



**Due to software upgrade, the following functions have been added and changed to this product.**

**•Firmware Ver.1.20** (SSeriesS)

(Except for WV-S1536LTN, WV-S2536LTN, WV-S2136G, WV-S2136LG, WV-S2236LG, WV-S2536LG, WV-S2536LGN)

No.	Functions	Item (Page)	Page
1	Add to the system log when recording stream fails to write	Status (Maintenance)	7
2	Add a function to notify the user of writing failures in the recording stream with a unique alarm	Status (Maintenance)	8
3	Add a note when the bit rate of the recording stream is set to a value exceeding recommended value	Image (Image/Audio)	9
4	SDK version display	Software mng. ( Ext. software )	10
5	Extend authentication password for the destination of notification	Advanced (Network)	12

**•Firmware Ver.1.31** (SSeriesS)

No.	Functions	Item (Page)	Page
6	Change AI-VMD and AI People Detection to be pre-installed	Software mng.	13
7	Add RAM capacity expansion mode	Software mng. ( Ext. software )	14
8	Add LLDP function	Advanced (Network)	15

**•Firmware Ver.1.40** (SSeriesS)

No.	Functions	Item (Page)	Page
9	Add SFTP periodic image transmission to “Event operation” of Easy Setup	Event action (Easy Setup)	17
10	Add “SFTP periodic image transmission error” to “Save trigger” of SD memory card	SD memory card (Basic)	25
11	Add link to SFTP settings in Camera action on alarm	Alarm	26
12	Add SFTP image transmission function	Advanced (Network)	29
13	Add SFTP periodic image transmission to “Schedule mode” of Schedule	Schedule	34
14	Using the recording function is changed when the Ext. software mode is On	Advanced (Network)	36
15	Change the initial value of “Overwrite” of SD memory card to On	SD memory card (Basic)	37
16	Add NTP test function	Advanced (Network)	38
17	Add TLS settings to HTTPS	Advanced (Network)	39
18	Add MQTT function	Advanced (Network)	40
19	Add a system log when MQTT function fails	Status (Maintenance)	43

•Firmware Ver.1.41 **SSeriesS**

No.	Functions	Item (Page)	Page
20	Add Genetec Stratocast Service*1	Network (Stratocast)	44

\*1 Except for WV-S1136A, WV-S1536LA, WV-S1536LNA, WV-S1536LNA-B, WV-S1536LA-B, WV-S1536LNSA, WV-S1536LTNA, WV-S2136A, WV-S2136A-B, WV-S2136GA, WV-S2136GA-B, WV-S2136LA, WV-S2136LA-B, WV-S2136LGA, WV-S2136LGA-B, WV-S2236LA, WV-S2236LA-B, WV-S2236LGA, WV-S2236LGA-B, WV-S2536LA, WV-S2536LGA, WV-S2536LGNA, WV-S2536LNA, WV-S2536LTNA, WV-S1536LTA, WV-S2536LTA.

•Firmware Ver.2.10

No.	Functions	Item (Page)	Page
21	Changed new GUI (Graphical User Interface) ( Except <b>Multi</b> )	-	47
22	Add AI-VMD alarm area information on TCP alarm notification	Notification (Alarm)	48
23	Add Image transmission log on Status page	Status (Maintenance)	49

•Firmware Ver.2.10 **fisheye**

No.	Functions	Item (Page)	Page
24	About removal of functions due to end of Internet Explorer support	-	51
9	Add SFTP periodic image transmission to “Event operation” of Easy Setup	Event action (Easy Setup)	17
10	Add “SFTP periodic image transmission error” to “Save trigger” of SD memory card	SD memory card (Basic)	25
11	Add link to SFTP settings in Camera action on alarm	Alarm	26
12	Add SFTP image transmission function	Advanced (Network)	29
13	Add SFTP periodic image transmission to “Schedule mode” of Schedule	Schedule	34
14	Using the recording function is changed when the Ext. software mode is On	SD memory card (Basic)	36
15	Change the initial value of “Overwrite” of SD memory card to On	SD memory card (Basic)	37
25	Changed the initial value of “Audio input encoding format”	Audio (Image/Audio)	52
26	Add "Close (Continue)" and "Open (Continue)" to the operation setting values of [Terminal 1], [Terminal 2], and [Terminal 3] on the [Alarm] tab	Alarm	53
27	Add alarm test function to the alarm	Alarm	55
8	Add LLDP function	Advanced (Network)	15

16	Add NTP test function	Advanced (Network)	38
17	Add TLS settings to HTTPS	Advanced (Network)	39
18	Add MQTT function	Advanced (Network)	40
19	Add a system log when MQTT function fails	Status (Maintenance)	43
28	Add log indications/error indications relating to Firmware Upgrade	System log (Maintenance)	56

• **Firmware Ver.2.20**

No.	Functions	Item (Page)	Page
29	Add FTP to the communication protocol of the file transfer function <b>SSeriesS</b> <b>SSeriesH</b> <b>fisheye</b> <b>miniAI</b> <b>PTZ S</b> <b>PTZ U</b>	Advanced (Network)	57
30	Add SFTP periodic image transmission to “Event operation” of Easy Setup <b>SSeriesS</b> <b>SSeriesH</b> <b>fisheye</b> <b>miniAI</b> <b>PTZ S</b> <b>PTZ U</b>	Event action (Easy Setup)	64
31	Change “SFTP periodic image transmission error” to “FTP/SFTP periodic image transmission error” in “Save trigger” of SD memory card. <SD memory card supported models only> <b>SSeriesS</b> <b>SSeriesH</b> <b>fisheye</b> <b>miniAI</b> <b>PTZ S</b> <b>PTZ U</b>	SD memory card (Basic)	75
32	Change the link of “SFTP setup” to “FTP/SFTP setup” in Camera action on alarm <b>SSeriesS</b> <b>SSeriesH</b> <b>fisheye</b> <b>miniAI</b> <b>PTZ S</b> <b>PTZ U</b>	Alarm	76
33	Add “FTP access to camera” to “Common” in Network setup <b>SSeriesS</b> <b>SSeriesH</b> <b>fisheye</b> <b>miniAI</b> <b>PTZ S</b> <b>PTZ U</b>	Network (Network)	78
34	Change “SFTP periodic image transmission” to “FTP/SFTP periodic image transmission” in “Schedule” mode <b>SSeriesS</b> <b>SSeriesH</b> <b>fisheye</b> <b>miniAI</b> <b>PTZ S</b> <b>PTZ U</b>	Schedule	79
35	Add the log related to FTP/SFTP to system log <b>SSeriesS</b> <b>SSeriesH</b> <b>fisheye</b> <b>miniAI</b> <b>PTZ S</b> <b>PTZ U</b>	System log (Others)	81
36	Add Ext. software function <b>PTZ U</b>	Extension software (Software mng.)	82
37	Add Ext. software mode <SD memory card supported models only> <b>PTZ U</b>	SD memory card (Basic)	90
38	Add HTML initialization function <b>SSeriesS</b> <b>SSeriesH</b> <b>fisheye</b> <b>miniAI</b> <b>PTZ S</b> <b>PTZ U</b>	Default reset (Maintenance)	91

**Firmware Ver.2.20** **miniAI**

No.	Functions	Item (Page)	Page
22	Add AI-VMD alarm area information on TCP alarm notification	Notification (Alarm)	48
23	Add Image transmission log on Status page	Status (Maintenance)	49

**Firmware Ver.2.30**

No.	Functions	Item (Page)	Page
39	Add 2fps and 3fps to FTP/SFTP refresh interval, add 1920x1080 to pre-alarm resolution, expand image destination server to 2 locations <b>fisheye</b> <b>miniAI</b> <b>SSeriesS</b> <b>SSeriesH</b> <b>PTZ S</b> <b>PTZ U</b>	Advanced (Network)	92
40	Add 0.5s, 1s, 2s, 3s, and 4s to the alarm deactivation time <b>fisheye</b> <b>miniAI</b> <b>SSeriesS</b> <b>SSeriesH</b> <b>PTZ S</b> <b>PTZ U</b>	Alarm	101
41	Add schedule setting to switch image quality at sunrise and sunset <b>fisheye</b> <b>miniAI</b> <b>SSeriesS</b> <b>SSeriesH</b> <b>Multi</b> <b>PTZ S</b> <b>PTZ U</b>	Schedule	102
42	Add enable/disable setting to SNMP agent setting <b>fisheye</b> <b>miniAI</b> <b>SSeriesS</b> <b>SSeriesH</b> <b>Multi</b> <b>PTZ S</b> <b>PTZ U</b>	SNMP (Network)	107
43	Add corridor view mode to image capture mode <b>fisheye</b>	Live image types –Image capture mode	108
44	Add 1280x720 image capture size for Stream (1) and Stream (2) (4 mega pixel model only) <b>Multi</b>	Stream Image/Audio – Image	111
45	Add title edit icon next to camera title <b>fisheye</b> <b>miniAI</b> <b>SSeriesS</b> <b>SSeriesH</b> <b>Multi</b> <b>PTZ S</b> <b>PTZ U</b>	“Live” page	113

**Firmware Ver.2.32**

No.	Functions	Item (Page)	Page
-	Add new model number: WV-S1136A, WV-S1536LA, WV-S1536LNA, WV-S1536LNA-B, WV-S1536LA-B, WV-S1536LNSA, WV-S1536LTNA, WV-S2136A, WV-S2136A-B, WV-S2136GA, WV-S2136GA-B, WV-S2136LA, , WV-S2136LA-B, WV-S2136LGA, WV-S2136LGA-B, WV-S2236LA, WV-S2236LA-B, WV-S2236LGA, WV-S2236LGA-B, WV-S2536LA, WV-S2536LGA, WV-S2536LGNA, WV-S2536LNA, WV-S2536LTNA, WV-S1536LTA, WV-S2536LTA, WV-S4156A, WV-S4176A, WV-S4556LA, WV-S4556LMA, WV-S4576LA, WV-S4576LMA For the above models, the previous firmware is not available earlier than Ver.2.32.	-	-

**Firmware Ver.2.33**

No.	Functions	Item (Page)	Page
46	Add SD memory card file system format to the “SD memory card” settings (fisheye) (miniAI) (SSeriesS) (SSeriesH) (Multi) (PTZ S) (PTZ U)	Basic - SD memory card	114

## 1. Add to the system log when recording stream fails to write

### (Operating Instructions “Others” – “Maintenance” - Check the status [Status])

A system log has been added for errors in the write process of the recording stream to the log related to SD memory cards.

Category	Indication	Description
SD memory card	<SD>Format	Successfully formatted the SD memory card.
	<SD>Format error	Error occurred when formatting the SD memory card.
	<SD> Write-protect ON (Locked card)	A write-protected SD memory card is inserted.
	<SD> Detection error	The SD memory card could not be correctly recognized.
	<SD> Write error	An error occurred when writing to the SD memory card.
	<SD> Read error	An error occurred when reading from the SD memory card.
	<SD> Delete error	An error occurred when deleting data from the SD memory card.
	<SD> File system error	An error occurred in File system of the SD memory card.
	<SD> Undefined error	An error other than the ones above has occurred for the SD memory card.
	<SD> An abnormality occurs in continuity of the SD memory recording. Check the recording bit rate setting of the SD memory recording.	An error occurred when writing to the SD memory card.
<SD> An error occurs in the SD memory card. Check the status of the SD memory card.	The SD memory card write process still generates data loss. Make sure that the SD memory card is properly recognized. If the card is not recognized, reboot the unit, or remove and reinsert the SD memory card to check.	

## 2. Add a function to notify the user of writing failures in the recording stream with a unique alarm

(Operating Instructions “Others” – “Maintenance” - Configure the alarm settings

[Alarm]) – Configuration of the settings relating to alarm notification[Notification]

– Configure the settings relating to Panasonic alarm protocol)

Add the write processing error of the recording stream to the occurrence condition of the Panasonic alarm protocol notification of “Diag.”

### Panasonic alarm protocol

#### • [Panasonic alarm protocol]

Select “On” or “Off” to determine whether or not to provide notification by Panasonic alarm protocol according to the settings for the “Alarm” and “Diag.” checkboxes of “Destination of notification” below.

- When an alarm is detected (“Alarm”)
- When a notification of the remaining capacity of the SD memory card has been provided (“Diag.”)
- When the SD memory card has become full (“Diag.”)
- When the SD memory card cannot be recognized (“Diag.”)
- When there is a write error on the SD memory card (“Diag.”)

**Default:** Off

### Destination of notification

#### • [Address 1] - [Address 8]

Enter the destination IP address or host name of the Panasonic alarm protocol from the following.

Up to 8 destination server addresses can be registered.

**[Alarm] checkbox:** When the checkbox is checked, the Panasonic alarm notification will be provided upon an alarm occurrence.

**[Diag.] checkbox:** When the checkbox is checked, notification using Panasonic alarm protocol will be provided in the following cases.

- When notification of the remaining capacity of the SD memory card has been provided
- When the SD memory card has become full
- When the SD memory card cannot be recognized
- When the SD memory card cannot be written

**[Destination server address]:** Enter the destination server address or host name.

**Available characters:** Alphanumeric characters, the colon (:), the period (.), the underscore (\_), and the hyphen (-).

To delete the registered destination server address, click the [Delete] button respective to the desired destination server address.

### 3. Add a note when the bit rate of the recording stream is set to a value exceeding recommended value

#### (Operating Instructions “Image/Audio” - Configure the settings relating to Stream [Image])

Add the statement that it is possible that an error may occur in the continuity of SD memory card recording, if you set a bit rate that exceeds the recommended value in “Note” of “Max bit rate (per client) \*”.

#### [Max bit rate (per client)\*]:

#### Note

- The bit rate for “Stream” is restricted by “Bandwidth control (bit rate)” on the [Network] tab on the “Network” page. When a value with “\*” attached is set, images may not be streamed.
- It is recommend that the bit rate setting of the stream to be 8192 kbps or lower. Setting a value higher than 8192 kbps may cause abnormalities in the continuity of the recorded video.
- When the refresh interval is too short, the actual bit rate may exceed the set bit rate depending on the subject.
- Depending on the number users connecting at the same time or the combination of features used, the bit rate may be lower than the configured value. Check the transmission of images after changing settings.

## 4. SDK version display

(Operating Instructions – Perform management of the extension software and the schedule setting [Ext. software] - Perform the installation, uninstallation and version upgrade of the extension software [Software mng.] )

The firmware version and SDK version of the camera and ext. software have been added to the software management screen.

If the SDK version of the camera is older than the ext. software, a message will be displayed to that effect.

### Installing the extension software

The screenshot displays the 'Software mng.' interface with three tabs: 'Software mng.', 'Operation sched.', and 'Control log'. The 'Software mng.' tab is active, showing a table of unique information and software management options.

Unique information	
MPR ID	4700-010G-4E35-09B4
Remaining ROM	140400 kbytes
Remaining RAM	57600 kbytes
SDK version	1.40
Firmware version	

AI-VMD	Uninstall
Software version	2.10
Status	Before the trial starts <span>Registration &gt;&gt;</span>
Setup menu	Setup >>

AI Privacy Guard	Uninstall
Software version	1.00
Status	Before the trial starts <span>Registration &gt;&gt;</span>
Setup menu	Setup >>

Software version	1.00
Status	Operable
Setup menu	Setup >>

AI Processor Activation Key

Register the Registration Key  Set

\*No dashes in between.

#### Unique information

##### [SDK version]

Display the version information of the SDK installed in the camera. If the ext. software you install requires a version number higher than the one shown here, the ext. software may not work properly.

##### [Software version]

The version information of the installed camera software will be displayed.

## **Extension software**

### **[Version]**

If you have installed ext. software, the version information of the installed ext. software is displayed along with the version information of the SDK installed in the ext. software.

If the version information of the SDK embedded in the camera is less than the version number required by the ext. software, the ext. software may not operate properly.

### **Note**

• For ext. software that does not have SDK version information installed, the SDK version information will not be displayed.

## **5. Extend authentication password for the destination of notification (Operating Instructions – Configure the network settings [Network] – Configure advanced network settings [Advanced] - Configure the settings related to sending E-mails)**

The number of characters that can be entered for the authentication password of the destination of notification has been expanded to 128 characters.

- **[Authentication – Password]**

Enter the password to access the server.

**Available number of characters:** 0 - 128 characters

**Unavailable characters:** " &

## **6. Change AI-VMD and AI People Detection to be pre-installed**

**(Operating Instructions – Perform management of the extension software and the schedule setting [Ext. software])**

Change the pre-installed Ext. software AI Video Motion Detection (“AI-VMD”) and AI Privacy Guard to AI-VMD and AI People Detection. Along with that, it is stated in "Note" that AI-VMD and AI People Detection are pre-installed.

Management of the extension software and the schedule setting can be performed on the “Ext. software” page. The “Ext. software” page has the [Software mng.] tab and the [Operation sched.] tab.

### **Note**

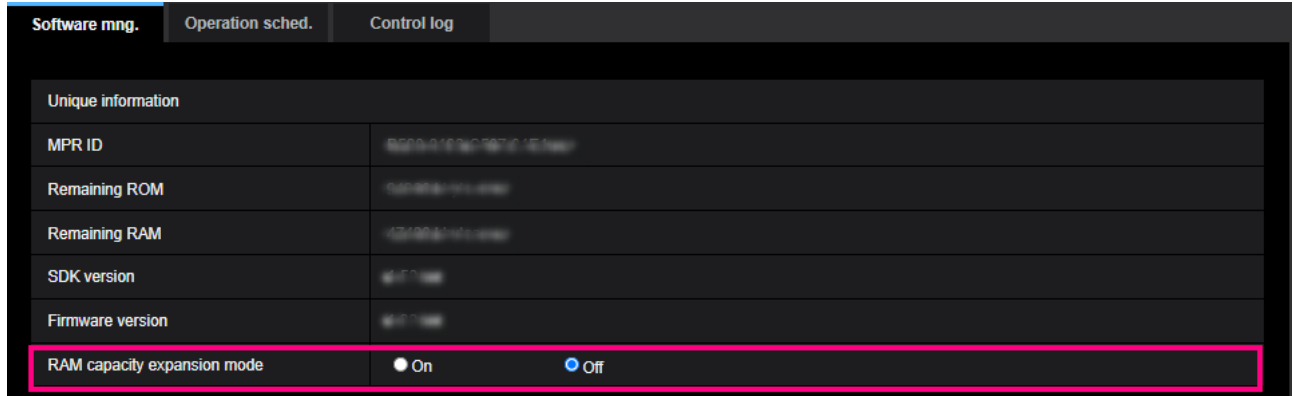
- AI-VMD and AI People Detection are already installed. For further information, refer to the respective operating instructions.
- The camera software upgrade will not change the installed Ext. software.

## 7. Add RAM capacity expansion mode

(Operating Instructions – Perform management of the extension software and the schedule setting [Ext. software] – Perform the installation, uninstallation and version upgrade of the extension software [Software mng.])

RAM capacity expansion mode has been added to the software management screen.

This mode increases the amount of RAM available to the Ext. software.



### Unique information

#### [RAM capacity expansion mode]

Set On/Off whether to expand the RAM capacity.

**Default:** Off

#### **Note**

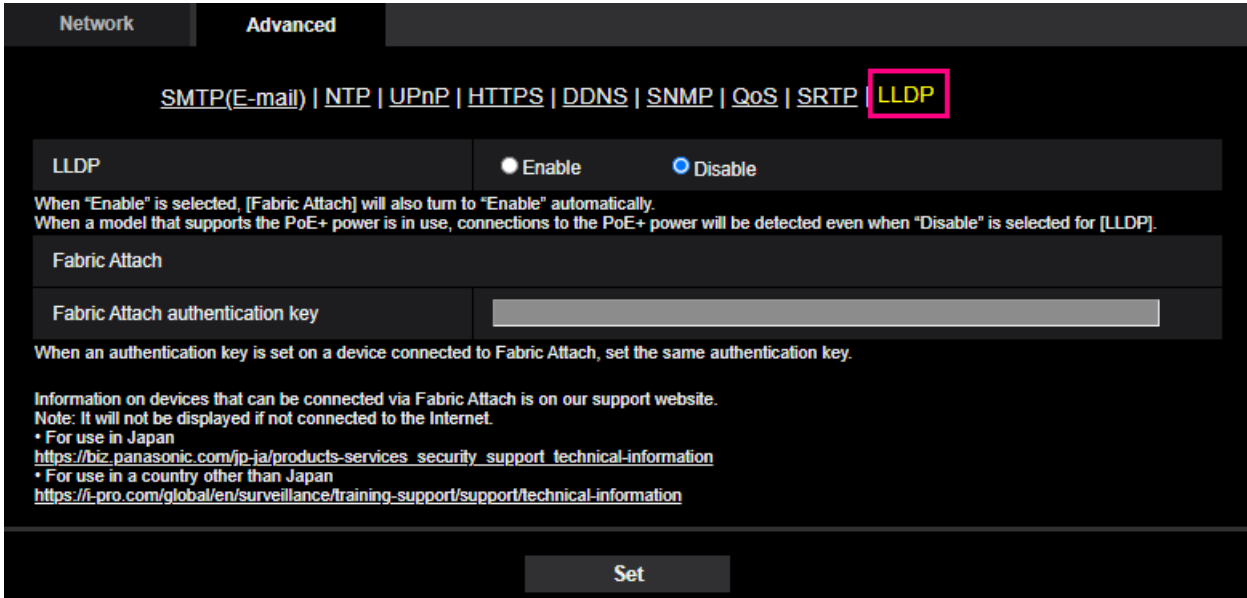
- When “RAM capacity expansion mode” is set to “On”, the recording function to SD memory card by this product cannot be used.
- If the minus is displayed in the “Remaining RAM” value, uninstall the ext. software or set the remaining RAM to “On”.
- Click the [Set] button to restart the product. After restarting, the product cannot be operated for about 2 minutes, same way as when the power is turned on.
- For information about the Ext. software that requires the “RAM capacity expansion mode” to be set to “On”, refer to our support website.

