|---------------|---------------|---------------|-----|
| Pre-Alarm Buffer Size | 0 (frames) | 0 (frames) | 0 (frames) | 0 |
| Pre-Alarm Speed | Select Spe. ▼ | Select Spe. ▼ | Select Spe. ▼ | |

Notice : The 'Pre-Alarm Buffer Size' value for each camera will be applied to the 'E-mail' and 'FTP (Buffered)' services.
Click the "Save" button to apply the new settings.

| | |
|-----------------------|--|
| » E-mail | Configuration of E-mail service to send pre-post alarm images. |
| » FTP(Buffered) | Configuration of ftp service to send pre-post alarm images. |
| » FTP(Periodic) | Configuration of ftp service to send recent images periodically according to service conditions. |
| » Sensor Notification | Configuration to notify sensor status to predefined IP address. |
| » Alarm Output | Configuration of alarm output duration according to service conditions. |

| | | |
|--------|--------------|-------------------------------------|
| Status | Start | <input type="button" value="Stop"/> |
|--------|--------------|-------------------------------------|

When the setting is completed as above, the image file is periodically transferred to the FTP server at a specified time..

When the condition is changed, the changed value is applied only when you click the Apply button as in 21).

9.1.4 Sensor Notification

This is the function to send the prepared CGI to a specific server when an event occurs in the camera..

To use the Sensor Notification function, proceed as follows..

- 1) Select input number for Sensor notification service.

Sensor Notification Service Configuration

Click a link below to configure the conditions for each camera input.

| | |
|---------------------------|---------------------------|
| » Input 1 | » Input 2 |
| » Input 3 | |

| | | |
|----------------------------------|---|--------------------------|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| Service Mode | <input checked="" type="radio"/> HTTP <input type="radio"/> TCP <input type="radio"/> UDP | |
| Main IP address | <input type="text"/> | |
| Aux1 IP address | <input type="text"/> | |
| Aux2 IP address | <input type="text"/> | |
| Aux3 IP address | <input type="text"/> | |
| Port | <input type="text" value="80"/> | (Default:80, 80 ~ 65535) |
| CGI Path or Alarm Common Message | <input type="text"/> | |
| User ID | <input type="text"/> | |
| Password | <input type="text"/> | |

- 2) Select Condition1. (Multiple Conditions setup is available.)

Sensor Notification Service Configuration at Input 1

Please click below link to configure the service condition.

| | |
|-------------|------------|
| Condition 1 | [Not Used] |
| Condition 2 | [Not Used] |
| Condition 3 | [Not Used] |

| | |
|--------------------------------------|--|
| CGI Name or Alarm Port Message | |
|--------------------------------------|--|

- 3) When the setting page appears, select Enable.

Enable
 Disable

- 4) Select **Mode**

Select Mode

Always
 Schedule Only
 Event Only
 Schedule and Event

- Always : Always is not used for Sensor Notification.
- Schedule Only : Sechedule only is not used for Sensor Notification.
- Event Only : Send CGI when event occurs.
- Schedule and Event : Send CGI when an event occurs at a specified time.

- 5) Schedule setup Menu.

* It is recommended to avoid the combination of Day+Time+Date(mm/dd). This is because it does not work if the day and month/day do not match.

*Recommend to select Day+Time or Time +Date only.

Schedule

| | | | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| Week | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
| | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Time (hh:mm) | 09 | : | 00 | ~ | 17 | : | 00 |
| <input type="checkbox"/> Date (mm/dd) | XX | / | XX | ~ | XX | / | XX |

6) Selection of Event Type

| Event | | | | |
|---------------------|------------------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Audio Detection | | | <input type="checkbox"/> | |
| Motion Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| External Input Data | | | <input type="checkbox"/> | |
| Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Disconnected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Boot Finished | <input type="checkbox"/> Enabled | | | |
| Serial Input | <input type="checkbox"/> Activated | | | |

- Event will be triggered by the followings.
 - Alarm Sensor (Alarm Input) : DI Sensor
 - Audio Detection
 - Motion Detection
 - External Input Data
 - Camera Connection : This Menu is not used for Camera
 - Connected : When camera is connected
 - Disconnected : when camera is not connected
 - Boot Finished :
 - Serial Input :

7) When setting is completed, click Save at the bottom..