<https://i-pro.com/global/en/surveillance/i-pro-application-platform/application-list>

## 8. Add LLDP function

(Operating Instructions – Configuring the network settings [Network] – Configure advanced network settings [Advanced])

LLDP (Link Layer Discovery Protocol) has been added to [Advanced] of [Network]. Interoperability can be achieved by sending and receiving camera's device information to and from LLDP-compatible devices.



### [LLDP]

Enable/Disable whether to enable the LLDP function and Fabric Attach.

**Default:** Disable

When set to “Enable”, LLDP including TLVs with the checks in the table below will be sent.

End Of LLDPDU TLV	Chassis ID TLV	Port ID TLV	Time To Live TLV	Port Description on TLV	System Name TLV	System Description on TLV	System Capability TLV	Management Address TLV	IEEE802.3 Power via MDI TLV	Fabric Attach Element TLV
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

\* Models that support PoE+ power supply will send LLDP including TLVs with the checks in the table below for PoE+ power supply even if set to “Disable”.

End Of LLDPDU TLV	Chassis ID TLV	Port ID TLV	Time To Live TLV	Port Description on TLV	System Name TLV	System Description on TLV	System Capability TLV	Management Address TLV	IEEE802.3 Power via MDI TLV	Fabric Attach Element TLV
✓	✓	✓	✓						✓	

## **Fabric Attach**

### **[Fabric Attach authentication key]**

Enter the key to be used for Fabric Attach authentication. Note that this is valid only when “LLDP” is “Enable”.

**Available number of characters:** 0 - 32 characters (If Fabric attach authentication is not performed, leave it blank.)

**Available characters:** Alphanumeric characters

**Default:** None (blank)

### **Note**

- Click the [Set] button to restart the product. After restarting, the product cannot be operated for about 2 minutes, just like when the power is turned on.
- For information about devices that can be connected using Fabric Attach, refer to our support website. <https://i-pro.com/global/en/surveillance/training-support/support/technical-information>

## 9. Add SFTP periodic image transmission to “Event operation” of Easy Setup

(Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action])

With the addition of the SFTP function, SFTP periodic image transmission has been added to the “Event action” of Easy Setup.

The screenshot shows a configuration screen for 'Event action' with the following sections:

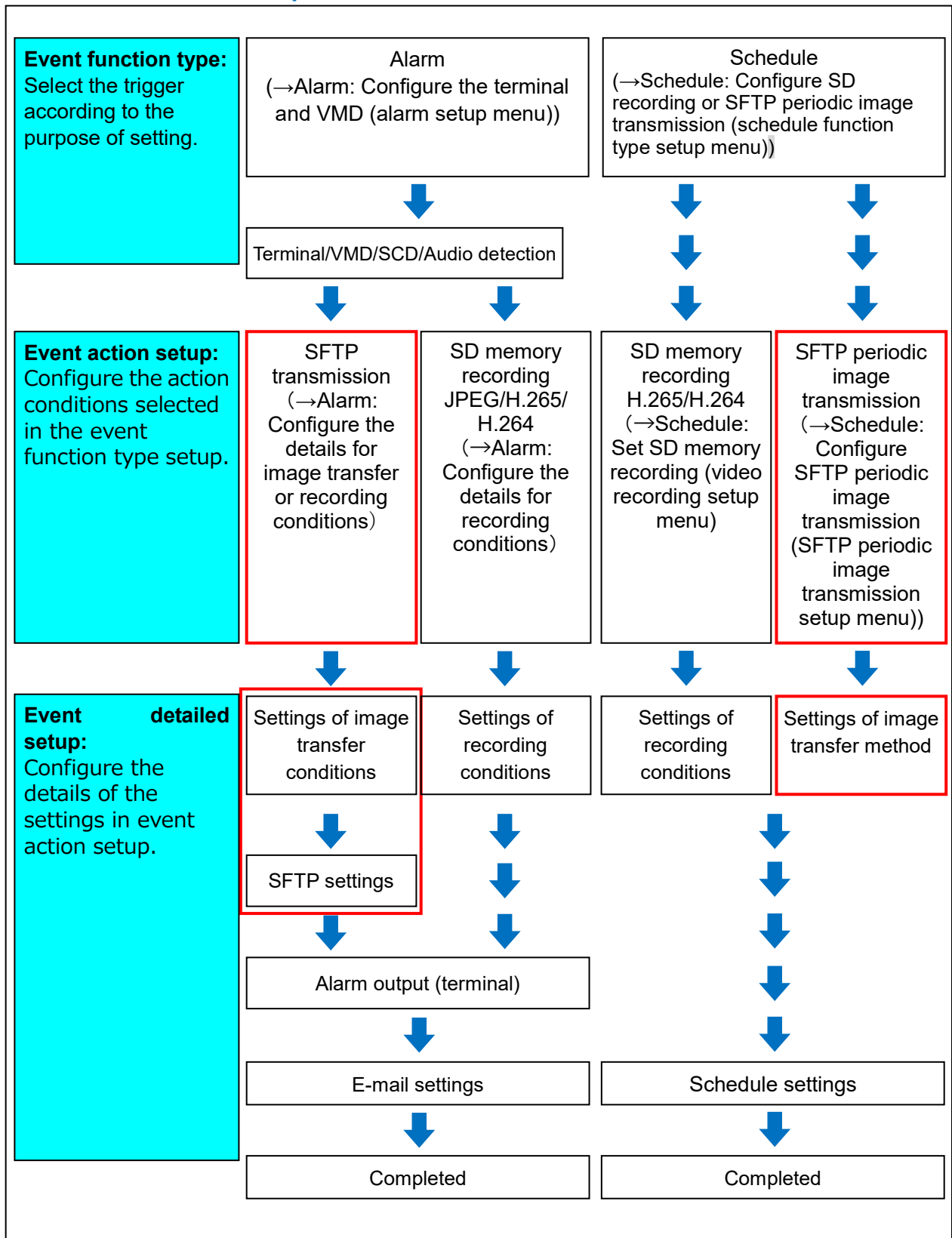
- Internet** (tab)
- Event action** (tab)
- Configure the event action setting.  
Specify the action to be taken when an alarm is detected and register the action in the schedule in order.
- [Current settings]
- Alarm**
  - Alarm condition: Off
  - Alarm: Off
  - Output terminal: Off
  - E-mail notification: Off
- Schedule**
  - Schedule: Off
- [Notes]
  - When the operating condition is changed, some settings will be cancelled. Confirm the settings after completing the setup.
- Next** button

You can set event actions for SD schedule recording/SFTP periodic image transmission/alarm detection. Once the settings are completed in each setup menu, click the [Next] button to proceed. The setup flow is as follows.

### **Note**

- If you click the [Next] button, the settings in the screen will be saved.

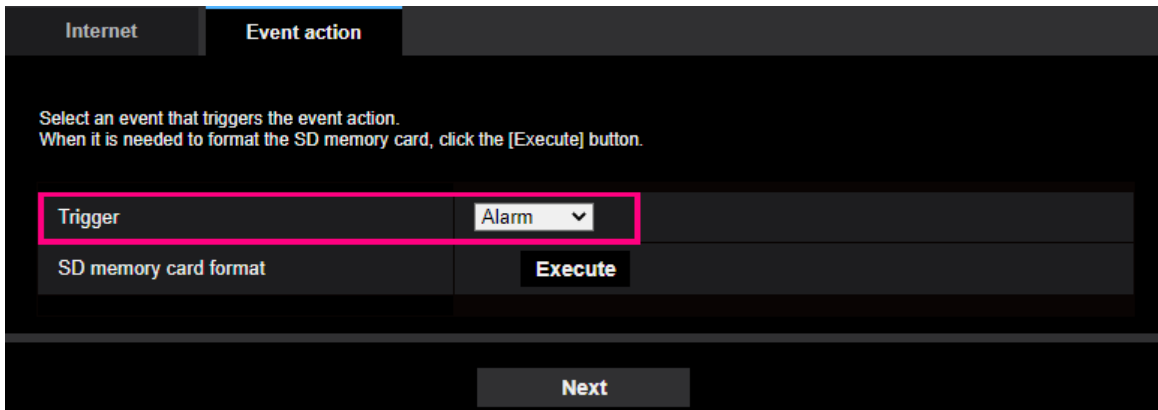
## Flow of event action setup



## Configure the schedule/alarm (event function type setup menu)

(Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action] – Configure the schedule/alarm (event function type setup menu))

Here, select the function type of the event.



### [Trigger]


- **Alarm:** Select when setting the alarm detection settings.
- **Schedule:** Select during “SD memory recording” or “SFTP periodic image transmission”.
- **Default:** Alarm

### [SD memory card format]

To format the SD memory card, click the [Execute] button.

Once you click the [Execute] button, the “Format” confirmation screen will be displayed.

If you click the [OK] button, the formatting will start.

Once the “Format” completion screen is displayed, press the  button.

### **IMPORTANT**

- All data saved on the SD memory card will be deleted when the SD memory card is formatted.
- Do not turn off the power of the camera during formatting.

### [Next] button

If you select “Alarm”, and click the [Next] button, the alarm setup menu will be displayed.

(→ Alarm: Configure the terminal and VMD (alarm setup menu))

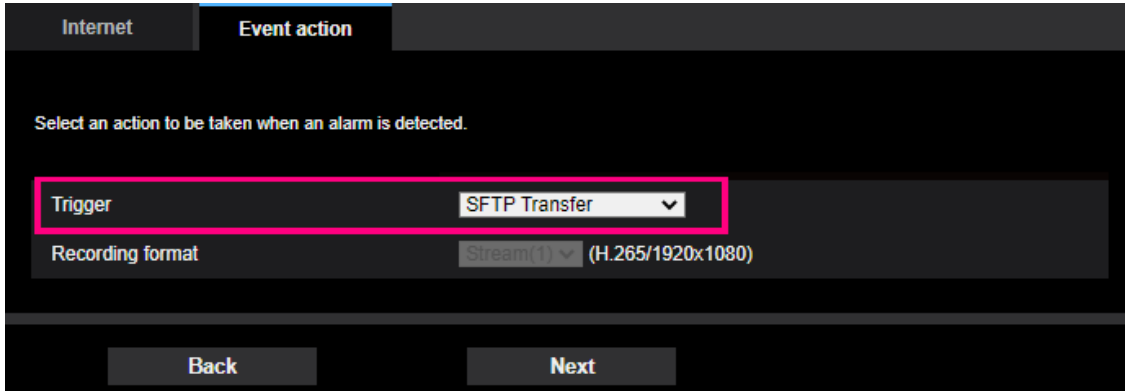
If you select “Schedule”, and click the [Next] button, the schedule function type setup menu will be displayed. (→Schedule: Configure SD recording or “SFTP periodic image transmission (schedule function type setup menu)”)

## Alarm: Configure the alarm function type (Alarm function type setup menu)

(Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action] – Alarm: Configure the alarm function type (Alarm function type setup menu))

Select the alarm function type as “SFTP transfer” or “SD memory recording”.

Configure “Recording format” of SD memory recording triggered by an alarm occurrence.



### [Trigger]

- **SFTP transfer:** When an alarm occurs, performs SFTP Transfer of the JPEG image.
- **SD memory recording:** When an alarm occurs, records the image to the SD memory card.

### Note

- “SFTP Transfer” for when an alarm occurs and “SFTP periodic image transmission” can both be performed simultaneously.
- If both “SFTP Transfer” for when an alarm occurs and “SFTP periodic image transmission” are set, “SFTP Transfer” will be given priority when an alarm occurs.

### [Recording format]

Select the recording format by selecting from “JPEG(1)”, “JPEG(2)”, “Stream(1)”, “Stream(2)”, “Stream(3)” and “Stream(4)”.

### [Next] button

If you select “SFTP Transfer” for “Trigger” and click the [Next] button, the SFTP transfer setup menu will be displayed. (→“Set SFTP transfer (SFTP transfer setup menu)”)

If you select “SD memory recording” for “Trigger”, select “JPEG(1)” or “JPEG(2)” for “Recording format”, and then click the [Next] button, the JPEG recording setup menu will be displayed. (→Configure SD memory recording (JPEG) (JPEG recording setup menu))

If you select “SD memory recording” for “Trigger”, select “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” for “Recording format”, and then click the [Next] button, the video recording setup menu will be displayed. (→“Configure SD memory recording (H.265 or H.264) (video recording setup menu)”)

### Note

- If you click the [Next] button, the setting items in the screen are saved.
- Even when the audio detection alarm is set, alarm recording onto the SD memory card will not be performed.

### [Back] button

If you click the [Back] button the alarm setup menu will be displayed. (→Alarm: “Configure the terminal and VMD (alarm setup menu)”)

**Alarm: Configure the details for image transfer or recording conditions**  
 (Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action] – Alarm: Configure the details for recording conditions)

(1) [Set SFTP transfer \(SFTP transfer setup menu\)](#)

SFTP transfer when an alarm is detected is set in this section.

The screenshot shows two configuration screens. The top screen is titled "SFTP alarm setting" and includes the following fields:

- Alarm image SFTP transmission:** Radio buttons for On (selected) and Off.
- Directory name:** A text input field.
- File name:** A text input field with checkboxes for Terminal 1, Terminal 2, Terminal 3, VMD, SCD, and Audio detection.
- Pre alarm:** Fields for Transmission interval (10s), Maximum number of images (10 pics), and Recording duration (0s).
- Post alarm:** Fields for Transmission interval (10s), Number of images (100 pics), and Recording duration (100s).
- Image capture size:** A dropdown menu set to JPEG(2) with a resolution of (640x360).

The bottom screen is titled "SFTP server setting" and includes the following fields:

- SFTP server address:** A text input field with an example entry: 192.168.0.10.
- Port number:** A text input field set to 22, with a range of (1-65535).
- Host key hash:** A text input field with a SHA256 label and an example entry: dqVcdVZ/2ySO5tz/R6YR+rbW6dnap6P743uiMV0cf0.
- User name:** A text input field.
- Password:** A text input field.

At the bottom of the screen are "Back" and "Next" buttons.

Refer to "12. Add SFTP image transmission function" for information about how to set the above screen.

**[Next] button**

If you select "Alarm output" in the alarm setup menu and click the [Next] button, the alarm output setup menu will be displayed. (→"Alarm: Configure the output terminal")

If you click the [Next] button in the alarm setup menu without selecting "Alarm output", the mail setup menu will be displayed. (→"Alarm: configure the mail notifications and mail server")

**Note**

- If you click the [Next] button, the setting items in the screen are saved.

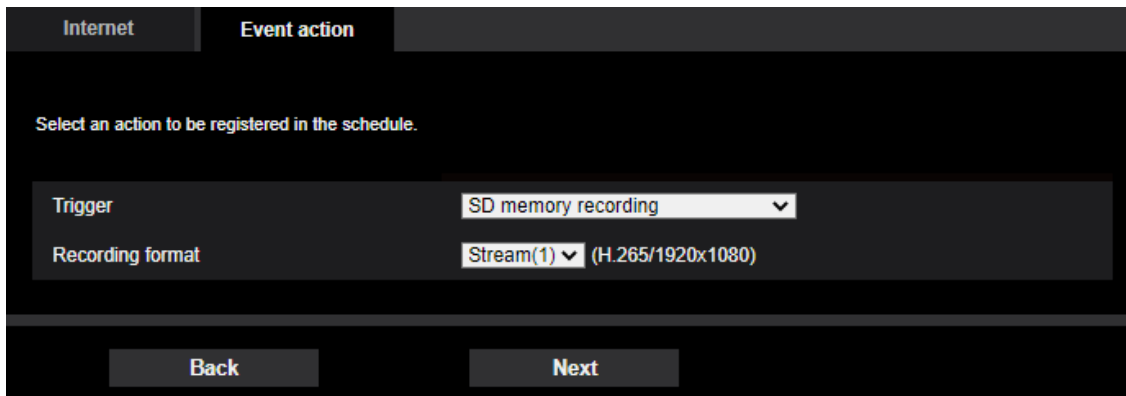
**[Back] button**

If you click the [Back] button, the alarm function type setup menu will be displayed. (→"Alarm: Configure the alarm function type (Alarm function type setup menu)")

## Schedule: Configure SD recording or SFTP periodic image transmission (schedule function type setup menu)

(Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action] – Schedule: Configure SD recording or SFTP periodic image transmission (schedule function type setup menu) )

Here, the schedule type is selected as “SD memory recording” or “SFTP periodic image transmission”.



The screenshot shows a dark-themed interface with a header bar containing 'Internet' and 'Event action' tabs. Below the header, the text 'Select an action to be registered in the schedule.' is displayed. Two dropdown menus are visible: 'Trigger' is set to 'SD memory recording' and 'Recording format' is set to 'Stream(1) (H.265/1920x1080)'. At the bottom, there are two buttons labeled 'Back' and 'Next'.

### [Trigger]

- **SD memory recording:** Records the H.265 (or H.264) image in the SD memory card at the scheduled time.
- **SFTP periodic image transmission:** Transmits the JPEG image to the SFTP server at the scheduled time.

### [Recording format]

When “SD memory recording” is selected for “Trigger”, “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” can be selected for the recorded image.

### [Next] button

If you select “SD memory recording” and click the [Next] button, the video recording setup menu will be displayed. (→“Schedule: Set SD memory recording (video recording setup menu)”)

If you select “SFTP periodic image transmission” and click the [Next] button, the SFTP periodic image transmission setup menu will be displayed. (→“Schedule: Configure SFTP periodic image transmission (SFTP periodic image transmission setup menu)”)

### Note

- If you click the [Next] button, the setting items in the screen are saved.

### [Back] button

If you click the [Back] button, the event function type setup menu will be displayed. (→“Configure the schedule/alarm (event function type setup menu)”)

### Note

- “SFTP periodic image transmission” and “SFTP img. trans.” for when an alarm occurs can both be performed simultaneously.
- If you select “SD memory recording”, the “SFTP periodic image transmission” setting will be canceled.

## Schedule: Configure SFTP periodic image transmission (SFTP periodic image transmission setup menu)

(Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action])

The SFTP periodic image transmission is configured in this section.

- To configure SFTP periodic image transmission settings:

SFTP periodic image transmission	
SFTP periodic image transmission	<input type="radio"/> On <input checked="" type="radio"/> Off
Directory name	<input type="text"/>
File name	<input type="text"/> <input type="radio"/> Name w/time&date <input type="radio"/> Name w/o time&date
Transmission interval	<input type="text"/>
Image capture size	<input type="text"/> (640x360)

SFTP server setting	
SFTP server address	<input type="text"/> Example of entry: 192.168.0.10
Port number	<input type="text"/> (1-65535)
Host key hash	SHA256: <input type="text"/> Example of entry: dqVcdVZ/2ySO5tz/R6YR+rpbW6dnap6P743uiMV0cf0
User name	<input type="text"/>
Password	<input type="text"/>

Refer to “12. Add SFTP image transmission function” for information about how to configure the above screen.

### **[Set] button**

“SFTP periodic image transmission” is displayed as “Off”.

Click the “Set” button to save the settings.

### **[Next] button**

“SFTP periodic image transmission” is displayed as “On”.