8) When the following page appears, check the condition information below.

Sensor Notification Service Configuration at Input 1

Please click below link to configure the service condition

| | |
|---------------|------------|
| ❖ Condition 1 | [Not Used] |
| ❖ Condition 2 | [Not Used] |
| ❖ Condition 3 | [Not Used] |

| | |
|--------------------------------------|--|
| CGI Name or Alarm Port Message | |
|--------------------------------------|--|

9) Enter the prepared CGI, or alarm message.

10) Click Save.

- 11) When the following page appears, enable the service..

Sensor Notification Service Configuration

Click a link below to configure the conditions for each camera input.

| | |
|---------------------------|---------------------------|
| » Input 1 | » Input 2 |
| » Input 3 | |

| | | |
|---|---|--------------------------|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable | |
| Service Mode | <input checked="" type="radio"/> HTTP <input type="radio"/> TCP <input type="radio"/> UDP | |
| Main IP address | | |
| Aux1 IP address | | |
| Aux2 IP address | | |
| Aux3 IP address | | |
| Port | 80 | (Default:80, 80 ~ 65535) |
| CGI Path or Alarm Common Message | | |
| User ID | | |
| Password | | |

- 12) Service mode : Select protocol type.
- 13) Main IP address ~ AUX3 IP Address : Enter the IP address of the device receiving the CGI or Alarm message.
- 14) Port : Enter port number.
- 15) CGI Patch & Alarm Common Message : Enter the specific command of the CGI.
- 16) User ID : Enter your user ID. (ID of the device which CGI is transmitted.)
- 17) Password: Enter password. (password of the device which CGI is transmitted.)
- 18) Click Save.
- 19) When the following page appears, click Apply.

Advanced Services

Total pre-alarm buffer size : 800 kb
Current used buffer size : 0 frames

| | Ch 1 | Ch 2 | Ch 3 | Sum |
|-----------------------|---------------|---------------|---------------|-----|
| Pre-Alarm Buffer Size | 0 (frames) | 0 (frames) | 0 (frames) | 0 |
| Pre-Alarm Speed | Select Spe: ▾ | Select Spe: ▾ | Select Spe: ▾ | |

Notice : The 'Pre-Alarm Buffer Size' value for each camera will be applied to the 'E-mail' and 'FTP (Buffered)' services.
Click the "Save" button to apply the new settings.

| | |
|---------------------------------------|--|
| » E-mail | Configuration of E-mail service to send pre-post alarm images. |
| » FTP(Buffered) | Configuration of ftp service to send pre-post alarm images. |
| » FTP(Periodic) | Configuration of ftp service to send recent images periodically according to service conditions. |
| » Sensor Notification | Configuration to notify sensor status to predefined IP address. |
| » Alarm Output | Configuration of alarm output duration according to service conditions. |

- 20) When the condition is changed, the changed value is applied only when you click the Apply button as in 18).

9.1.5 Alarm Output

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

To set the Alarm Output, proceed as follows.

- 1) Click Output 1 for Alarm out service setup.

- 2) Select Condition1. (Multiple condition setup is available.)

- 3) When the setting page appears, select Enable.

- 4) Select **Mode**

- Always : Keep DO running continuously.
- Schedule Only : Operates DO within the specified time.
- Event Only : Activate DO when an event occurs.
- Schedule and Event : When the event occurs on the designated date, DO is activated..

- 5) The schedule setting menu is as follows..

* It is recommended to avoid the combination of Day+Time+Date(mm/dd). This is because it does not work if the day and month/day do not match.