If you click the [Next] button, the setup menu to set the SFTP periodic image transmission schedule will be displayed. (→“To configure SFTP periodic image transmission schedule settings”)

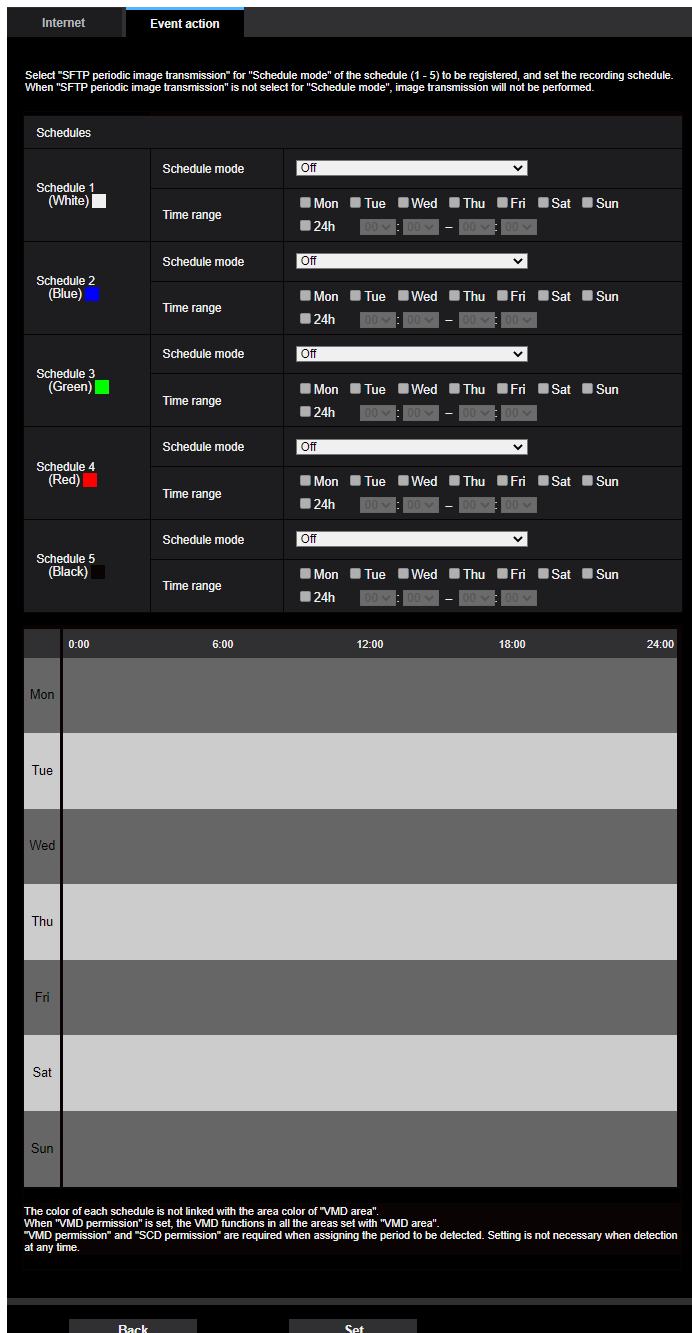
### **Note**

- If you click the [Next] button, the setting items in the screen are saved.

### **[Back] button**

If you click the [Back] button, the schedule function type setup menu will be displayed. (→“Schedule: Configure SD recording or SFTP periodic image transmission (schedule function type setup menu)”)

•To configure SFTP periodic image transmission schedule settings:



Refer to “Configure the settings relating to the schedules [Schedule]” for information about how to set the above screen.

**[Set] button**

If you click the [Set] button, setup will be completed.

**[Back] button**

If you click the [Back] button, the SFTP periodic image transmission setup menu will be displayed. (→“Schedule: Configure SFTP periodic image transmission (SFTP periodic image transmission setup menu)”)

**Note**

•SFTP periodic image transmission will not be performed when “SFTP periodic image transmission” is not selected in “Schedule mode”.

## 10. Add “SFTP periodic image transmission error” to “Save trigger” of SD memory card

(Operating Instructions – Configure the basic settings of the camera [Basic] – Configure the settings relating to the SD memory card [SD memory card])

With the addition of the SFTP function, “SFTP periodic image transmission error” has been added to the “Save trigger” of the Recording stream.

### Recording stream

#### [Save trigger]

Select a trigger to save images on the SD memory card from the following.

- **SFTP periodic image transmission error:** Saves images when images have failed to transmit to the SFTP server by the SFTP periodic image transmission function. Available only for the “JPEG (1)” or “JPEG(2)” images.
- **Alarm input:** Saves images at an alarm occurrence.
- **Manual:** Saves images manually.
- **Schedule:** Saves images in accordance with the settings for “Schedule” (→“Configure the settings relating to the schedules [Schedule]”). Available only for the “Stream (1)”, “Stream(2)”, “Stream(3)”, or “Stream (4)” images.
- **Default:** Manual

If you have selected “Alarm input” in the [Save trigger], you can select the alarm type from the following:

- **Terminal 1:** Save the image when an alarm occurs in Terminal 1.
- **Terminal 2:** Save the image when an alarm occurs in Terminal 2.
- **Terminal 3:** Save the image when an alarm occurs in Terminal 3.
- **VMD:** Save the image when motion detection occurs.
- **SCD:** Save the image when SCD occurs.
- **Command alarm:** Save the image when a command alarm is entered.

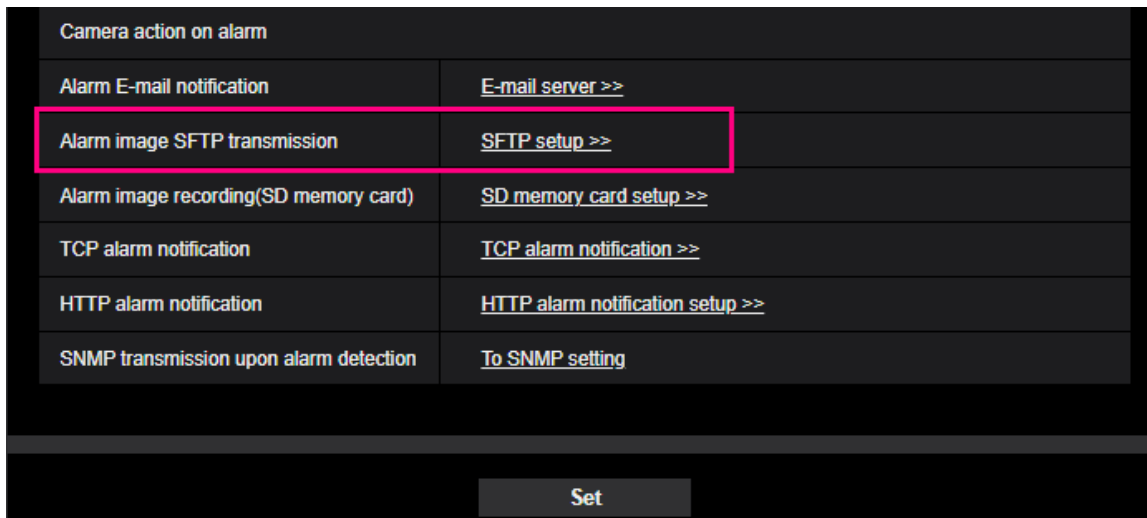
#### **Note**

- When “Stream (1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” is selected for “Recording format”, “SFTP periodic image transmission error” is unavailable.
- To enable alarms to occur, alarm settings must be configured in advance on the [Alarm] tab.
- When “JPEG (1)” or “JPEG(2)” is selected for “Recording format”, “Schedule” is unavailable.
- When connected with our network disk recorder, “Save trigger” may be displayed in a gray-out state as “Network failure”. To change the setting of “Save trigger” after disconnecting the recorder, set “Not use” for “SD memory card” once and then set “Use” again.
- Alarm recording is not available for streams that are being distributed in a state where “Advanced (Fixed GOP 60s w/1s key-frame)” is selected for “GOP control”.
- No image will be recorded at the time of an audio detection alarm occurrence.

## 11. Add link to SFTP settings in Camera action on alarm

(Operating Instructions – Configure the alarm settings [Alarm] – Configure the settings relating to the camera action on alarm occurrence [Alarm])

Click the [Alarm] tab on the “Alarm” page. (→“How to display the setup menu”, “How to operate the setup menu”) The settings related to the camera action on alarm can be configured in this section.



### [Alarm E-mail notification]

Click “E-mail server >>” to display the setup menu that can configure the settings relating to E-mail notification when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to alarm E-mail notifications”)

### [Alarm image SFTP transmission]

Click “SFTP setup >>” to display the setup menu that can configure the settings relating to SFTP transmission when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to SFTP transmissions of alarm images”)

### [Alarm image recording (SD memory card)]

Click “SD memory card setup >>” to display the setup menu that can configure the settings relating to recording images on an SD memory card when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to recording to an SD memory card when an alarm occurs”)

### [TCP alarm notification]

Click “TCP alarm notification >>” to display the setup menu that can configure the settings relating to transmitting TCP alarm notifications when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to TCP alarm protocol notification when an alarm occurs”)

### [HTTP alarm notification]

Click “HTTP alarm notification setup >>” to display the setup menu that can configure the settings relating to transmitting HTTP alarm notifications when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to HTTP alarm notification when an alarm occurs”)

**[SNMP transmission upon alarm detection]**

Click “To SNMP setting” to display the setup menu that can configure the settings relating to SNMP transmission when an alarm occurs. The setup menu will be displayed in a newly opened window.  
(→“Configure settings relating to SNMP transmissions of alarm images”)

## Configure settings relating to SFTP transmissions of alarm Images

(Operating Instructions – Configure the alarm settings [Alarm])

– Configure the settings relating to the camera action on alarm occurrence [Alarm])

Click “SFTP setup >>” of “Camera action on alarm” on the [Alarm] tab of the “Alarm” page. (→“Configure the settings relating to the camera action on alarm occurrence [Alarm]”)

Refer to “12. Add SFTP image transmission function” for information on configuration for these settings.

SFTP alarm setting			
Alarm image SFTP transmission	<input type="radio"/> On <input checked="" type="radio"/> Off		
Directory name	<input type="text"/>		
File name	<input type="text"/>		
	<input checked="" type="checkbox"/> Terminal 1 <input checked="" type="checkbox"/> VMD	<input checked="" type="checkbox"/> Terminal 2 <input checked="" type="checkbox"/> SCD	<input checked="" type="checkbox"/> Terminal 3 <input checked="" type="checkbox"/> Command alarm <input checked="" type="checkbox"/> Audio detection
* For alarms by the "Ext. software", alarm images will be transmitted only by configuring the alarm image SFTP transmission.			
Pre alarm	Transmission interval	Maximum number of images	Recording duration
	<input type="text" value="1fps"/>	<input type="text" value="0 pic"/>	0s
Post alarm	Transmission interval	Number of images	Recording duration
	<input type="text" value="1fps"/>	<input type="text" value="100 pics"/>	100s
Image capture size	<input type="text" value="JPEG(2)"/> (640x360)		
SFTP server setting			
SFTP server address	<input type="text"/> Example of entry: 192.168.0.10		
Port number	<input type="text" value="22"/> (1-65535)		
Host key hash	SHA256: <input type="text"/> Example of entry: dqVcdVZ/2ySO5tz/R6YR+rpbW6dnap6P743uiMV0cf0		
User name	<input type="text"/>		
Password	<input type="text"/>		
<input type="button" value="Set"/>		<input type="button" value="Close"/>	

## 12. Add SFTP image transmission function

(Operating Instructions – Configuring the network settings [Network] – Configure advanced network settings [Advanced])

SFTP (SSH File Transfer Protocol) function has been added to securely send images to the server by using SSH (Secure Shell) encrypted data stream.

It has the following two transmission functions.

- Send images when an alarm occurs
- Send images periodically

The screenshot shows the 'Advanced' network settings page with 'SFTP' highlighted. It contains three main configuration sections:

- SFTP alarm setting:** Includes a radio button for 'Alarm image SFTP transmission' (currently 'Off'), a text field for 'Directory name', a 'File name' section with checkboxes for Terminal 1, Terminal 2, Terminal 3, VMD, SCD, Command alarm, and Audio detection, and 'Pre alarm' and 'Post alarm' settings with dropdowns for transmission interval, maximum number of images, and recording duration. The image capture size is set to JPEG(2) (640x360).
- SFTP periodic image transmission:** Includes a radio button for 'SFTP periodic image transmission' (currently 'Off'), a text field for 'Directory name', a 'File name' section with radio buttons for 'Name w/time&date' and 'Name w/o time&date', a 'Transmission interval' dropdown, and an 'Image capture size' dropdown set to JPEG(2) (640x360).
- SFTP server setting:** Includes text fields for 'SFTP server address' (with example 192.168.0.10), 'Port number' (with example 22 and range 1-65535), 'Host key hash' (with example SHA256: dqVcdVZ/2ySO5tz/R6YR+rpBW6dnap6P743uiMV0cf0), 'User name', and 'Password'.

A 'Set' button is located at the bottom of the configuration area.

### SFTP alarm

#### [Alarm image SFTP transmission]

Select "On" or "Off" to determine whether or not to transmit the alarm image to the SFTP server.

- **Default:** Off

#### [Directory name]

Enter the directory name where the alarm images are to be saved.

For example, enter "/ALARM" to designate the directory "ALARM" under the root directory of the SFTP server.

- **Available number of characters:** 1 - 256 characters
- **Unavailable characters:** " & ;

### [File name]

Enter the file name used for the alarm image to be transmitted to an SFTP server. The file name will be as follows.

File name: ["Entered file name" + "Time and date (year/ month/ day/ hour/ minute/ second)"] + "Serial number"

- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & \* / : ; < > ? ¥ |
- **Terminal 1:** Transmit the image to the SFTP server when an alarm occurs in Terminal 1.
- **Terminal 2:** Transmit the image to the SFTP server when an alarm occurs in Terminal 2.
- **Terminal 3:** Transmit the image to the SFTP server when an alarm occurs in Terminal 3.
- **VMD:** Transmit the image to the SFTP server when motion is detected.
- **SCD:** Transmit the image to the SFTP server when SCD (scene change detection) occurs.
- **Audio detection:** Transmit the image to the SFTP server when audio detection occurs.
- **Command alarm:** Transmit the image to the SFTP server when a command alarm is entered.

### [Pre alarm]

#### • **Transmission interval**

Select the update interval of images before an alarm occurs from the following.

When 30fps mode or 15fps mode is selected for [Image capture mode]:

0.1fps/ 0.2fps/ 0.33fps/ 0.5fps/ 1fps

When 25fps mode or 12.5fps mode is selected for [Image capture mode]:

0.08fps/ 0.17fps/ 0.28fps/ 0.42fps/ 1fps

- **Default:** 1fps

#### • **Maximum number of images**

Select the number of images to be transmitted from the following.

0pics/ 1pic/ 2pics/ 3pics/ 4pics/ 5pics/ 6pics\*/ 7pics\*/ 8pics\*/ 9pics\*/ 10pics\*/ 20pics\*/ 30pics\*/ 40pics\*/ 50pics\*

- **Default:** 0 pics

#### • **Recording duration**

The recording duration, which changes according to the configured "Transmission interval" and "Maximum number of images", of images recorded before an alarm occurs is displayed.

### Note

- When "JPEG(1)" is selected for the capture size of the image to be transmitted, pre alarm is unavailable if the image capture size of "JPEG(1)" is "1920x1080".
- When "On" is selected for "Image compression rate upon alarm detection", only post alarm recorded images are compressed. Compression is not applied to pre alarm recorded images.
- When a selection with an asterisk (\*) on the right of it is selected for "Maximum number of images" of "Pre alarm", the specified number of images may not be able to be sent depending on the image capture size and image quality. The following table shows the maximum number of images that can be sent for pre alarm.

		Image quality									
		0	1	2	3	4	5	6	7	8	9
Image capture size	1280x960	5	6	7	8	10	10	10	20	30	40
	1280x720	7	8	10	10	10	20	20	30	40	50
	VGA	10	20	20	30	30	40	50	50	50	50
	640x360	20	30	40	50	50	50	50	50	50	50
	QVGA	40	50	50	50	50	50	50	50	50	50
	320x180	50	50	50	50	50	50	50	50	50	50

**[Post alarm]**

**• Transmission interval**

Select the transmission interval for the alarm image transmission to the FTP server from the following.

When 30fps mode or 15fps mode is selected for [Image capture mode]:

0.1fps/ 0.2fps/ 0.33fps/ 0.5fps/ 1fps

When 25fps mode or 12.5fps mode is selected for [Image capture mode]:

0.08fps/ 0.17fps/ 0.28fps/ 0.42fps/ 1fps

**• Default:** 1fps

**• Number of images**

Select the number of images to be transmitted from the following.

1pic/ 2pics/ 3pics/ 4pics/ 5pics/ 6pics/ 7pics/ 8pics/ 9pics/ 10pics/ 20pics/ 30pics/ 50pics/ 100pics/ 200pics/300pics/ 500pics/ 1000pics/ 1500pics/ 2000pics/ 3000pics

**• Default:** 100pics

**• Recording duration**

Approximate time to be taken to save the set “Number of images” with the set “Transmission interval” will be displayed.

**[Image capture size]**

Select the image capture size of images transmitted when an alarm occurs from the following.

JPEG(1)/JPEG(2)

**• Default:** JPEG(2)

**SFTP periodic image transmission**

**[SFTP periodic image transmission]**

Select “On” or “Off” to determine whether or not to transmit images using the SFTP periodic image transmission function.

When “On” is selected, it is necessary to configure the settings of the SFTP server.

**• Default:** Off

**IMPORTANT**

• When using SFTP periodic image transmission, it is necessary to configure the schedule settings of SFTP periodic image transmission on the [Schedule] tab of the “Schedule” page. (→“Configure the settings relating to the schedules [Schedule]”)

### [Directory name]

Enter the directory name where the images are to be saved.

For example, enter “/img” to designate the directory “img” under the root directory of the SFTP server.

- **Available number of characters:** 1 - 256 characters
- **Unavailable characters:** " & ;
- **Default:** None (blank)

### [File name]

Enter the file name (name of the image file to be transmitted) and select the naming option from the following.

- **Name w/time&date:** File name will be [“Entered file name” + “Time and date (year/ month/ day/ hour/ minute/ second)” + “Serial number (starting from 00)”].
- **Name w/o time&date:** File name will be the characters entered for “File name” only. When “Name w/o time&date” is selected, the file will be overwritten each time a file is newly transmitted.
- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & ; : / \* < > ? ¥ |
- **Default:** None (blank)

### Note

- When “Name w/time&date” is selected, the file name will be [“Entered file name” + “Time and date (year/ month/ day/ hour/ minute/ second)” + “Serial number (starting from 00)” + “s” during summer time.

### [Transmission interval]

Select the interval for the FTP periodic image transmission from the following.

1s/ 2s/ 3s/ 4s/ 5s/ 6s/ 10s/ 15s/ 20s/ 30s/ 1min/ 2min/ 3min/ 4min/ 5min/ 6min/ 10min/ 15min/ 20min/ 30min/1h/ 1.5h/ 2h/ 3h/ 4h/ 6h/ 12h/ 24h

- **Default:** 1s

### [Image capture size]

Select the image capture size of images to be transmitted from the following.

JPEG(1)/JPEG(2)

- **Default:** JPEG(2)

## SFTP server

### [SFTP server address]

Enter the IP address or the host name of the SFTP server.

- **Available number of characters:** 1 - 128 characters
- **Available characters:** Alphanumeric characters, the colon (:), the period (.), the underscore (\_), and the hyphen (-).

### **IMPORTANT**

- When entering the host name for “SFTP server address”, it is necessary to configure the DNS settings on the [Network] tab of the “Network” page. (→“Configure the network settings [Network]”)

### [Port number]

Enter a control port number to be used for the FTP server.

- **Available port number:** 1-65535

- **Default:** 22

The following port numbers are unavailable since they are already in use.

20, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 995, 10669, 10670

#### **[Host key hash]**

Enter the hash value of the public key of the SFTP server.

- **Available number of characters:** 43 - 44 characters
- **Available characters:** Alphanumeric characters, +, /, =

#### **[User name]**

Enter the user name (login name) to access the FTP server.

- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & ; ¥

#### **[Password]**

Enter the password to access the FTP server.

- **Available number of characters:** 0 - 32 characters
- **Unavailable characters:** " &

## 13. Add SFTP periodic image transmission to “Schedule mode” of Schedule

### (Operating Instructions – Configure the settings relating to the schedules [Schedule])

“SFTP periodic image transmission” was added to “Schedule mode” of the schedule setting.

#### [Schedule mode]

Select an action to be assigned to the schedule from “Schedule mode”.

“Off” is selected at the default.