*Recommend to select Day+Time or Time +Date only

| Schedule | | | | | | | | | | | |
|--|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------|--|---|---------------------------------|--|
| Week | Sun | Mon | Tue | Wed | Thu | Fri | Sat | | | | |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | | | | |
| <input checked="" type="checkbox"/> Time (hh:mm) | <input type="text" value="09"/> | | : | <input type="text" value="00"/> | | ~ | <input type="text" value="17"/> | | : | <input type="text" value="00"/> | |
| <input type="checkbox"/> Date (mm/dd) | <input type="text" value="XX"/> | | / | <input type="text" value="XX"/> | | ~ | <input type="text" value="XX"/> | | / | <input type="text" value="XX"/> | |

6) Selection of Event

| Event | | | | |
|---------------------|------------------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 |
| Alarm Sensor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Audio Detection | | | <input type="checkbox"/> | |
| Motion Detection | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| External Input Data | | | <input type="checkbox"/> | |
| Camera Connected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Camera Disconnected | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Boot Finished | <input type="checkbox"/> Enabled | | | |
| Serial Input | <input type="checkbox"/> Activated | | | |

- Event will be triggered by the followings.
 - Alarm Sensor (Alarm Input) : DI Sensor
 - Audio Detection
 - Motion Detection
 - External Input Data
 - Camera Connection : This Menu is not used for Camera
 - Connected : When camera is connected
 - Disconnected : when camera is not connected
 - Boot Finished :
 - Serial Input :

7) When setting is completed, click Save at the bottom..

8) Click Save.

9) When the following page appears, check the condition information below..

Alarm Output Service Configuration at Input 1

Please click below link to configure the service condition

| | |
|----------------|------------|
| >> Condition 1 | [M1][] |
| >> Condition 2 | [Not Used] |
| >> Condition 3 | [Not Used] |

| | | | |
|-----------------------|----------|---|-----|
| Alarm Output Duration | Infinite | ▼ | sec |
|-----------------------|----------|---|-----|

10) Select Alarm Output Duration time.

This is a menu to setup DO duration time.

If set to Infinite, it will continue to operate until the user releases DO.

If you select between 1 and 30 seconds, DO operates until the specified time and stops automatically..

- 11) When setup is complete, click Save.
- 12) When the following page appears, enable the service..

Alarm Output Service Configuration

Please click the below link to configure Alarm Output service for each alarm output.

[» Output 1](#)

| | |
|---------|---|
| Service | <input type="radio"/> Enable <input checked="" type="radio"/> Disable |
|---------|---|

- 13) Click Save.
- 14) When the following page appears, click Apply..

Advanced Services

Total pre-alarm buffer size : **800** kb
Current used buffer size : **0** frames

| | Ch 1 | Ch 2 | Ch 3 | Sum |
|-----------------------|------------|------------|------------|-----|
| Pre-Alarm Buffer Size | 0 (frames) | 0 (frames) | 0 (frames) | 0 |
| Pre-Alarm Speed | Select Spe | Select Spe | Select Spe | |

Notice : The 'Pre-Alarm Buffer Size' value for each camera will be applied to the 'E-mail' and 'FTP (Buffered)' services.
Click the "Save" button to apply the new settings.

| | |
|---------------------------------------|--|
| » E-mail | Configuration of E-mail service to send pre-post alarm images. |
| » FTP(Buffered) | Configuration of ftp service to send pre-post alarm images. |
| » FTP(Periodic) | Configuration of ftp service to send recent images periodically according to service conditions. |
| » Sensor Notification | Configuration to notify sensor status to predefined IP address. |
| » Alarm Output | Configuration of alarm output duration according to service conditions. |

| | | |
|---------------|--------------|-------------------------------------|
| Status | Start | <input type="button" value="Stop"/> |
|---------------|--------------|-------------------------------------|

- 15) When the condition is changed, the changed value is applied only when you click the Apply button as in 14).