- **Off:** No action will be taken for the respective schedule.
- **Alarm permission (Terminal alarm 1, 2, 3):** Alarm input (terminal alarm) will be allowed during the period of the schedule.
- **Alarm permission (Terminal alarm 1):** Terminal 1 alarm input will be allowed during the period of the schedule.
- **Alarm permission (Terminal alarm 2):** Terminal 2 alarm input will be allowed during the period of the schedule.
- **Alarm permission (Terminal alarm 3):** Terminal 3 alarm input will be allowed during the period of the schedule.
- **VMD permission:** The video motion detection (VMD) function will be active during the period of the schedule.
- **SCD permission:** The scene change detection (SCD) function will be active during the period of the schedule.
- **Audio detection permission:** The audio detection function will be active during the period of the schedule.
- **Access permission:** Users whose access level is set to “2. Camera control” and “3. Live only” on the [User auth.] tab (→“Configure the settings relating to the user authentication [User auth.]”) can access the camera only in the period of schedule.
- **Recording to SD (Recording stream):** The SD recording will be performed at the designated time in the schedule. Further, the “Recording format” is enabled only when there is a stream.
- **Image adjust 1: Scene 1:** Images are set to the image settings of “Scene file 1” at the designated time in the schedule. When the designated time for the schedule finishes, images are set to the image settings of “Scene file is not applied”.
- **Image adjust 2: Scene 2:** Images are set to the image settings of “Scene file 2” at the designated time in the schedule. When the designated time for the schedule finishes, images are set to the image settings of “Scene file is not applied”.
- **Image adjust 3: Scene 3:** Images are set to the image quality settings of “Scene file 3” at the designated time in the schedule. Once designated time in the schedule is over, the image quality setting is set to “Scene file is not applied”.
- **Image adjust 4: Scene 4:** Images are set to the image quality settings of “Scene file 4” at the designated time in the schedule. Once designated time in the schedule is over, the image quality setting is set to “Scene file is not applied”.
- **SFTP periodic image transmission:** SFTP periodic image transmission will be performed at the designated time in the schedule.
- **E-mail permission:** While the schedule is set, e-mail notification is sent when alarm is input.
- **Reboot:** The camera reboots at the scheduled time. Can only be selected with Schedule 5.

**Note**

- Select “On” for “User auth.” on the [User auth.] tab of “User mng.” page (→“Configure the settings relating to the user authentication [User auth.]”) and “Off” for “Host auth.” on the “Host auth.” page (→“Configure the settings relating to the host authentication [Host auth.]”) to validate “Access permission”.
- When selecting “Recording to SD (Recording stream)”, select “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” for “Recording format” on the [SD memory card] tab and select “Schedule” for “Save trigger”. (→ [Save trigger] in “Configure the settings relating to the SD memory card [SD memory card]”)

## 14. Using the recording function is changed when the Ext. software mode is On

(Operating Instructions – Configure the basic settings of the camera [Basic]) – Configure the settings relating to the SD memory card [SD memory card])

Even if the Ext. software mode is set to On, the recording function to SD memory card by this product function can be used.

### [Ext. software mode]

Set this setting to “On” when the installed Ext. software uses the SD memory card of this product.

- **On:** The Ext. software can use the SD memory card of this product.
- **Off:** The Ext. software cannot use the SD memory card of this product.

**Default:** Off

### Note

- For information about the software, refer to our support website  
<https://i-pro.com/global/en/surveillance/training-support/support/technical-information>  
<Control No.: C0103>.
- When the Ext. software mode is set from On to Off, it is recommended to format the SD memory card.
- When operating the Ext. software that uses an SD memory card, the operation of the recording function to the SD memory card cannot be guaranteed.

## 15. Change the initial value of “Overwrite” of SD memory card to On (Operating Instructions – Configure the basic settings of the camera [Basic]) – Configure the settings relating to the SD memory card [SD memory card])

### [Overwrite]

Determine whether or not to overwrite when the remaining capacity of the SD memory card becomes insufficient.

- **On:** Overwrites when the remaining capacity of the SD memory card becomes insufficient. (The oldest image is the first to be overwritten.)
- **Off:** Stops saving images on the SD memory card when the SD memory card becomes full.
- **Default:** On

## 16. Add NTP test function

(Operating Instructions – Configuring the network settings [Network] – Configure advanced network settings [Advanced] – Configure the settings relating to the NTP server)

Add a test function for time synchronization to check if it can communicate with NTP server.

NTP	
Time adjustment	<input checked="" type="radio"/> Manual <input type="radio"/> Synchronization with NTP server
NTP server address setting	Manual ▾
NTP server address	<input type="text"/> Example of entry: 192.168.0.10
NTP port	<input type="text" value="123"/> (1-65535)
Time adjustment interval	<input type="text" value="1h"/> ▾
NTP test	<input type="button" value="Execute"/>

### [NTP test]

Select “Synchronization with NTP server” for “Time adjustment”, set the NTP server information, and then click the “Execute” button. You can communicate with the NTP server, synchronize the time, and check the NTP operation.

### Note

- If the NTP test succeeds, “NTP time correction has succeeded.” is displayed .
- If the NTP test fails, “NTP time correction has failed.” is displayed .
- When “Time adjustment” is set to “Manual”, the “Execute” button of NTP test is grayed out.
- When “Time adjustment” is set to “Synchronization with NTP server” and the “NTP server address” is not set, the “Execute” button for the NTP test will be grayed out.

## 17. Add TLS settings to HTTPS

(Operating Instructions – Configuring the network settings [Network] – Configure advanced network settings [Advanced] – Configure the HTTPS settings)

Add TLS1.1, TLS1.2 and TLS1.3 selection items to the HTTPS connection method.

The screenshot shows the 'Advanced' tab of the Network settings interface. The 'HTTPS' section is active, and the 'Connection' dropdown is set to 'HTTP'. A pink box highlights the TLS options: 'TLS1.1' (disabled), 'TLS1.2' (checked), and 'TLS1.3' (checked). Below this, there are sections for 'Pre-installed certificate', 'CA Certificate', and 'Information'. The 'Information' section shows 'Invalid' and buttons for 'Confirm' and 'Delete'. A 'Set' button is at the bottom.

Network		Advanced	
SMTP(E-mail)   SFTP   NTP   UPnP   <b>HTTPS</b>   DDNS   SNMP   QoS   SRTP   MQTT   LLDP			
HTTPS			
Connection	HTTP	When "HTTPS" is selected for "Connection", the maximum bandwidth(bit rate) is limited to 32Mbps.	
	<input type="checkbox"/> TLS1.1	<input checked="" type="checkbox"/> TLS1.2	<input checked="" type="checkbox"/> TLS1.3
Select certificate	Pre-installed		
HTTPS port	443	(1-65535)	
Pre-installed certificate			
Download root certificate	Execute		
CA Certificate			
CRT key generate	Execute		
Generate Certificate Signing Request	Execute		
CA Certificate install		Browse...	Execute
Information	Invalid	Confirm	Delete
Set			

### [HTTPS - Connection]

Select the protocol used to connect the camera.

- **HTTP:** HTTP and HTTPS connections are available.
- **HTTPS:** Only the HTTPS connection is available.
- **Default:** HTTP

Select the TLS to use when HTTPS is selected.

- **TLS1.1:** Enable/Disable.
- **TLS1.2, TLS1.3:** Always enabled and cannot be disabled.
- **Default:** **TLS1.1:** Disable, **TLS1.2:** Enable, **TLS1.3:** Enable

### Note

- To change to an HTTPS connection when HTTP is selected, perform HTTPS connection settings first. The HTTPS connection will be available even if the setting is changed to HTTP afterwards.

## 18. Add MQTT function

(Operating Instructions – Configuring the network settings [Network] – Configure advanced network settings [Advanced])

MQTT (Message Queueing Telemetry Transport) has been added to “Advanced” of “Network”. When an alarm occurs, the MQTT server can be notified of the event action by the alarm.

The screenshot shows the MQTT settings configuration interface. At the top, there are tabs for 'Network' and 'Advanced'. Below the tabs, there is a navigation bar with links for 'SMTP(E-mail)', 'SETIP', 'NTP', 'UPnP', 'HTTPS', 'DDNS', 'SNMP', 'QoS', 'SRTP', 'MQTT', and 'LLDP'. The 'MQTT' link is highlighted. The main content area is divided into several sections:

- MQTT settings:** A toggle switch for 'On' and 'Off'. The 'Off' option is selected.
- Server:** Fields for 'Address', 'Port number' (with a default value of 1883 and a note '(1-65535)'), 'Protocol' (set to 'MQTT'), 'User name', and 'Password'.
- Root CA certificate:** An 'Installation' section with a 'Choose File' button and a note 'No file chosen', and an 'Execute' button. An 'Information' section shows 'Invalid' status with 'Confirm' and 'Delete' buttons. A 'Server certificate verification' section has a toggle for 'Enable' and 'Disable', with 'Enable' selected. A note states: 'When the server certificate verification is enabled, it is necessary to install a root CA certificate.'
- Notification setting:** A section with a toggle for 'Enable/Disable' and a 'Notification string' section. The 'Enable/Disable' toggle is set to 'Enable'. The 'Notification string' section has a table with columns for 'Terminal' and 'Notification string'. The table has six rows: 'Terminal 1', 'Terminal 2', 'Terminal 3', 'VMD', 'Audio detection', and 'Command alarm'. Each row has fields for 'Topic', 'Payload', and 'QoS', and a 'Retain' checkbox.
- Alarm:** A section with a 'Set' button at the bottom.

### [MQTT settings]

Set On/Off whether to enable/disable the MQTT function.

When set to On, or it is On when the camera starts up, it will connect to the set server.

When the set alarm occurs, the settings will be notified to the server.

**Default:** Off

### Server

#### [Address]

Enter the IP address or host name of the MQTT server to be notified when an alarm occurs.

**Available number of characters:** 1 - 128 characters

**Available characters:** Alphanumeric characters, the colon (:), the period (.), the underscore (\_), and the hyphen (-)

**Default:** None (blank)

**[Port]**

Enter the port number of the MQTT server.

**Available port number:** 1 - 65535

**Default:** 8883

The following port numbers cannot be set because they are used by this product.

20, 21, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 554, 995, 10669, 10670

**[Protocol]**

Select the protocol to use when connecting to an MQTT server from MQTT over SSL/MQTT over TCP.

**Default:** MQTT over SSL

**[User name]**

Enter the user name to access the MQTT server.

**Available number of characters:** 0 - 32 characters

**Unavailable characters:** " & ; ¥

**[Password]**

Enter the password to access the MQTT server.

**Available number of characters:** 0 - 32 characters

**Unavailable characters:** " &

**Root CA certificate****[Install]**

Install the root CA certificate issued by the certification authority.

In the "Open File Dialog" that appears when you click the [Choose File] button, select the root CA certificate file issued by the certification authority, and then click the [Execute] button to install the root CA certificate.

The data format of the root CA certificate is PEM format or DER format.

**[Information]**

The root CA certificate information is displayed.

**Invalid :** The root CA certificate is not installed.

**Root CA certificate host name :** Indicates that the certificate is installed.

[Confirm] The details of CA certificate can be checked with the button.

[Delete] The CA certificate will be deleted with the button.

**[Server certificate verification]**

When [Protocol] is set to "MQTT over SSL" and [Server certificate verification] is set to "Enable", the server certificate is verified using the root CA certificate registered during the SSL connection.

**Default :** Enable

**Note**

- When [Server certificate verification] is set to "Enable", install the root CA certificate.

## Notification setting

### [Alarm]

Check the alarm events to be notified to the MQTT server.

**Terminal 1:** Notifies the MQTT server when an alarm occurs at terminal 1.

**Terminal 2:** Notifies the MQTT server when an alarm occurs at terminal 2.

**Terminal 3:** Notifies the MQTT server when an alarm occurs at terminal 3.

**VMD:** Notifies the MQTT server when motion detection occurs.

**Audio detection:** Notifies the MQTT server when audio detection occurs.

**Command alarm:** Notifies the MQTT server when a command alarm is entered.

### [Topic]

Set the MQTT topic name to be sent. Topics have a hierarchical structure separated by "/".

**Available number of characters:** 1 - 128 characters

**Available characters:** Alphanumeric characters, "/"

**Default:**

**Terminal 1:** i-PRO/NetworkCamera/Alarm/Terminal/1

**Terminal 2:** i-PRO/NetworkCamera/Alarm/Terminal/2

**Terminal 3:** i-PRO/NetworkCamera/Alarm/Terminal/3

**VMD:** i-PRO/NetworkCamera/Alarm/VideoMotionDetection

**Audio detection:** i-PRO/NetworkCamera/Alarm/AudioDetection

**Command alarm:** i-PRO/NetworkCamera/Alarm/Command

### [Payload]

Set the MQTT message payload.

**Available number of characters:** 1 - 128 characters

**Available characters:** Alphanumeric characters

**Default:**

**Terminal 1:** terminal alarm 1

**Terminal 2:** terminal alarm 2

**Terminal 3:** terminal alarm 3

**VMD:** VMD alarm

**Audio detection:** audio

**Command alarm:** cmd

### [QoS]

Select the QoS level from 0, 1, 2. The communication quality improves in the order of  $0 < 1 < 2$ .

**0:** The message is delivered at most once with QoS0. There is no guarantee that the message will reach the server.

**1:** The message is delivered at least once with QoS1. The message is guaranteed to reach the destination, but may be duplicated.

**2:** The message is delivered exactly once with QoS2. It guarantees that the message arrives just once.

**Default:** 1

### [Retain]

Check this box if you want the MQTT server to save the last notified message.

**Default:** Unchecked

## 19. Add a system log when MQTT function fails

(Operating Instructions – Others – About the displayed system log)

Add a system log when an error occurs in the MQTT function.

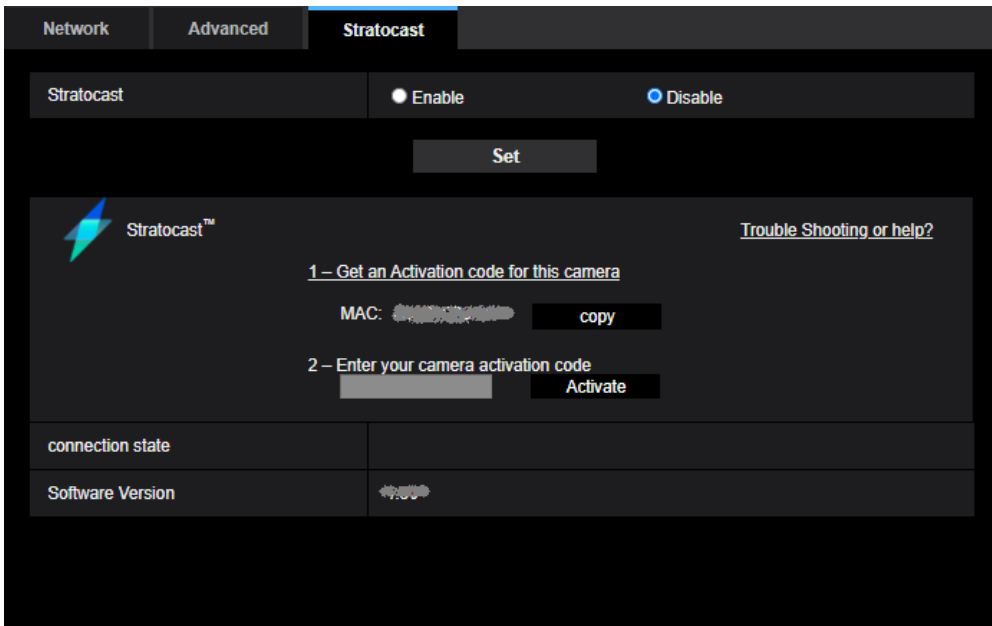
### Error display related to MQTT

Category	Indication	Description
MQTT	<MQTT> Connection error	When the connection to the server fails, certification verification fails, or is disconnected (except for disconnections from the camera due to setting change)
	<MQTT> Notification error	When publishing to the server fails

## 20. Add Genetec Stratocast Service

### (Operating Instructions – Configure the network settings [Network] – Configure Stratocast [Stratocast])

Add settings for connecting to Genetec Stratocast.



The screenshot shows the Stratocast configuration page. At the top, there are tabs for 'Network', 'Advanced', and 'Stratocast'. Below the tabs, there is a 'Stratocast' section with 'Enable' and 'Disable' radio buttons. A 'Set' button is located below the radio buttons. The main content area features the Stratocast logo and a link for 'Trouble Shooting or help?'. Below the logo, there are two steps: '1 - Get an Activation code for this camera' with a 'MAC' field and a 'copy' button, and '2 - Enter your camera activation code' with an input field and an 'Activate' button. At the bottom, there are sections for 'connection state' and 'Software Version'.

Stratocast is a cloud-based video monitoring service provided by Genetec.

You can register the network camera on the cloud server and check the camera images.

#### [Stratocast]

Enables/disables the Stratocast connection function.

Enable: Enables the connection function to Stratocast.

Disable: Disables the connection function to Stratocast.

**Default:** Disable

#### **Note**

- When "Stratocast" is set to "Enable", the "Stream encoding format" of "Stream (1)" is set to "H.264".
- When "Image capture mode" is set to "4: 3 mode (12.5fps mode)" or "4: 3 mode (15fps mode)", you cannot see live images in Stratocast.

#### [Trouble Shooting or help?]

The Stratocast help page will appear in your browser. This help site is Genetec web site.

#### [Get an Activation code for this camera]

The browser will launch and the Stratocast portal site will open. Enter the camera information in the portal site. Once completed, an Activation code will be displayed.

#### [Enter your camera activation code]

Enter the Activation code obtained from the Stratocast portal site.

#### [Connection state]

Indicates the connection status between the camera and Stratocast.

**Activation Started:** The connection to Stratocast has started.

**Time Synchronization failed:** Failed to connect to the Stratocast NTP server.

**Registration failed:** Failed to register the camera with the Enrollment service.

**Device unregistered:** The camera has been unregistered.

**Device Registered:** The camera has been registered with Stratocast.

**Balancer failed:** Failed to connect to Device Load Balancer.

**Device Failed to Connect:** Failed to connect to Stratocast.

**Device Connected:** The camera is connected to Stratocast.

**Device Disconnected:** The connection between the camera and Stratocast has been lost.

### [Software Version]

The version of the camera firmware installed in the camera is displayed.

### To register the Genetec Stratocast Service, follow the steps below.

1. Enable the Stratocast connection function.
  - Select "Enable" in "Stratocast" and click "Set".

### Note

Do not close this window until the camera registration to Stratocast is completed.

2. Log in to Stratocast.

- Click "1 - Get an Activation code for this camera" to connect to the Stratocast portal site with a browser.
- Log in using your registered Genetec account.

3. Follow the instructions on the Stratocast portal site to register the camera and obtain an Activation code.

- Follow the instructions on the Stratocast portal site screen to register the camera.
- Confirm that the MAC address has been entered on the registration screen.

If the MAC address is not entered, enter the MAC address displayed on the camera browser.

(Click the "Copy" button to copy the MAC address to the clipboard.)

- When registration is completed, the Activation code will be displayed.

4. Enter the displayed Activation code on the camera screen to start the Stratocast service.

- Return to the browser screen of the camera, enter the Activation code, and click the "Activate" button.
- Return to the Stratocast portal screen and wait for Stratocast to process (about 5 minutes).
- Follow the instructions on the Stratocast portal screen to start the service.

**Note**

- You can also start the camera registration from the Stratocast portal site. In this case, use the “Copy” button to enter the MAC address of the camera into the portal site.
- For information about Stratocast registration, click [Trouble Shooting or help?] on the camera screen to refer to the Stratocast help site.
- If video delays or connection errors occur, check the connection using the following methods.
  - Check if the network bandwidth is sufficient. A network bandwidth of 1 Gbps or more and a fixed line connection is recommended.
  - Make sure that the camera's LAN cable is not disconnected. Then turn off the camera, turn it on again, wait for a while, and then connect the camera to the network.
- For technical inquiries about Stratocast, please contact your sales representative.

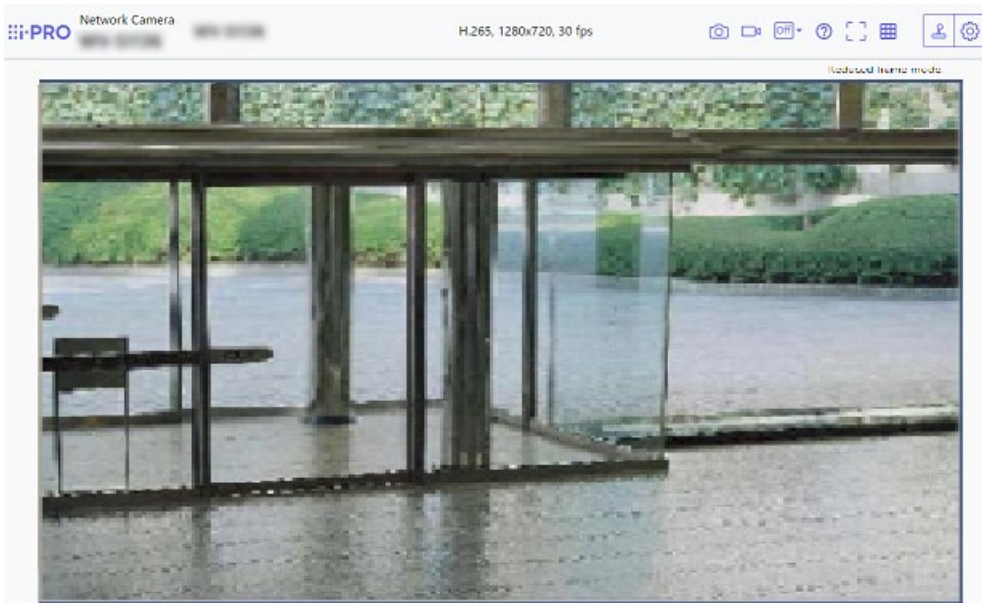
Genetec™, Stratocast™ and  **Stratocast™** are trademarks of Genetec Inc.

## 21. Changed new GUI (Graphical User Interface) (Operating Instructions)

Changed to a new GUI. The “Set” menu of the GUI before change is displayed by clicking the “Settings” [⚙️] button of the new GUI and then clicking the “Camera detailed setting” [⚙️] button on the “Detailed setting” tab.

Refer to the following technical information website [New functions and addendum (New GUI) <Control No.:C0324> for more information.

<https://i-pro.com/global/en/surveillance/training-support/support/technical-information>



## 22. Add AI-VMD alarm area information on TCP alarm notification ( Operating Instructions - Configure the alarm settings [Alarm] - Configuration of the settings relating to alarm notification [Notification] - Configure the settings relating to TCP alarm protocol)

Add AI-VMD alarm area information on TCP alarm notification.

Alarm	VMD area	SCD area	Audio detection	Notification
TCP alarm notification   <a href="#">HTTP alarm notification</a>				
TCP alarm notification	<input type="radio"/> On <input checked="" type="radio"/> Off			
Additional alarm data	<input type="radio"/> On <input checked="" type="radio"/> Off			
AI-VMD alarm area information	<input checked="" type="radio"/> On <input type="radio"/> Off			
Destination port	<input type="text" value="1818"/> (1-65535)			
Retry times	<input type="text" value="2"/> ▼			

### [AI-VMD alarm area information]

Determine whether or not to send notifications for AI-VMD alarm detection area numbers with the TCP alarm protocol by selecting On/Off.

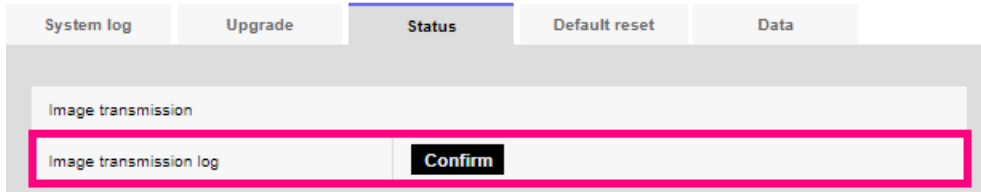
- **Default:** On

#### **Note**

- This setting is displayed if you have installed the extension software AI-VMD.
- This setting is displayed if it is set to AI-VMD in the alarm settings.

## 23. Add Image transmission log on Status page (Operating Instructions - Maintenance of the camera [Maintenance] - Check the status [Status])

Add Image transmission log on Status page.



Click the “Confirm” button, to display the image transmission log in a separate window.

Up to 4,000 image transmission logs can be saved on the SD memory card when the SD memory card is inserted after selecting “Use” for “SD memory card” on the [SD memory card] tab ( Configure the settings relating to the SD memory card [SD memory card]”).

When “Not use” is selected for “SD memory card”, up to 100 image transmission logs can be saved on the built-in memory of the camera.

When the saved image transmission logs have reached the maximum number, the newer logs will overwrite the older image transmission logs. In this case, the oldest log is the first to be overwritten. The image transmission logs will be displayed in group of 100 logs each, and the logs will be saved even when the power of the camera is turned off.

<< Previous 100		1/2Page			Next 100 >>
No.	Time	Stream type	Connected user	IP address	Event
1	Jul/12/2022 22:38:11	Stream(1)	admin	192.168.0.6	Received start request
2	Jul/12/2022 22:12:11	Stream(1)	admin	192.168.0.6	Received stop request
3	Jul/12/2022 22:11:57	Stream(1)	admin	192.168.0.6	Received start request
4	Jul/12/2022 13:03:56	Stream(1)	admin	192.168.0.6	Received start request
5	Jul/11/2022 18:20:42	JPEG(2)	admin	192.168.0.6	Received start request
6	Jul/11/2022 18:20:40	JPEG(2)	admin	192.168.0.6	Received start request
7	Jul/11/2022 18:20:37	JPEG(2)	admin	192.168.0.6	Received start request
8	Jul/11/2022 18:20:16	JPEG(2)	admin	192.168.0.6	Received start request
9	Jul/11/2022 18:19:25	Stream(1)	admin	192.168.0.6	Received start request
10	Jul/08/2022 22:54:00	Stream(1)	admin	192.168.0.6	Received stop request
11	Jul/08/2022 22:53:55	Stream(1)	admin	192.168.0.6	Received start request
12	Jul/05/2022 00:53:24	Stream(1)	admin	192.168.0.6	Received start request
13	Jul/02/2022 15:23:41	Stream(1)	admin	192.168.0.6	Received stop request

**Close**

### [<< Latest 100]

When clicking “<< Latest 100”, the latest 100 image transmission logs will be displayed.

### [Next 100 >>]

When clicking “Next 100 >>”, the next 100 image transmission logs will be displayed.

**[Number of pages display]**

The currently opened page will be displayed in the “page/total page” format.

**[<< Previous 100]**

When clicking “<< Previous 100”, the previous 100 image transmission logs will be displayed.

**[No.]**

The serial number of the image transmission logs will be displayed.

**[Time]**

Time and date at the error occurrence will be displayed.

**[Stream type]**

The stream type (Stream(\*), JPEG(\*), SD memory card playback) of the image transmission logs will be displayed.

\* displays the number.

**[Connected user]**

The user of the image transmission will be displayed.

**Note**

- If “Off” is selected for [User auth.], “-” will be displayed.

**[IP address]**

The IP address of the image transmission will be displayed.

**[Event]**

Start requests, stop requests, and start errors (heavy access) of the image transmission will be displayed.

**Note**

·A stop request may not be logged in the following cases.

- When settings related to the stream are changed, such as the image mode, stream, or resolution
- When moving to the setting screen from the Live image
- When the Live image is closed
- When the network is disconnected

## 24. About removal of functions due to end of Internet Explorer support (Operating Instructions)

Microsoft ended support for the Web browser "Internet Explorer" on June 15, 2022. We have also terminated support for "Internet Explorer" for our cameras, and deleted the following functions that are only compatible with "Internet Explorer".

No	Menu	Tab menu	Delete function
1	Live	-	"Viewer Software" button
2	Basic	Basic	"Status update mode" settings
3	Basic	Basic	"Status reception port" settings
4	Basic	Basic	"Viewer software (nwc4Ssetup.exe)" settings
5	Basic	Log	"Log"
6	Image or Image/Audio	Image	"Internet mode (over HTTP)" settings
7	Multi-screen	Multi-screen	"H.265(1)" or "H.264(1)" option for "Refresh interval"
8	Maintenance	Upgrade	"Viewer software installation counter"

## **25. Changed the initial value of “Audio input encoding format”** **(Operating Instructions Configure the settings relating to images and audio** **[Image/Audio] - Configure the settings relating to audio [Audio])**

Due to the end of support for Internet Explorer, the initial value of [Audio input encoding format] on the [Audio] tab will be changed to "AAC-LC".

### **[Audio input encoding format]**

Select the audio input encoding format to be used in the “Live” page from G.726, G.711, or AAC-LC.

- **Default:** AAC-LC

### **Note**

- With a web browser, you can receive calls only with AAC-LC.
- G.711 is available only when the “Mic Input (To PC)” is selected for “Audio transmission mode”.
- G.726 is always applied for the audio transmission encoding format.

## 26. Add “Close (Continue)” and “Open (Continue)” to the operation setting values of [Terminal 1], [Terminal 2], and [Terminal 3] on the [Alarm] tab

(Operating Instructions – Configure the alarm settings [Alarm] – Configure the settings relating to the alarm action [Alarm])

### Alarm

#### [Terminal 1] [S4556] [S4156] [S4576]

Determine how to use terminal 1.

- **Off:** Not used.
- **Alarm input(TRM1):** Receives alarms. When “Alarm input” is selected, a pull-down menu for “Close” and “Open” is displayed.
  - **Close:** An alarm is detected when the terminal status is changed to “Close”.
  - **Open:** An alarm is detected when the terminal status is changed to “Open”.
  - **Close(Continue):** An alarm is detected when the terminal status is changed to “Close”. When “Close” is selected for the terminal status, alarm detection will be performed regularly at a fixed interval set by “Alarm deactivation time”.
  - **Open(Continue):** An alarm is detected when the terminal status is changed to “Open”. When “Open” is selected for the terminal status, alarm detection will be performed regularly at a fixed interval set by “Alarm deactivation time”.
- **Black & white input** [S4556] [S4576] : Receives the black & white switchover input. (When the input is set to On, the black & white mode is activated.)
- **Auto time adjustment:** Receives the time adjustment input. When the signal is received and if the clock is within 29 minutes ± the hour, the time will be adjusted to 00 minutes 00 seconds. During SD memory card recording, the time is not changed in operations which reset the time under 5 seconds. When “Auto time adjustment” is selected, a pull-down menu for “Close” and “Open” is displayed.
  - **Close:** The time is adjusted when the terminal status is changed to “Close”.
  - **Open:** The time is adjusted when the terminal status is changed to “Open”.
- **Default:** Off

#### [Terminal 2] [S4556] [S4156] [S4576]

Determine how to use terminal 2.

- **Off:** Not used.
- **Alarm input(TRM2):** Receives alarms. When “Alarm input” is selected, a pull-down menu for “Close” and “Open” is displayed.
  - **Close:** An alarm is detected when the terminal status is changed to “Close”.
  - **Open:** An alarm is detected when the terminal status is changed to “Open”.
  - **Close(Continue):** An alarm is detected when the terminal status is changed to “Close”. When “Close” is selected for the terminal status, alarm detection will be performed regularly at a fixed interval set by “Alarm deactivation time”.
  - **Open(Continue):** An alarm is detected when the terminal status is changed to “Open”. When “Open” is selected for the terminal status, alarm detection will be performed regularly at a fixed interval set by “Alarm deactivation time”.
- **Alarm output:** Alarm output will be carried out according to the settings for “Output terminal” ( Configure the settings relating to the output terminal [Alarm] [S4556] [S4156] [S4576] ).
- **Default:** Off

### **[Terminal 3] [S4556] [S4156] [S4576]**

Determine how to use terminal 3.

- **Off:** Not used.
- **Alarm input(TRM3):** Receives alarms. When “Alarm input” is selected, a pull-down menu for “Close” and “Open” is displayed.
  - **Close:** An alarm is detected when the terminal status is changed to “Close”.
  - **Open:** An alarm is detected when the terminal status is changed to “Open”.
  - **Close(Continue):** An alarm is detected when the terminal status is changed to “Close”. When “Close” is selected for the terminal status, alarm detection will be performed regularly at a fixed interval set by “Alarm deactivation time”.
  - **Open(Continue):** An alarm is detected when the terminal status is changed to “Open”. When “Open” is selected for the terminal status, alarm detection will be performed regularly at a fixed interval set by “Alarm deactivation time”.
- **AUX output:** AUX output will be supplied. The [AUX] buttons will be displayed on the “Live” page.
- **Default:** Off

### **IMPORTANT**

- In order for the EXT I/O terminals to detect alarm inputs when the terminal status is changed from Open to Close (On) or from Close to Open (Off), about 100 ms or more is needed. Because alarms cannot be detected for about 5 seconds after a detection is made, alarm inputs received within about 5 seconds after an alarm is detected are not detected.

### **Note**

- AUX is a camera terminal that allows users to operate (Open/Close) arbitrarily from the “Live” page. For example, an operator can remotely control lights in a place where the camera is installed by connecting the terminal to the light controller.
- Refer to the Installation Guide for further information about input/output rating of each terminal.

## **27. Add alarm test function to the alarm**

### **(Operating Instructions Configure the alarm settings [Alarm] - Configure the settings relating to the alarm action [Alarm])**

An alarm test function has been added to the alarm.

#### **[Alarm test]**

Click the [Execute] button to execute the alarm test function.

#### **Note**

- When the test alarm function is executed, the camera will detect a command alarm. This can be used to check the SD recording or notification to external devices triggered by alarm detection. Check the related settings using the system logs of this camera and the external device set as the notification destination.
- The test alarm function cannot be executed multiple times during the alarm deactivation time.

## 28. Add log indications/error indications relating to Firmware Upgrade (Operating Instructions Others - About the displayed system log)

Added system logs for log indications/error indications relating to firmware upgrades.

### Log indications relating to Firmware Upgrade

Category	Indication	Description
Firmware Upgrade	Upgraded successfully	<ul style="list-style-type: none"> <li>Firmware Upgrade succeeded and the firmware versions (before/after) are logged.</li> </ul>

### Error indications relating to Firmware Upgrade

Category	Indication	Description
Firmware Upgrade	Upgrade failure (Time out: Shortage of communication bands)	<p>Failed to upgrade the firmware due to timeout caused by lack of communication bandwidth.) Check the communication environment and retry.</p>
	Upgrade failure (File error: Incorrect selection of firmware file)	<ul style="list-style-type: none"> <li>Failed to upgrade the firmware because an incorrect file was uploaded. Select the firmware of the camera and retry.</li> </ul>
	Upgrade failure (Communication error: File damage)	<ul style="list-style-type: none"> <li>Failed to upgrade the firmware because the file corrupted during the firmware file transfer. Check the communication environment and retry.</li> </ul>
	Upgrade failure (Other error)	<ul style="list-style-type: none"> <li>Undefined error occurred in the firmware upgrade process. Please wait for a while and retry.</li> </ul>

## 29. Add FTP to the communication protocol of the file transfer function (Operating Instructions – Configuring the network settings [Network] – Configure advanced network settings [Advanced])

Added FTP to the communication protocol of the file transfer function.

FTP (File Transfer Protocol) and SFTP (SSH File Transfer Protocol) are protocols for transferring files, and are used when sending images to a server.

SFTP allows you to securely transmit images to a server using an SSH (Secure Shell) encrypted data stream. It has the following two transmission functions.

- Send images when an alarm occurs
- Send images periodically

Network
Advanced

SMTP(E-mail) | **FTP/SFTP** | NTP | UPnP | HTTPS | DDNS | SNMP | QoS | SRTP | MQTT | LLDP

**Transmission protocol**
 FTP
  SFTP

**Alarm setting**

**Alarm image transmission**
 On
  Off

**Directory name**

**File name**

Terminal 1

Terminal 2

Terminal 3

VMD

SCD

Auto track

Command alarm

Audio detection

\* For alarms by the "Ext. software", alarm images will be transmitted only by configuring the alarm image SFTP transmission.

**FTP transmission retry**
 On
  Off

**Pre alarm**

Transmission interval	Maximum number of images	Recording duration
<input type="text"/>	<input type="text"/>	0s

**Post alarm**

Transmission interval	Number of images	Recording duration
<input type="text"/>	<input type="text"/>	100s

**Image capture size**
 (640x360)

**Periodic transmission settings**

**Periodic image transmission**
 On
  Off

**Directory name**

**File name**

**Transmission interval**

**Image capture size**
 (640x360)

**SFTP server setting**

**SFTP server address**

Example of entry: 192.168.0.10

**Port number**
 (1-65535)

**Host key hash**

SHA256  
Example of entry: dqVcdVZ/2ySO5tz/R8YR+rpBWBdnap8P743uiMv0cf0

**User name**

**Password**

**FTP server setting**

**FTP server address**

Example of entry: 192.168.0.10

**User name**

**Password**

**Control port**
 (1-65535)

**FTP mode**
 Passive
  Active

- **[Transmission protocol]**

Select and set the protocol with the destination server from FTP/SFTP.

- **SFTP** : SFTP is used as the protocol for transmitting with the server.
- **FTP** : FTP is used as the protocol for transmitting with the server.
- **Default** : SFTP

**IMPORTANT**

- When FTP is selected in the protocol settings, FTP server authentication information (user names and passwords) may be leaked on the network when sending images to the FTP server.

## Alarm setting

### [Alarm image transmission]

Select "On" or "Off" to determine whether or not to transmit images when an alarm is detected.

- **On**: Transmits an image to the server when an alarm has occurred.
- **Off**: Does not transmit an image to the server when an alarm has occurred.
- **Default**: Off

### [Directory name]

Enter the directory name where the alarm images are to be saved.

For example, enter "/ALARM" to designate the directory "ALARM" under the root directory of the server.

- **Available number of characters**: 1 - 256 characters
- **Unavailable characters**: " & ;

### [File name]

Enter the file name used for the alarm image to be transmitted to the server. The file name will be as follows.

- **File name**: ["Entered file name" + "Time and date (year/ month/ day/ hour/ minute/ second)"] + "Serial number"
- **Available number of characters**: 1 - 32 characters
- **Unavailable characters**: " & \* / : ; < > ? ¥ |

When "On" is selected for [Alarm image FTP transmission], you can select the alarm type from the following.

Terminal 1-3 <Terminal input/output supported models only>

- **Terminal1**: Transmit the image to the server when an alarm occurs in Terminal 1.
- **Terminal2**: Transmit the image to the server when an alarm occurs in Terminal 2.
- **Terminal3**: Transmit the image to the server when an alarm occurs in Terminal 3.
- **VMD**: Transmit the image to the server when motion is detected.
- **SCD**: Transmit the image to the server when SCD (scene change detection) occurs.
- **Audio detection**: Transmit the image to the server when audio detection occurs.
- **Command alarm**: Transmit the image to the server when a command alarm is entered.

The following functions are unique for PTZ camera < **PTZ S** only >

- **Auto track**: Transmit the image to the server when an auto track occurs.

**[FTP transmission retry]**

Select "On" or "Off" to determine whether or not to resend failed FTP transmissions.

- **On:** If transmission fails, transmissions are resent until they are successfully sent.
- **Off:** If transmission fails, the image that failed to be sent is discarded and the next image is sent.
- **Default:** Off

**Note**

• When SFTP is selected in "Transmission protocol" settings, FTP transmission retry is unavailable.

**[Pre alarm]**

• **Transmission interval**

Select the transmission interval of images before an alarm occurs from the following.

When 60fps mode, 30fps mode or 15fps mode is selected for [Image capture mode]:

0.1fps/ 0.2fps/ 0.33fps/ 0.5fps/ 1fps

When 50fps mode, 25fps mode or 12.5fps mode is selected for [Image capture mode]:

0.08fps/ 0.17fps/ 0.28fps/ 0.42fps/ 1fps

- **Default:** 1fps

• **Maximum number of images**

Select the number of images to be transmitted from the following.

0pic/ 1pic/ 2pics/ 3pics/ 4pics/ 5pics/ 6pics/ 7pics/ 8pics/ 9pics/ 10pics/ 20pics/ 30pics/ 40pics/ 50pics/

- **Default:** 0 pic

• **Recording duration**

Approximate time to be taken to save the set "Maximum number of images" with the set "Transmission interval" will be displayed.

**Note**

- When "JPEG(1)" is selected for the capture size of the image to be transmitted, pre alarm is unavailable if the image capture size of "JPEG(1)" is **larger than** "1920x1080".
- When "On" is selected for "Image compression rate upon alarm detection", only post alarm recorded images are compressed. Compression is not applied to pre alarm recorded images.
- When a selection with an asterisk (\*) on the right of it is selected for "Maximum number of images" of "Pre alarm", the specified number of images may not be able to be sent depending on the image capture size and image quality. The following table shows the maximum number of images that can be sent for pre alarm.

		Image quality									
		0	1	2	3	4	5	6	7	8	9
Image capture size	1280x960	5	6	7	8	10	10	10	20	30	40
	1280x720	7	8	10	10	10	20	20	30	40	50
	VGA	10	20	20	30	30	40	50	50	50	50
	640x360	20	30	40	50	50	50	50	50	50	50
	QVGA	40	50	50	50	50	50	50	50	50	50
	320x180	50	50	50	50	50	50	50	50	50	50

### [Post alarm]

#### • **Transmission interval**

Select the transmission interval for the alarm image transmission from the following.