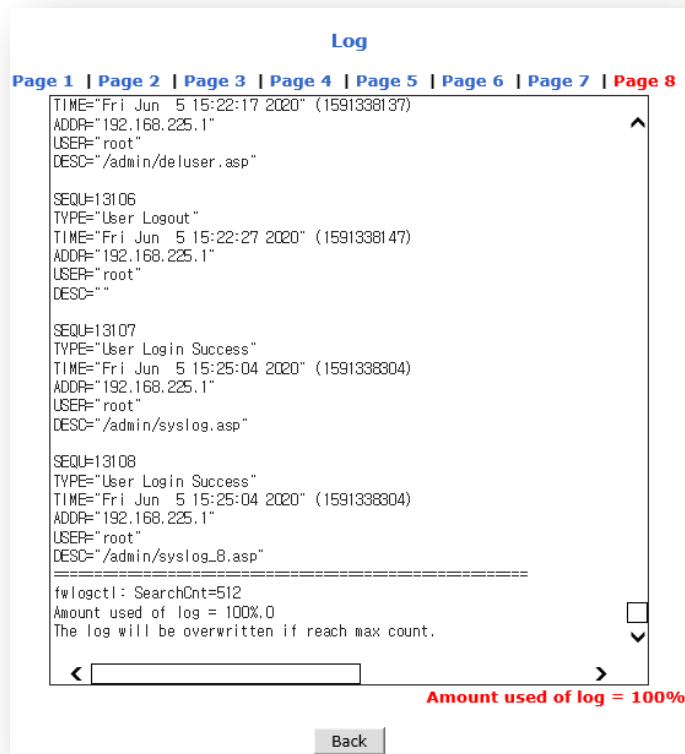
10. Utilities

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

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..

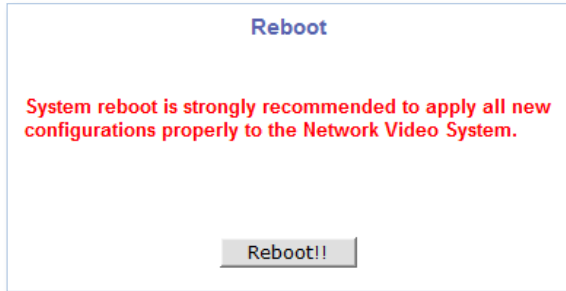
This log consists of a total of 8 pages, and the old log is automatically deleted and a new log is recorded.



10.2 Reboot

This is a function to reboot the camera at a web browser. When you click the Reboot button, a popup window will appear asking if you really want to reboot. At this time, click the OK button to reboot the camera. If you were watching the video, a prompt screen asking if you want to close the web browser appears. Reboot is started regardless of whether the web browser is closed or not. The system cannot be used while the system is rebooting.

To reboot, click the Reboot button shown in the figure below.

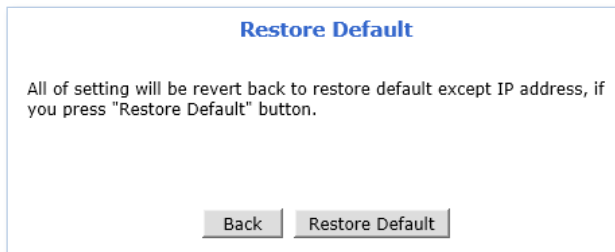


10.3 Restore Default

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..

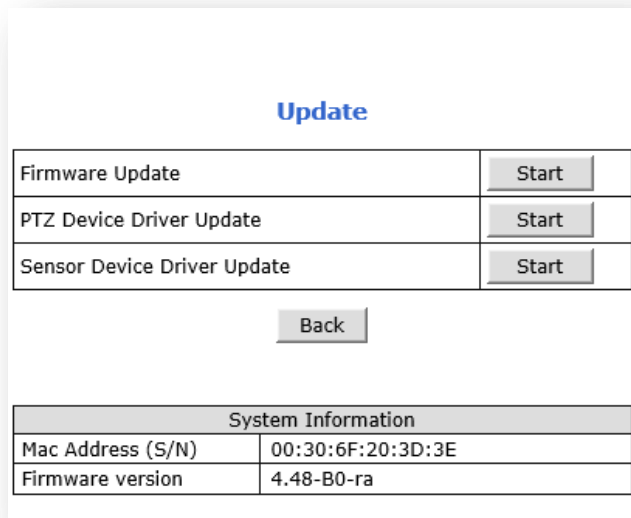
ou must connect to the camera by entering root. If necessary, it can be changed to a new password..