When 60fps mode, 30fps mode or 15fps mode is selected for [Image capture mode]:

0.1fps/ 0.2fps/ 0.33fps/ 0.5fps/ 1fps

When 50fps mode, 25fps mode or 12.5fps mode is selected for [Image capture mode]:

0.08fps/ 0.17fps/ 0.28fps/ 0.42fps/ 1fps

#### • **Default:** 1fps

#### • **Number of images**

Select the number of images to be transmitted from the following.

1pic/ 2pics/ 3pics/ 4pics/ 5pics/ 6pics/ 7pics/ 8pics/ 9pics/ 10pics/ 20pics/ 30pics/ 50pics/ 100pics/  
200pics/300pics/ 500pics/ 1000pics/ 1500pics/ 2000pics/ 3000pics

#### • **Default:** 100pics

#### • **Recording duration**

Approximate time to be taken to save the set “Number of images” with the set “Transmission interval” will be displayed.

### [Image capture size]

Select the image capture size of images transmitted when an alarm occurs from the following.

JPEG(1)/JPEG(2)

#### • **Default:** JPEG(2)

## Periodic image transmission settings

### [Periodic image transmission]

Select “On” or “Off” to determine whether or not to transmit images using the periodic image transmission function.

When “On” is selected, it is necessary to configure the settings of the server.

- **On:** Performs periodic image transmission.
- **Off:** Does not perform periodic image transmission.
- **Default:** Off

### **IMPORTANT**

- When using periodic image transmission, it is necessary to configure the schedule settings of FTP/SFTP periodic image transmission on the [Schedule] tab of the “Schedule” page. (→“Configure the settings relating to the schedules [Schedule]”)

### [Directory name]

Enter the directory name where the images are to be saved.

For example, enter “/img” to designate the directory “img” under the root directory of the server.

- **Available number of characters:** 1 - 256 characters
- **Unavailable characters:** " & ;
- **Default:** None (blank)

### [File name]

Enter the file name (name of the image file to be transmitted) and select the naming option from the following.

- **Name w/time&date:** File name will be ["Entered file name" + "Time and date (year/ month/ day/ hour/ minute/ second)" + "Serial number (starting from 00)"].
- **Name w/o time&date:** File name will be the characters entered for "File name" only. When "Name w/o time&date" is selected, the file will be overwritten each time a file is newly transmitted.
- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & ; : / \* < > ? ¥ |
- **Default:** None (blank)

#### **Note**

- When "Name w/time&date" is selected, the file name will be ["Entered file name" + "Time and date (year/ month/ day/ hour/ minute/ second)" + "Serial number (starting from 00)"] + "s" during summer time.

#### **[Transmission interval]**

Select the interval for the periodic image transmission from the following.

1s/ 2s/ 3s/ 4s/ 5s/ 6s/ 10s/ 15s/ 20s/ 30s/ 1min/ 2min/ 3min/ 4min/ 5min/ 6min/ 10min/ 15min/ 20min/ 30min/1h/ 1.5h/ 2h/ 3h/ 4h/ 6h/ 12h/ 24h

- **Default:** 1s

#### **[Image capture size]**

Select the image capture size of images to be transmitted from the following.

JPEG(1)/JPEG(2)

- **Default:** JPEG(2)

### **SFTP server setting**

#### **Note**

- When [Transmission protocol] is set to FTP, the SFTP server setting is unavailable

#### **[SFTP server address]**

Enter the IP address or the host name of the SFTP server.

- **Available number of characters:** 1 - 128 characters
- **Available characters:** Alphanumeric characters, the colon (:), the period (.), the underscore (\_), and the hyphen (-).

#### **IMPORTANT**

- When entering the host name for "SFTP server address", it is necessary to configure the DNS settings on the [Network] tab of the "Network" page. (→"Configure the network settings [Network]")

#### **[Port number]**

Enter a control port number to be used for the SFTP server.

- **Available port number:** 1-65535
- **Default:** 22

The following port numbers are unavailable since they are already in use.

20, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 995, 10669, 10670

**[Host key hash]**

Enter the hash value of the public key of the SFTP server.

- **Available number of characters:** 43 - 44 characters
- **Available characters:** Alphanumeric characters, +, /, =

**[User name]**

Enter the user name (login name) to access the SFTP server.

- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & ; ¥

**[Password]**

Enter the password to access the SFTP server.

- **Available number of characters:** 0 - 32 characters
- **Unavailable characters:** " &

## FTP server setting

**Note**

- When [Transmission protocol] is set to SFTP, the FTP server setting is unavailable.

**[FTP server address]**

Enter the IP address or the host name of the FTP server.

- **Available number of characters:** 1 - 128 characters
- **Available characters:** Alphanumeric characters, the colon (:), the period (.), the underscore (\_), and the hyphen (-).

**IMPORTANT**

- When entering the host name for "FTP server address", it is necessary to configure the DNS settings on the [Network] tab of the "Network" page. (→"Configure the network settings [Network]")

**[User name]**

Enter the user name (login name) to access the FTP server.

- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & ; ¥

**[Password]**

Enter the password to access the FTP server.

- **Available number of characters:** 0 - 32 characters
- **Unavailable characters:** " &

**[Control port]**

Enter a control port number to be used for the FTP server.

- **Available port number:** 1 - 65535
- **Default:** 21

The following port numbers are unavailable since they are already in use.

20, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 995, 10669, 10670

**[FTP mode]**

Select "Passive" or "Active" for the FTP mode.

Normally, select "Passive". When it is impossible to connect after select "Passive", try to connect after selecting "Active".

- **Default:** Passive

### 30. Add SFTP periodic image transmission to “Event operation” of Easy Setup

(Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action])

By adding the FTP function to the SFTP function, “SFTP periodic transmission” in “Event action” of Easy Setup was changed to “FTP/SFTP periodic transmission”.

The screenshot shows a configuration window with two tabs: 'Internet' and 'Event action'. The 'Event action' tab is active. Below the tabs, there is a header 'Configure the event action setting. Specify the action to be taken when an alarm is detected and register the action in the schedule in order.' followed by '[Current settings]'. The settings are organized into two sections: 'Alarm' and 'Schedule'. Each section contains a table of settings.

Alarm	
Alarm condition	Off
Alarm	Off
Output terminal	Off
E-mail notification	Off

Schedule	
Schedule	Off

[Notes]  
• When the operating condition is changed, some settings will be cancelled. Confirm the settings after completing the setup.

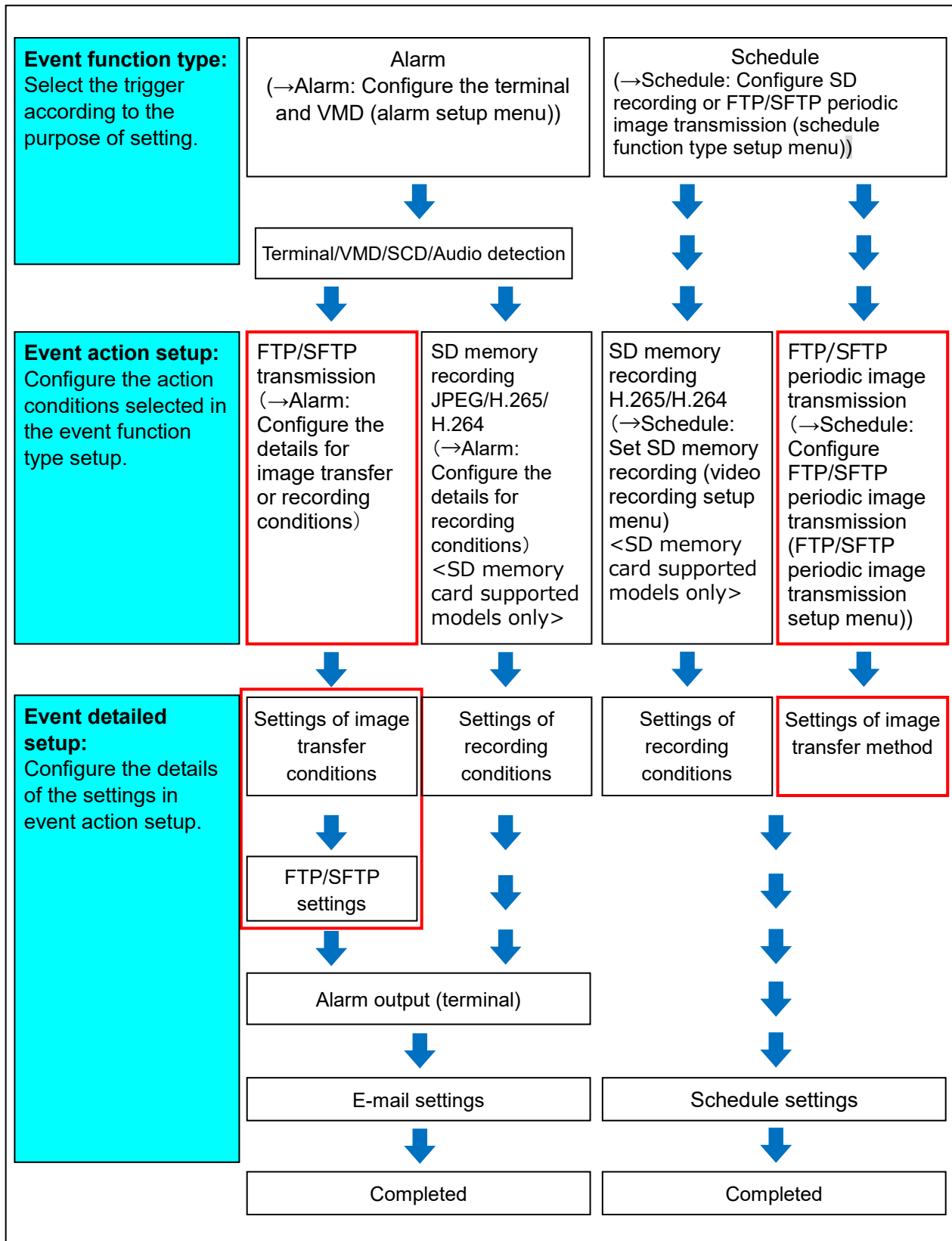
Next

You can set event actions for SD schedule recording/FTP periodic image transmission/alarm detection. Once the settings are completed in each setup menu, click the [Next] button to proceed. The setup flow is as follows.

#### **Note**

- If you click the [Next] button, the settings in the screen will be saved.

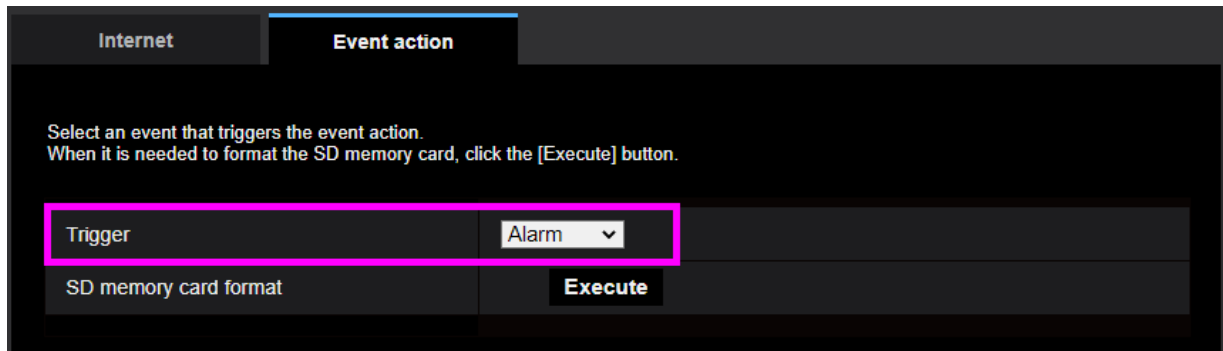
## Flow of event action setup



## Configure the schedule/alarm (event function type setup menu)

(Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action]-schedule/alarm (event function type setup menu))

Here, select the function type of the event.



### [Trigger]

- **Alarm:** Select when setting the alarm detection settings.
- **Schedule:** Select during “SD memory recording” or “FTP/SFTP periodic image transmission”.
- **Default:** Alarm

### [SD memory card format]

To format the SD memory card, click the [Execute] button.

Once you click the [Execute] button, the “Format” confirmation screen will be displayed.

If you click the [OK] button, the formatting will start.

Once the “Format” completion screen is displayed, press the  button.

### **IMPORTANT**

- All data saved on the SD memory card will be deleted when the SD memory card is formatted.
- Do not turn off the power of the camera during formatting.

### [Next] button

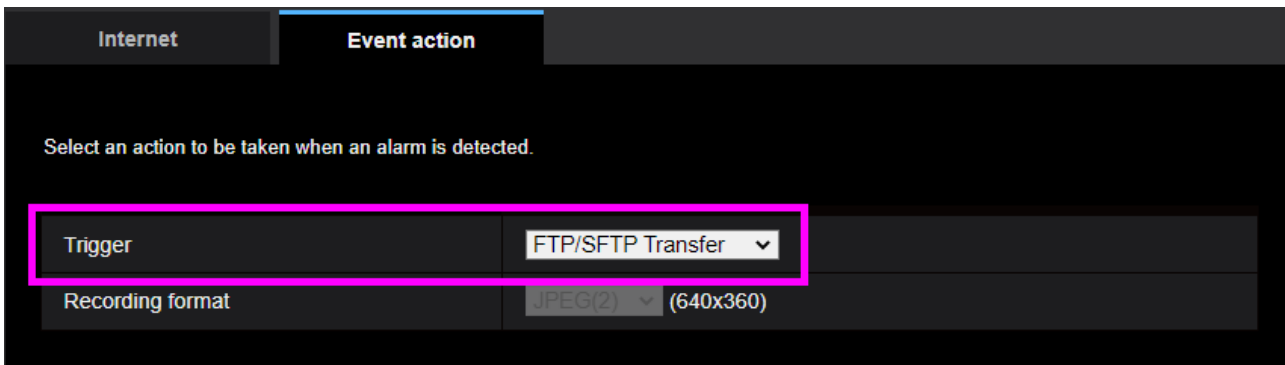
To format the SD memory card, click the [Execute] button. If you select “Alarm”, and click the [Next] button, the alarm setup menu will be displayed. (→Alarm: Configure the terminal and VMD (alarm setup menu))

If you select “Schedule”, and click the [Next] button, the schedule function type setup menu will be displayed. Schedule: Configure SD recording or FTP periodic image transmission (schedule function type setup menu)

## Alarm: Configure the terminal and VMD (alarm setup menu)

### (Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action]-schedule/alarm (event function type setup menu))

Here, select from “SD recording” or “FTP/SFTP transfer” in “Operating conditions” for the alarm type. Also select from each JPEG/each stream for “Recording compression method”.



#### [Trigger]

- **SD memory recording:** When an alarm occurs, records the image to the SD memory card.
- **FTP/SFTP Transfer:** When an alarm occurs, FTP/SFTP transfer of the JPEG image.

#### Note

- “FTP Transfer” for when an alarm occurs and “FTP/SFTP periodic image transmission” can both be performed simultaneously.
- If both “FTP Transfer” for when an alarm occurs and “FTP periodic image transmission” are set, “FTP Transfer” will be given priority when an alarm occurs.
- The protocol used to send images with "FTP/SFTP transfer" when an alarm occurs can be set in the FTP/SFTP transfer settings. (→③ Set FTP/SFTP transfer (FTP/SFTP transfer setup menu))

#### [Recording format]

When “SD memory recording” is selected for “Trigger”, “JPEG(1)”, “JPEG(2)”, “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” can be selected for the stream encoding format for the recorded image.

#### [Next] button

If you select “FTP Transfer” for “Trigger” and click the [Next] button, the FTP transfer setup menu will be displayed. (→③ Set FTP/SFTP transfer (FTP/SFTP transfer setup menu))

If you select “SD memory recording” for “Trigger”, select “JPEG(1)” or “JPEG(2)” for “Recording format”, and then click the [Next] button, the JPEG recording setup menu will be displayed. (→②Configure SD memory recording (JPEG) (JPEG recording setup menu)) <SD memory card supported models only>

If you select “SD memory recording” for “Trigger”, select “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” for “Recording format”, and then click the [Next] button, the video recording setup menu will be displayed. (→Configure SD memory recording (H.265 or H.264) (video recording setup menu) <SD memory card supported models only>

#### Note

- If you click the [Next] button, the setting items in the screen are saved.
- Even when the audio detection alarm is set, alarm recording onto the SD memory card will not be performed. <SD memory card supported models only>

## [Back] button

If you click the [Back] button the alarm setup menu will be displayed.

(→Alarm: Configure the terminal and VMD (alarm setup menu))

## Alarm : Configure the details for images transfer or recording conditions (Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action]- Alarm : Configure the details for images transfer or recording conditions)

### ③Set FTP/SFTP transfer (FTP transfer seutp menu)

FTP transfer when an alarm is detected is set in this section.

The screenshot shows the 'Event action' configuration screen. At the top, there are tabs for 'Internet' and 'Event action'. Below the tabs, a heading reads 'Set the method of image transmission to the FTP/SFTP server when an alarm is detected.' The configuration is organized into several sections:

- Transmission protocol:** Radio buttons for 'FTP' and 'SFTP' (selected).
- Alarm setting:** Radio buttons for 'On' and 'Off' (selected).
- Directory name:** A text input field.
- File name:** Checkboxes for 'Terminal 1', 'Terminal 2', 'Terminal 3', 'VMD', 'SCD', 'Auto track', and 'Audio detection'. A note states: '\* For alarms by the "Ext. software", alarm images will be transmitted only by configuring the alarm image SFTP transmission.'
- FTP transmission retry:** Radio buttons for 'On' and 'Off'.
- Pre alarm:** Fields for 'Transmission interval' (10s), 'Maximum number of images' (1 pic), and 'Recording duration' (0s).
- Post alarm:** Fields for 'Transmission interval' (10s), 'Number of images' (100 pics), and 'Recording duration' (100s).
- Image capture size:** A dropdown menu set to '(640x360)'.
- SFTP server setting:** Fields for 'SFTP server address' (with example 192.168.0.10), 'Port number' (22, with note (1-65535)), 'Host key hash' (SHA256, with example), 'User name', and 'Password'.
- FTP server setting:** Fields for 'FTP server address' (with example 192.168.0.10), 'User name', 'Password', 'Control port' (21, with note (1-65535)), and 'FTP mode' (radio buttons for 'Passive' and 'Active').

At the bottom of the screen, there are 'Back' and 'Next' buttons.

Refer to “29. Add FTP to the communication protocol of the file transfer function” for information about how to configure the above screen” how to set the above screen.

### [Next] button

If you select “Alarm output” in the alarm setup menu and click the [Next] button, the alarm output setup menu will be displayed. (→Alarm: Configure the output terminal) <Terminal input/output supported models only>

If you click the [Next] button in the alarm setup menu without selecting “Alarm output”, the mail setup menu will be displayed. (→Alarm: configure the mail notifications and mail server)

### Note

- If you click the [Next] button, the setting items in the screen are saved.

### [Back] button

If you click the [Back] button, the alarm function type setup menu will be displayed. (Alarm: Configure the alarm function type (Alarm function type setup menu)

## Schedule: Configure SD recording or FTP/SFTP periodic image transmission (schedule function type setup menu)

(Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action

### [Event action]- Schedule: Configure SD recording or FTP/SFTP periodic image transmission (schedule function type setup menu)

Here, the schedule type is selected as “SD memory recording” or “FTP/SFTP periodic image transmission”.

Internet	Event action
Select an action to be taken when an alarm is detected.	
Trigger	SD memory recording ▼
Recording format	Stream(1) ▼ (H.265/1920x1080)

### [Trigger]

- **SD memory recording:** Records the H.265 (or H.264) image in the SD memory card at the scheduled time.
- **FTP/SFTP transfer:** Transmits the JPEG image to the FTP/SFTP server at the scheduled time

### [Recording format]

When “SD memory recording” is selected for “Trigger”, “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” can be selected for the recorded image.

### [Next] button

If you select “SD memory recording” and click the [Next] button, the video recording setup menu will be displayed. (→Schedule: Set SD memory recording (video recording setup menu)

<SD memory card supported models only>

If you select “FTP/SFTP periodic image transmission” and click the [Next] button, the FTP/SFTP periodic image transmission setup menu will be displayed. (→ Schedule: Configure FTP/SFTP periodic image transmission (FTP/SFTP periodic image transmission setup menu))

**Note**

- If you click the [Next] button, the setting items in the screen are saved.

**[Back] button**

If you click the [Back] button, the event function type setup menu will be displayed.  
displayed. (→Configure the schedule/alarm (event function type setup menu))

**Note**

- “FTP/SFTP periodic image transmission” and “FTP/SFTP img. trans.” for when an alarm occurs can both be performed simultaneously.
- If you select “SD memory recording”, the “FTP/SFTP periodic image transmission” setting will be canceled.

## Schedule : Configure FTP/SFTP periodic image transmission (FTP/SFTP periodic image transmission setup menu)

((Operating Instructions – Use Easy Setup [Easy Setup] – Configure an event action [Event action]))

The FTP/SFTP periodic image transmission is configured in this section.

- To configure FTP/SFTP periodic image transmission settings;

Internet	Event action
Configure the FTP/SFTP server information and the method of JPEG image transmission to the FTP/SFTP server.	
Transmission protocol	<input type="radio"/> FTP <input checked="" type="radio"/> SFTP
Periodic transmission settings	
Periodic image transmission	<input type="radio"/> On <input checked="" type="radio"/> Off
Directory name	<input type="text"/>
File name	<input type="text"/> <input type="radio"/> Name w/time&date <input type="radio"/> Name w/o time&date
Transmission interval	<input type="text" value="15"/> s
Image capture size	JPEG(2) (640x360)
SFTP server setting	
SFTP server address	<input type="text"/> Example of entry: 192.168.0.10
Port number	<input type="text" value="22"/> (1-65535)
Host key hash	SHA256: <input type="text"/> Example of entry: dqVcdVZ/2ySO5tz/R6YR+rpbW6dnap6P743uiMV0cf0
User name	<input type="text"/>
Password	<input type="password"/>
FTP server setting	
FTP server address	<input type="text"/> Example of entry: 192.168.0.10
User name	<input type="text"/>
Password	<input type="password"/>
Control port	<input type="text" value="21"/> (1-65535)
FTP mode	<input type="radio"/> Passive <input type="radio"/> Active
<input type="button" value="Back"/> <input type="button" value="Set"/>	

Refer to “29. Add FTP to the communication protocol of the file transfer function” for information about how to configure the above screen.

**[Set] button**

Displayed when “Periodical transmission” is “Off”. Click [Set] to save the settings.

**[Next] button**

This will be displayed when “Periodic transmission” is “On”. If you click the [Next] button, the FTP/SFTP periodic transmission schedule will be displayed. (→ Schedule: Configure FTP/SFTP periodic image transmission (FTP/SFTP periodic image transmission setup menu))

**Note**

- If you click the [Next] button, the setting items in the screen are saved.

**[Back] button**

If you click the [Back] button, the schedule function type setup menu will be displayed.

(→ Schedule: Configure SD recording or FTP/SFTP periodic image transmission (schedule function type setup menu))

- To configure FTP/SFTP periodic image transmission schedule settings :

Internet      **Event action**

Select "FTP/SFTP periodic image transmission" for "Schedule mode" of the schedule (1 - 8) to be registered, and set the recording schedule.  
When "FTP/SFTP periodic image transmission" is not select for "Schedule mode", image transmission will not be performed.

Schedules	Schedule mode	Time range
Schedule 1 (White)	Off	<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"/> Sun 24h    :    :    -    :    :
Schedule 2 (Blue)	Off	<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"/> Sun 24h    :    :    -    :    :
Schedule 3 (Green)	Off	<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"/> Sun 24h    :    :    -    :    :
Schedule 4 (Red)	Off	<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"/> Sun 24h    :    :    -    :    :
Schedule 5 (Black)	Off	<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"/> Sun 24h    :    :    -    :    :
Schedule 6 (Yellow)	Off	<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"/> Sun 24h    :    :    -    :    :
Schedule 7 (Light blue)	Off	<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"/> Sun 24h    :    :    -    :    :
Schedule 8 (Purple)	Off	<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"/> Sun 24h    :    :    -    :    :

	0.00	6.00	12.00	18.00	24.00
Mon					
Tue					
Wed					
Thu					
Fri					
Sat					
Sun					

The color of each schedule is not linked with the area color of "VMD area".  
When "VMD permission" is set, the VMD functions in all the areas set with "VMD area".  
"VMD permission", "SCD permission" and "Auto track permission" are required to be set to specify a period of time where detection or tracking is to be performed. They are not required to be set when detection or tracking is to be performed regularly.  
"Auto mode (auto track)" and "Auto track from the right-click menu" on the "Live" page are available even when it is out of the period specified in "Auto track permission".  
If the camera direction is changed by other operation while the setting of preset position, auto pan, preset sequence or patrol is being performed, the camera will automatically move back to the previous preset position and resume the operation in 1 minute.

Back      Set

Refer to "Configure the settings relating to the schedules [Schedule]" for information about how to set the above screen.

**[Set] button**

If you click the [Set] button, setup menu will be displayed.

**[Back] button**

If you click the [Back] button, the FTP/SFTP periodic image transmission setup menu will be displayed.  
(→Schedule: Configure FTP/SFTP periodic image transmission (FTP/SFTP periodic image transmission setup menu))

**Note**

- FTP/SFTP periodic image transmission will not be performed when “FTP/SFTP periodic image transmission” is not selected in “Operation mode”.

### 31. Change “SFTP periodic image transmission error” to “FTP/SFTP periodic image transmission error” in “Save trigger” of SD memory card. <SD memory card supported models only>

(Operating Instructions – Configure the basic settings of the camera [Basic]  
– Configure the settings relating to the SD memory card [SD memory card])

By adding the FTP function to the SFTP function, Change “SFTP periodic image transmission error” to “FTP/SFTP periodic image transmission error” in “Save trigger” of recording stream.

#### Recording stream

##### [Save trigger] button

Select a trigger to save images on the SD memory card from the following.

• **FTP/SFTP periodic image transmission error**: Saves images when images have failed to transmit to the FTP/SFTP server by the FTP/SFTP periodic image transmission function. Available only for the “JPEG(1)” or “JPEG(2)” images.

- **Alarm input**: Saves images at an alarm occurrence.
- **Manual**: Saves images manually.
- **Schedule**: Saves images in accordance with the settings for “Schedule”. Available only for the “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” images.
- **Default**: Manual

If you have selected “Alarm input” in the [Save trigger], you can select the alarm type from the following: Terminal1-3 <Terminal input/output supported models only>

- **Terminal 1**: Save the image when an alarm occurs in Terminal 1.
- **Terminal 2**: Save the image when an alarm occurs in Terminal 2.
- **Terminal 3**: Save the image when an alarm occurs in Terminal 3.
- **VMD**: Save the image when motion detection occurs.
- **SCD**: Save the image when SCD occurs.
- **Command alarm**: Save the image when a command alarm is entered.

The following functions are unique for PTZ camera < **PTZ S** only >

- **Auto track**: Save the image when an auto track occurs.

#### Note

- When “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” is selected for “Recording format”, “FTP/SFTP periodic image transmission error” is unavailable.
- To enable alarms to occur, alarm settings must be configured in advance on the [Alarm] tab.
- When “JPEG(1)” or “JPEG(2)” is selected for “Recording format”, “Schedule” is unavailable.
- When connected with our network disk recorder, “Save trigger” may be displayed in a gray-out state as “Network failure”. To change the setting of “Save trigger” after disconnecting the recorder, set “Not use” for “SD memory card” once and then set “Use” again.
- Alarm recording is not available for streams that are being distributed in a state where “Advanced(Fixed GOP 60s w/1s key-frame)” is selected for “GOP control”.
- No image will be recorded at the time of an audio detection alarm occurrence.

## 32. Change the link of “SFTP setup” to “FTP/SFTP setup” in Camera action on alarm

### (Operating Instructions – Configure the alarm settings [Alarm] – Configure the settings relating to the camera action on alarm occurrence [Alarm])

Click the [Alarm] tab on the “Alarm” page. (→“How to display the setup menu”, “How to operate the setup menu”) The settings related to the camera action on alarm can be configured in this section.

Camera action on alarm	
Alarm E-mail notification	<a href="#">E-mail server &gt;&gt;</a>
Alarm image FTP/SFTP transmission	<a href="#">FTP/SFTP setup &gt;&gt;</a>
Alarm image recording(SD memory card)	<a href="#">SD memory card setup &gt;&gt;</a>
TCP alarm notification	<a href="#">TCP alarm notification &gt;&gt;</a>
HTTP alarm notification	<a href="#">HTTP alarm notification setup &gt;&gt;</a>
SNMP transmission upon alarm detection	<a href="#">To SNMP setting</a>

#### Camera action on alarm

##### [Alarm E-mail notification]

Click “E-mail server >>” to display the setup menu that can configure the settings relating to E-mail notification when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to alarm E-mail notifications”)

##### [Alarm image FTP/SFTP transmission]

Click “FTP/SFTP setup >>” to display the setup menu that can configure the settings relating to FTP/SFTP transmission when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to FTP/SFTP transmissions of alarm images”)

##### [Alarm image recording (SD memory card)]

Click “SD memory card setup >>” to display the setup menu that can configure the settings relating to recording images on an SD memory card when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to recording to an SD memory card when an alarm occurs”)

##### [TCP alarm notification]

Click “TCP alarm notification >>” to display the setup menu that can configure the settings relating to transmitting TCP alarm notifications when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to TCP alarm protocol notification when an alarm occurs”)

##### [HTTP alarm notification]

Click “HTTP alarm notification setup >>” to display the setup menu that can configure the settings relating to transmitting HTTP alarm notifications when an alarm occurs. The setup menu will be displayed in a newly opened window. (→“Configure settings relating to HTTP alarm notification when an alarm occurs”)

**[SNMP transmission upon alarm detection]**

Click “To SNMP setting” to display the setup menu that can configure the settings relating to SNMP transmission when an alarm occurs. The setup menu will be displayed in a newly opened window.

(→“**Configure settings relating to FTP/SFTP transmissions of alarm images**”)

**(Operating Instructions – Configure the alarm settings [Alarm] –  
Configure the settings relating to the camera action on alarm occurrence  
[Alarm])**

Click “FTP/SFTP setup >>” of “Camera action on alarm” on the [Alarm] tab of the “Alarm” page.

(→“Configure the settings relating to the camera action on alarm occurrence [Alarm]”)

Refer to “29. Add FTP to the communication protocol of the file transfer function” for information about how to configure the above screen.

### 33. Add “FTP access to camera” to “Common” in Network setup (Operating Instructions – Configuring the network settings [Network] – Configure advanced network settings [Advanced])

With the addition of FTP function, “FTP access to camera” was added to “Common” in Network setup.

Common	
HTTP port	<input type="text" value="80"/> (1-65535)
Line speed	<input type="text" value="Auto"/>
Max RTP packet size	<input checked="" type="radio"/> Unlimited(1500byte) <input type="radio"/> Limited(1280byte)
HTTP max segment size(MSS)	<input type="text" value="Unlimited(1460byte)"/>
Bandwidth control(bit rate)	<input type="text" value="51200kbps"/>
Easy IP Setup accommodate period	<input checked="" type="radio"/> 20min <input type="radio"/> Unlimited
FTP access to camera	<input type="radio"/> Allow <input checked="" type="radio"/> Forbid
ONVIF® *ONVIF is a trademark of Onvif, Inc.	<input checked="" type="radio"/> On <input type="radio"/> Off

#### [FTP access to camera]

Select “Allow” or “Forbid” to determine whether to allow or forbid the FTP access to camera.

- **Allow:** Allow to access FTP to the camera.
- **Forbid:** Forbid to access FTP to the camera.
- **Default:** Forbid.

#### **IMPORTANT**

- When accessing the camera from a PC, there is a possibility that authentication information (user names, passwords, etc.) will be leaked.

## 34. Change “SFTP periodic image transmission” to “FTP/SFTP periodic image transmission” in “Schedule” mode

### (Configure the settings relating to the schedules [Schedule])

By changing the FTP/SFTP function of SFTP function, “SFTP periodic transmission” in “Schedule mode” of schedule setting was changed to “FTP/SFTP periodic transmission”.

#### [Schedule mode]

Select an action to be assigned to the schedule from “Schedule mode”.

“Off” is selected at the default

- **Off:** No action will be taken for the respective schedule.

Alarm permission <Terminal input/output supported models only>

- **Alarm permission (Terminal alarm 1, 2, 3):** Alarm input (terminal alarm) will be allowed during the period of the schedule.
- **Alarm permission (Terminal alarm 1):** Terminal 1 alarm input will be allowed during the period of the schedule.
- **Alarm permission (Terminal alarm 2):** Terminal 2 alarm input will be allowed during the period of the schedule.
- **Alarm permission (Terminal alarm 3):** Terminal 3 alarm input will be allowed during the period of the schedule.
- **VMD permission:** The video motion detection (VMD) function will be active during the period of the schedule.
- **SCD permission:** The scene change detection (SCD) function will be active during the period of the schedule.
- **Audio detection permission:** The audio detection function will be active during the period of the schedule.

- **Access permission:** Users whose access level is set to “2. Camera control” and “3. Live only” on the [User auth.] tab.

- **Recording to SD (Recording stream):** The SD recording will be performed at the designated time in the schedule. Further, the “Recording format” is enabled only when there is a stream.

<SD memory card supported models only>

- **Image adjust 1: Scene 1:** Images are set to the image settings of “Scene file 1” at the designated time in the schedule. When the designated time for the schedule finishes, images are set to the image settings of “Scene file is not applied”.
- **Image adjust 2: Scene 2:** Images are set to the image settings of “Scene file 2” at the designated time in the schedule. When the designated time for the schedule finishes, images are set to the image settings of “Scene file is not applied”.
- **Image adjust 3: Scene 3:** Images are set to the image quality settings of “Scene file 3” at the designated time in the schedule. Once designated time in the schedule is over, the image quality setting is set to “Scene file is not applied”.
- **Image adjust 4: Scene 4:** Images are set to the image quality settings of “Scene file 4” at the designated time in the schedule. Once designated time in the schedule is over, the image quality setting is set to “Scene file is not applied”.

- **FTP/SFTP periodic image transmission:** FTP/SFTP periodic image transmission will be performed at the designated time in the schedule.

- **E-mail permission:** While the schedule is set, e-mail notification is sent when alarm is input.

- **Reboot:** The camera reboots at the scheduled time. Can only be selected with Schedule 5 or Schedule 8.

The following functions are unique for PTZ camera < **PTZ S** only >

**Position refresh** : The camera position will be refreshed at the designated time in the schedule.

**1-256** : The camera will move to the selected position from the preset position at the designated time in the schedule.

**Auto track permission** : The auto track activation setting set on the [Auto track setting] tab will be permitted during the period of the schedule.

**Auto pan** : The camera will start the auto-panning operation set on the [Position] tab at the designated time in the schedule.

**Patrol 1**: The camera will start the patrol 1 operation set on the [Position] tab at the designated time in the schedule. This is enabled only when “Patrol 1” is set.

**Patrol 2**: The camera will start the patrol 2 operation set on the [Position] tab at the designated time in the schedule. This is enabled only when “Patrol 2” is set.

**Patrol 3**: The camera will start the patrol 3 operation set on the [Position] tab at the designated time in the schedule. This is enabled only when “Patrol 3” is set.

**Patrol 4**: The camera will start the patrol 4 operation set on the [Position] tab at the designated time in the schedule. This is enabled only when “Patrol 4” is set.

**Preset sequence 1**: The camera will start the preset sequence 1 operation set on the [Position] tab at the designated time in the schedule. This is enabled only when “Preset sequence 1” is set.

**Preset sequence 2**: The camera will start the preset sequence 2 operation set on the [Position] tab at the designated time in the schedule. This is enabled only when “Preset sequence 2” is set.

**Preset sequence 3**: The camera will start the preset sequence 3 operation set on the [Position] tab at the designated time in the schedule. This is enabled only when “Preset sequence 3” is set.

### **Note**

- Select “On” for “User auth.” on the [User auth.] tab of “User mng.” page (“Configure the settings relating to the user authentication [User auth.]”) and “Off” for “Host auth.” on the “Host auth.” page (“Configure the settings relating to the host authentication [Host auth.]”) to validate “Access permission”.
- When selecting “Recording to SD(Recording stream)”, select “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” for “Recording format” on the [SD memory card] tab and select “Schedule” for “Save trigger”. ([Save trigger] <SD memory card supported models only>

### 35. Add the log related to FTP/SFTP to system log (Operating Instructions – Others – About the displayed system log)

Add a system log related to FTP/SFTP functions.

#### Error display related to FTP/SFTP

Category	Indication	Description
Server error	<u>Failed to find the server.</u>	<ul style="list-style-type: none"> <li>The server may be down. Contact the server administrator.</li> <li>Server IP address may be incorrect. Check the IP address settings of the server again.</li> </ul>
	<u>Failed to resolve the FTP server address from DNS.</u>	
Connection error	User name or password isn't correct.	<ul style="list-style-type: none"> <li>The server may be down. Contact the server administrator.</li> <li>The settings relating to the indicated item may be incorrect. Check if the settings are configured correctly.</li> </ul>
	Failed to change the directory.	
	Host key verification error	
	Access not authorized	
	Failed to transmit the image	
	<u>File transfer error.</u>	
	<u>Passive mode error.</u>	
	<u>Log out failed.</u>	
Internal error	Undefined error.	<ul style="list-style-type: none"> <li><u>An error occurred in the FTP/SFTP function. Check if the FTP/SFTP settings are configured correctly.</u></li> </ul>

### 36. Add Ext.software function (Operating Instructions – Settings)

The [Ext.software] menu have been added to the setup menu.

The screenshot shows a web interface with a dark theme. At the top, there are three tabs: 'Software mng.' (selected), 'Operation sched.', and 'Control log'. Below the tabs is a table with the following rows:

Unique information	
MPR ID	XXXXXXXXXX
Remaining ROM	XXXXXXXXXX
Remaining RAM	XXXXXXXXXX
SDK version	1.0.0
Firmware version	1.0.0
RAM capacity expansion mode	<input type="radio"/> On <input checked="" type="radio"/> Off

Below the table is a 'Set' button. Underneath, there are three bullet points:

- When "On" is set for the RAM capacity expansion mode, the function to record on the SD memory card will become unavailable.
- "Off" is unavailable when the remaining RAM capacity is less than 51200 kbytes.
- Refer to the following URL for extension software required to set "On" for the RAM capacity expansion mode.

For use in Japan  
<https://cwc.i-pro.com/pages/application-platform-list>  
For use in a country other than Japan  
<https://i-pro.com/global/en/surveillance/i-pro-application-platform/application-list>

Below this is a file selection dialog with a 'Choose File' button and 'No file chosen' text. It contains a radio button for 'Install new Ext. software' and an 'Execute' button. Below the dialog, it says 'Use the latest edition of the extension software.' and a final instruction: 'Please wait and do not operate the browser during install.'

#### [Ext. software]

Management of the extension software and the schedule setting are available. When the extension software is installed, a link for the screen of the extension software will displayed. (Perform management of the extension software and the schedule setting [Ext. software])

## 36.1 Perform management of the extension software and the schedule setting [Ext. software]

Management of the extension software and the schedule setting can be performed on the “Ext. software” page.

The “Ext. software” page has the [Software mng.] tab, [Operation sched.] tab, and the [Control log] tab.

## 36.2 Perform the installation, uninstallation and version upgrade of the extension software [Software mng.]

Click the “Software mng.” tab of the “Ext. software” page. (For menu display and how to operate, refer to “How to display the setup menu” and “How to operate the setup menu”.)

### Installing the extension software

1 Save the extension software to be installed in the PC.

#### **IMPORTANT**

- Check [Remaining ROM] and [Remaining RAM] of the camera. If the Remaining ROM or RAM is not enough to install the extension software, it is necessary to uninstall the other extension software that is already installed. Refer to “[Uninstall] button” for how to uninstall the software.

2 Click the [Choose File] button and designate “Ext. software”.

3 Confirm that “Install new Ext. software” is selected and then click the [Execute] button. Installation of the extension software will start. When the installation is completed, the name of the installed extension software will be added to the “Software mng.” screen.

#### **IMPORTANT**

- A space cannot be used in the name of the saving directory.
- Be sure to use the designated file (extension: ext).
- Do not turn off the power of the camera during the installation process.
- Do not perform any operation during the installation process and wait until it completes.

4 Obtain the registration key number and register the registration key.

#### **Note**

- Depending on the type of extension software, you may need to register the registration key. For information on how to obtain and register the registration key, refer to the instruction manual of the extension software.
- After registering the registration key, the camera will restart. After the camera restarts, make sure that the registration key is registered before setting the extension software.