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.

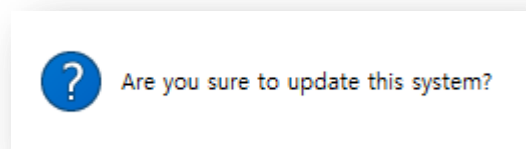


- **Firmware Update:** update the camera's firmware.
- **PTZ Device Driver Update:** update PTZ driver.
- **Sensor Device Driver Update:** update Sensor Device Driver.
- **System Information :** Check the camera's MAC address and firmware version.

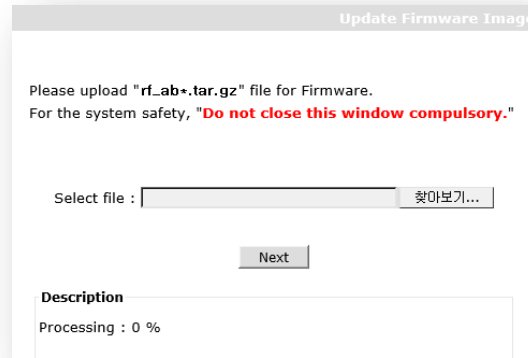
■ Firmware Update

Camera firmware update can be done as follows..

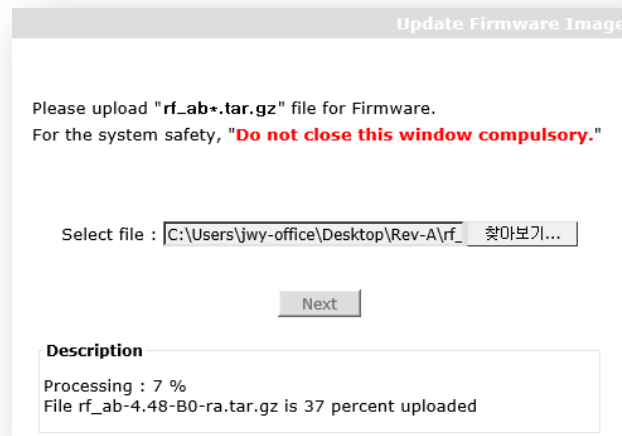
- 1) Click the Start button on the right side of the Firmware Update.
- 2) When the update confirmation window appears as shown below, click the OK button..



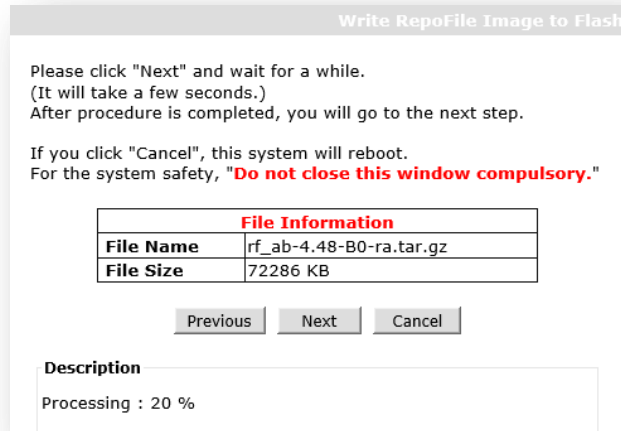
- 3) The Firmware Update window appears. Click the Browse button to select the firmware..



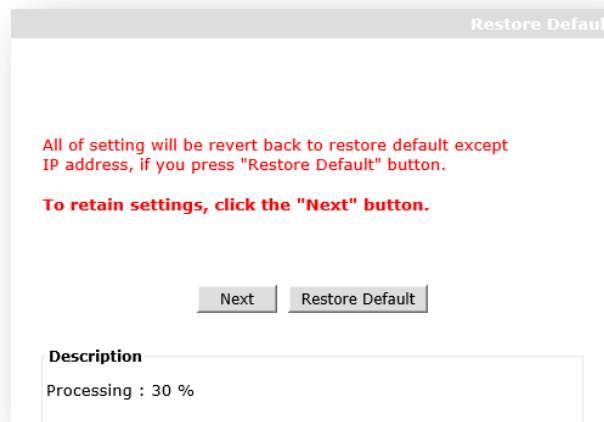
- A. The firmware update window pops up.
 - B. If the pop-up is blocked in Windows, the update window will not appear.
 - C. In the web browser, select Tools → Pop-up Blocker → Disable Pop-up Blocker and try update again..
- 4) After selecting the update file and clicking the Next button, the firmware 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.

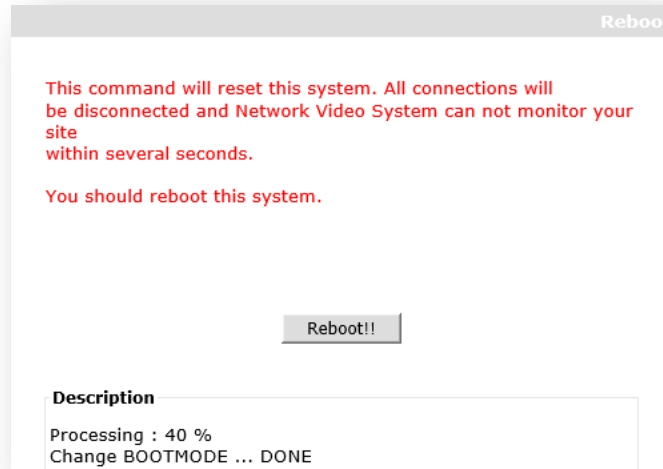


- 6) Select whether to update firmware only while maintaining the current settings or to perform firmware update after initializing to factory default state.

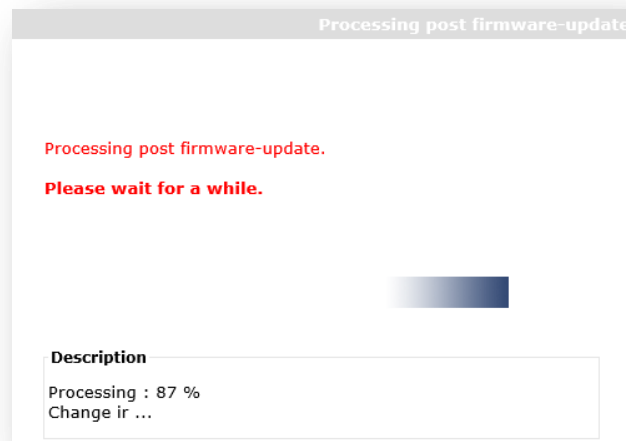


- Next : Keep current settings and proceed with firmware update.
- Restore Default : . Initialize the current settings and proceed with the firmware update

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

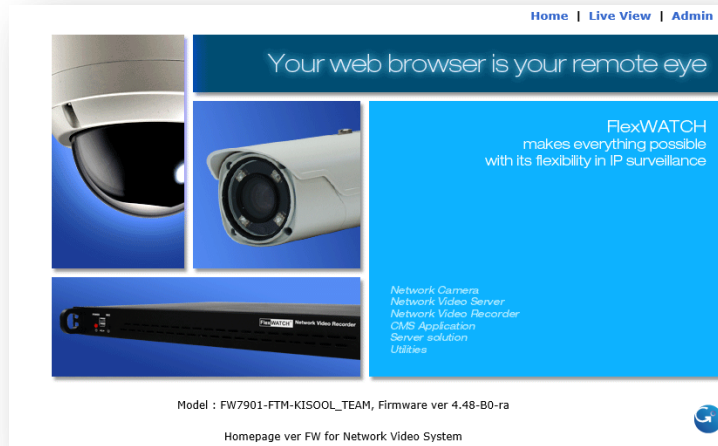


- 8) After rebooting, firmware update is automatically performed. Progress is expressed in %.



- 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.



- When the web page is connected, please 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..

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