## “Software mng.” screen

The screenshot shows the 'Software mng.' screen with three tabs: 'Software mng.', 'Operation sched.', and 'Control log'. The 'Software mng.' tab is active, displaying a table of unique information:

Unique information	
MPR ID	XXXXXXXXXX
Remaining ROM	XXXXXXXXXX
Remaining RAM	XXXXXXXXXX
SDK version	XXXX
Firmware version	XXXX
RAM capacity expansion mode	<input type="radio"/> On <input checked="" type="radio"/> Off

Below the table is a 'Set' button. Underneath, there are instructions:

- When "On" is set for the RAM capacity expansion mode, the function to record on the SD memory card will become unavailable.
- "Off" is unavailable when the remaining RAM capacity is less than 51200 kbytes.
- Refer to the following URL for extension software required to set "On" for the RAM capacity expansion mode.

For use in Japan  
<https://cwc.i-pro.com/pages/application-platform-list>  
For use in a country other than Japan  
<https://i-pro.com/global/en/surveillance/i-pro-application-platform/application-list>

The bottom part of the screen shows a software installation dialog with a 'Choose File' button (labeled 'No file chosen'), a radio button for 'Install new Ext. software', an 'Execute' button, and the text 'Use the latest edition of the extension software.' A footer message says 'Please wait and do not operate the browser during install.'

When the extension software is installed, unique information of the camera and the registration status of the extension software will be displayed. On this screen, the following operations are available.

- Uninstallation of the extension software
- Display of the registration status detail screen
- Display of the extension software setting screen
- Update of the extension software

### **Note**

- Only one extension software can be installed.

## **Unique information**

### **[MPR ID]**

This ID is required to install the extension software. This also has a device ID unique to each camera.

### **[Remaining ROM]**

The remaining ROM capacity in the camera for the extension software will be displayed. If an extension software to be installed requires more capacity than the ROM capacity displayed here, installation of the extension software is unavailable.

### **[Remaining RAM]**

The remaining RAM capacity in the camera for the extension software will be displayed. If an extension software to be installed requires more capacity than the RAM capacity displayed here, installation of the extension software is unavailable.

### **[SDK version]**

Display the version information of the SDK installed in the camera. If the ext. software you install requires a version number higher than the one shown here, the ext. software may not work properly.

### **[Firmware version]**

The version information of the installed camera software will be displayed.

### **[RAM capacity expansion mode]**

Select On/Off to determine whether to perform the RAM capacity expansion mode.

**Default :** Off

### **Note**

- When “RAM capacity expansion mode” is set to “On”, the recording function to SD memory card by this product cannot be used.
- If the minus is displayed in the “Remaining RAM” value, uninstall the ext. software or set the remaining RAM to “On”.
- Click the [Set] button to restart the product. After restarting, the product cannot be operated for about 2 minutes, same way as when the power is turned on.

## **Ext. software**

### **[Uninstall] button**

The installed extension software can be uninstalled.

### **[Software version]**

If you have installed ext. software, the version information of the installed ext. software is displayed along with the version information of the SDK installed in the ext. software.

For ext. software that does not have SDK version information installed, the SDK version information will not be displayed.

### **Note**

- If the version information of the SDK embedded in the camera is less than the version number required by the ext. software, the ext. software may not operate properly.

**[Status]**

The installation status of the extension software will be displayed. When “Operable” is displayed, it is in a state that operation of the installed extension software is available.

**[Setup>>] button**

In case that the extension software has a unique screen such as a setting screen, it is possible to display the screen.

**[Install new Ext. software]**

When installing a new extension software is installed, select this and then select an extension software to be installed.

**[Upgrade]**

The version of the installed extension software can be upgraded by selecting the installed extension software and then clicking the [Execute] button.

### 36.3 Set a schedule of the extension software [Operation sched.]

Click the “Operation sched.” tab of the “Ext. software” page. (For menu display and how to operate, refer to “How to display the setup menu” and “How to operate the setup menu”.)

Software mng.
Operation sched.
Control log

▼

Operating day of week

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Time table 1	●	●	●	●	●	●	●
Time table 2	●	●	●	●	●	●	●
Off	●	●	●	●	●	●	●

[Time table 1]

		0:00	6:00	12:00	18:00	24:00	Operation content
1	00 : 00 - 00 : 00						Off
2	00 : 00 - 00 : 00						Off
3	00 : 00 - 00 : 00						Off
4	00 : 00 - 00 : 00						Off
5	00 : 00 - 00 : 00						Off
6	00 : 00 - 00 : 00						Off

[Time table 2]

		0:00	6:00	12:00	18:00	24:00	Operation content
1	00 : 00 - 00 : 00						Off
2	00 : 00 - 00 : 00						Off
3	00 : 00 - 00 : 00						Off
4	00 : 00 - 00 : 00						Off
5	00 : 00 - 00 : 00						Off
6	00 : 00 - 00 : 00						Off

Set

**[Operating day of week]**

Select "Time table 1", "Time table 2" or "Off" for each day of the week.

**[Time table 1] [Time table 2]**

From the pull-down menu, select the start time and the end time of the schedule.

To set 24 hours per day, set [00:00] - [00:00]. On/Off option can be set at [Operation content].

**How to set the schedules**

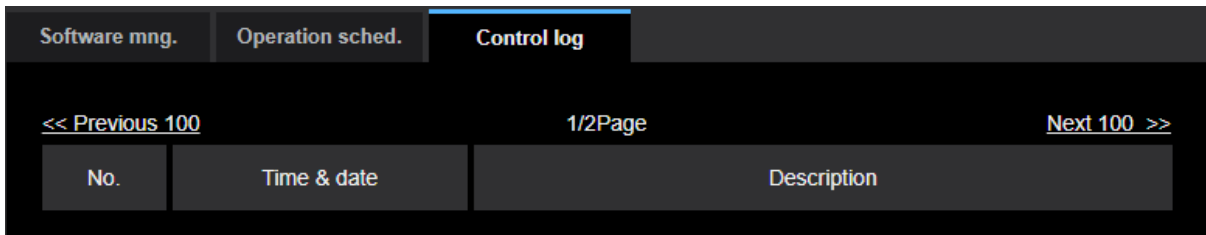
1. Select software for which an operation schedule is set from the extension software list.
2. At [Operating day of week], select a day of week and a time table where the operation schedule is to be set.
3. Specify a period of time on "Time table 1" and "Time table 2" where the schedule is to be executed. To execute for 24 hours, specify the period of time as [00:00] - [00:00].
4. Click the [Set] button after completing the settings.

## 36.4 Check the control log of extension software [Control log]

Up to 200 control logs can be saved on the built-in memory of the camera.

When the saved control logs have reached the maximum number, the newer logs will overwrite the older control logs. In this case, the oldest log is the first to be overwritten.

The control logs will be displayed in group of 100 logs each, and the logs will be saved even when the power of the camera is turned off.



No.	Time & date	Description
-----	-------------	-------------

### [Next 100 >>]

When clicking "Next 100 >>", the next 100 control logs will be displayed.

### [Number of pages display]

The currently opened page will be displayed in the "page/total page" format.

### [<< Previous 100]

When clicking "<< Previous 100", the previous 100 control logs will be displayed.

### [No.]

The serial number of the control log will be displayed.

### [Time & date]

Time and date at the error occurrence will be displayed.

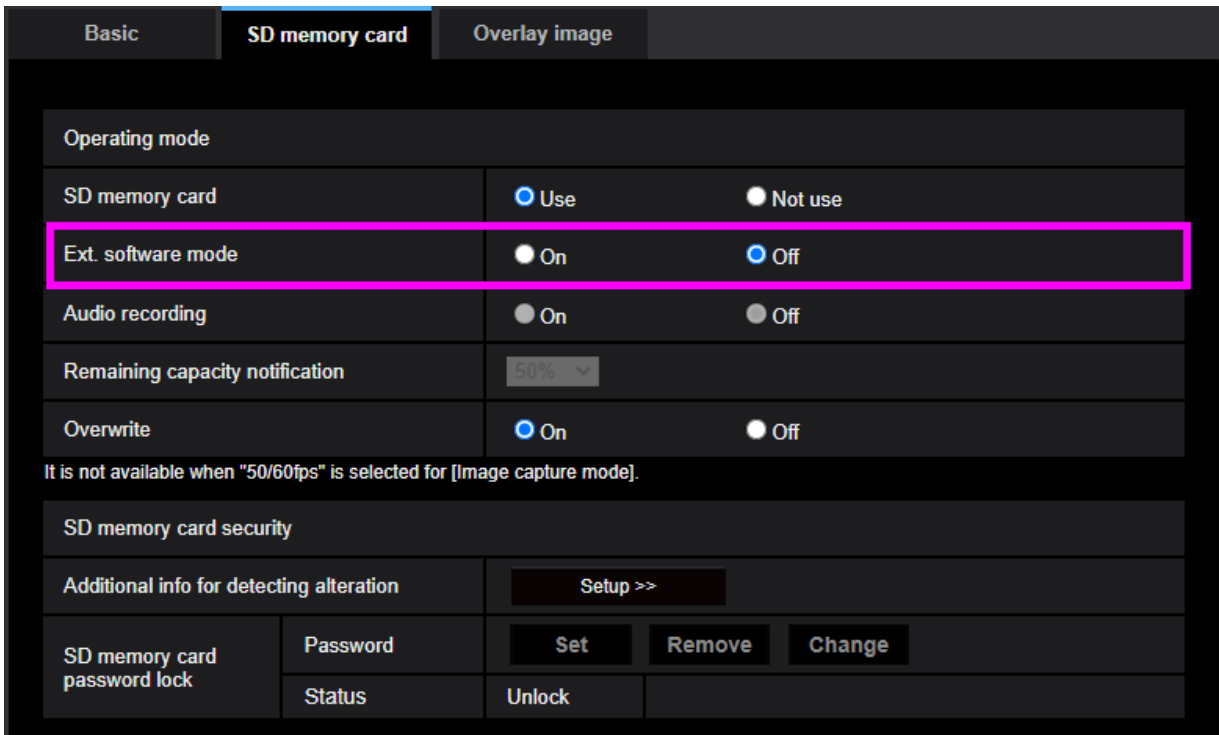
### [Description]

The descriptions about the control log will be displayed.

### 37. Add Ext. software mode

(Operating Instructions – Configure the basic settings of the camera [Basic]  
– Configure the settings relating to the SD memory card [SD memory card])

[Ext.software mode] has been added to the SD memory card settings.



#### [Ext. software mode]

Set this setting to "On" when the installed extension software uses the SD memory card in this product.

- On: The extension software can use the SD memory card in this product. In this case, recording on the SD memory card using the functions of this product will become unavailable.
- Off: The extension software cannot use the SD memory card in this product.
- Default: Off

#### **Note**

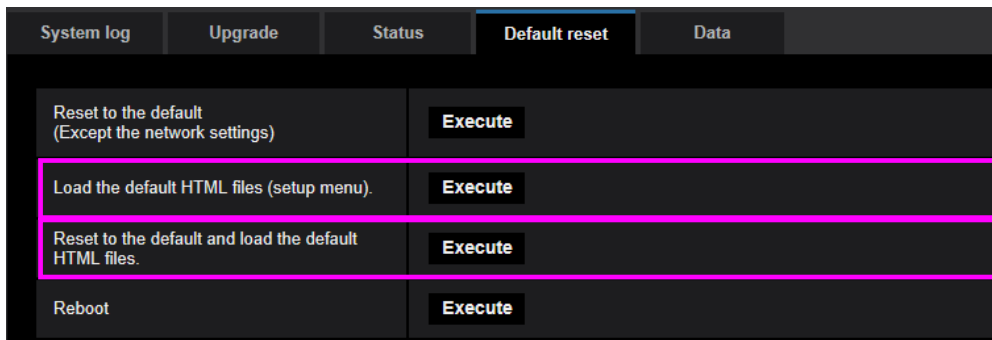
- If you set the extension software mode from "On" to "Off", formatting the SD memory card is recommended.
- If you are operating extension software that uses the SD memory card, the operation of recording to the SD memory card is not guaranteed.

## 38. Add HTML initialization function

### (Operating Instructions – Reset the settings/Reboot the camera [Default reset])

[Load the default HTML files (setup menu).] and [Reset to the default and load the default HTML files.] have been added to the [Default reset] tab.

The settings and the HTML data of the camera can be initialized and reboot of the camera can be performed on this page.



#### [Reset to the default (Except the network settings)]

Click the [Execute] button to reset the settings to the default. Note that the network settings will not be reset.

It is impossible to operate the camera for about 3 minutes after the initialization.

#### [Load the default HTML files (setup menu).]

Click the [Execute] button to reset the HTML files to the default.

It is impossible to operate the camera for about 3 minutes after the initialization.

#### [Reset to the default and load the default HTML files.]

Click the [Execute] button to reset the settings of the camera and the HTML files to the default. Note that the network settings will not be reset.

It is impossible to operate the camera for about 3 minutes after the initialization.

#### [Reboot]

Click the [Execute] button to reboot the camera.

It is impossible to operate the camera for about 2 minutes after rebooting the camera.

#### **Note**

- Refer to the supplied Installation Guide for more information about initializing the network settings.
- If “Diag.” of the alarm or e-mail notification function is selected, a notification of error will be sent to “Destination E-mail address” or to “Destination of notification” when an error such as no SD memory card insertion after the reboot or a locked SD memory card insertion occurs.

### 39. Add 2fps and 3fps to FTP/SFTP refresh interval, add 1920x1080 to pre-alarm resolution, expand image destination server to 2 locations (Operating Instructions – Configuring the network settings [Network] – Configure advanced network settings [Advanced])

The following have been added to the communication protocol FTP/SFTP function of the file transfer function.

- Added 2fps, 3fps to refresh interval
- Added 1920x1080 to pre-alarm resolution
- Expanded image destination server to 2 locations

FTP (File Transfer Protocol) and SFTP (SSH File Transfer Protocol) are protocols for transferring files and are used to send images to a server.

SFTP allows you to securely send images to a server using data streams encrypted by SSH (Secure Shell).

There are two transmission functions below.

- Send images when an alarm occurs
- Send images periodically

The screenshot shows the 'Advanced' settings page for 'i-PRO Web Service'. The 'FTP/SFTP' section is highlighted with a pink border. It includes settings for 'Transmission protocol' (FTP/SFTP), 'Alarm setting (Server 1)', 'Alarm setting (Server 2)', and 'Periodic transmission settings'. The 'Alarm setting (Server 1)' section includes options for 'Alarm image transmission', 'Directory name', 'File name' (with checkboxes for Terminal 1, 2, 3, VMD, SCD, Auto track, Command alarm, Audio detection), 'FTP transmission retry', 'Pre alarm' (with dropdowns for Transmission interval, Maximum number of images, Recording duration), 'Post alarm' (with dropdowns for Transmission interval, Number of images, Recording duration), and 'Image capture size' (set to 1920x1080). The 'Alarm setting (Server 2)' section includes similar options for 'Alarm image transmission', 'Directory name', 'File name', and 'Image capture size'. The 'Periodic transmission settings' section includes options for 'Periodic image transmission', 'Directory name', 'File name' (with radio buttons for Name w/time&date and Name w/o time&date), 'Transmission interval', and 'Image capture size' (set to 1920x1080). A note at the bottom states: '[Periodic image transmission] is available for [FTP Server 1], [SFTP Server 1].'

### [Transmission protocol]

Select and set the protocol with the destination server from FTP/SFTP.

- **SFTP:** SFTP is used as the protocol for transmitting with the server.
- **FTP:** FTP is used as the protocol for transmitting with the server.
- **Default:** SFTP

### **IMPORTANT**

- When FTP is selected in the protocol settings, FTP server authentication information (user names and passwords) may be leaked on the network when sending images to the FTP server.

## Alarm setting

### Alarm setting (server 1)

#### [Alarm image transmission]

Select "On" or "Off" to determine whether or not to transmit images when an alarm is detected.

- **On:** Transmits an image to the server when an alarm has occurred.
- **Off:** Does not transmit an image to the server when an alarm has occurred.
- **Default:** Off

#### [Directory name]

Enter the directory name where the alarm images are to be saved.

For example, enter "/ALARM" to designate the directory "ALARM" under the root directory of the server.

- **Available number of characters:** 1 - 256 characters
- **Unavailable characters:** " & ;

#### [File name]

Enter the file name used for the alarm image to be transmitted to the server. The file name will be as follows.

- **File name:** ["Entered file name" + "Time and date (year/ month/ day/ hour/ minute/ second)"] + "Serial number"
- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & \* / : ; < > ? ¥ |

When "On" is selected for [Alarm image FTP transmission], you can select the alarm type from the following.

- **Terminal1** <Terminal input/output supported models only>: Transmit the image to the server when an alarm occurs in Terminal 1.
- **Terminal2** <Terminal input/output supported models only>: Transmit the image to the server when an alarm occurs in Terminal 2.
- **Terminal3** <Terminal input/output supported models only>: Transmit the image to the server when an alarm occurs in Terminal 3.
- **VMD:** Transmit the image to the server when motion is detected.
- **SCD:** Transmit the image to the server when SCD (scene change detection) occurs.
- **Audio detection:** Transmit the image to the server when audio detection occurs.
- **Command alarm:** Transmit the image to the server when a command alarm is entered.
- **Auto track** <(PTZ S) only> : Transmit the image to the server when an auto track occurs.

### **[FTP transmission retry]**

Select "On" or "Off" to determine whether or not to resend failed FTP transmissions.

- **On:** If transmission fails, transmissions are resent until they are successfully sent.
- **Off:** If transmission fails, the image that failed to be sent is discarded and the next image is sent.
- **Default:** Off

### **Note**

- When SFTP is selected in "Transmission protocol" settings, FTP transmission retry is unavailable.
- When 2fps or 3fps is selected in [Refresh interval], FTP transmission retry is unavailable.

### **[Pre alarm]**

#### • **Transmission interval**

Select the transmission interval of images before an alarm occurs from the following.

When 60fps mode, 30fps mode or 15fps mode is selected for [Image capture mode]:

0.1fps/ 0.2fps/ 0.33fps/ 0.5fps/ 1fps/ 2fps/ 3fps

When 50fps mode, 25fps mode or 12.5fps mode is selected for [Image capture mode]:

0.08fps/ 0.17fps/ 0.28fps/ 0.42fps/ 1fps/ 2fps/ 3fps

- **Default:** 1fps

#### • **Maximum number of images**

Select the number of images to be transmitted from the following.

0pic/ 1pic/ 2pics/ 3pics/ 4pics/ 5pics/ 6pics/ 7pics/ 8pics/ 9pics/ 10pics/ 20pics/ 30pics/ 40pics/ 50pics/

- **Default:** 0 pic

#### • **Recording duration**

Approximate time to be taken to save the set "Maximum number of images" with the set "Transmission interval" will be displayed.

### **Note**

- When "JPEG(1)" is selected for the capture size of the image to be transmitted, pre alarm is unavailable if the image capture size of "JPEG(1)" is larger than "1920x1080".
- When "On" is selected for "Image compression rate upon alarm detection", only post alarm recorded images are compressed. Compression is not applied to pre alarm recorded images.
- When a selection with an asterisk (\*) on the right of it is selected for "Maximum number of images" of "Pre alarm", the specified number of images may not be able to be sent depending on the image capture size and image quality. The following table shows the maximum number of images that can be sent for pre alarm.
- If the refresh interval is higher than 1fps, the maximum number of pre-alarm images is 10.

		Image quality									
		0	1	2	3	4	5	6	7	8	9
Image capture size	1920x1080	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>20</u>	<u>30</u>	<u>40</u>
	1280x960	5	6	7	8	10	10	10	20	30	40
	1280x720	7	8	10	10	10	20	20	30	40	50
	VGA	10	20	20	30	30	40	50	50	50	50
	640x360	20	30	40	50	50	50	50	50	50	50
	QVGA	40	50	50	50	50	50	50	50	50	50
	320x180	50	50	50	50	50	50	50	50	50	50

**[Post alarm]**

• **Transmission interval**

Select the transmission interval for the alarm image transmission from the following.

When 60fps mode, 30fps mode or 15fps mode is selected for [Image capture mode]:

0.1fps/ 0.2fps/ 0.33fps/ 0.5fps/ 1fps/ 2fps/ 3fps

When 50fps mode, 25fps mode or 12.5fps mode is selected for [Image capture mode]:

0.08fps/ 0.17fps/ 0.28fps/ 0.42fps/ 1fps/ 2fps/ 3fps

• **Default:** 1fps

• **Number of images**

Select the number of images to be transmitted from the following.

1pic/ 2pics/ 3pics/ 4pics/ 5pics/ 6pics/ 7pics/ 8pics/ 9pics/ 10pics/ 20pics/ 30pics/ 50pics/ 100pics/ 200pics/300pics/ 500pics/ 1000pics/ 1500pics/ 2000pics/ 3000pics

• **Default:** 100pics

• **Recording duration**

Approximate time to be taken to save the set “Number of images” with the set “Transmission interval” will be displayed.

**Note**

• If the resolution of the image to be transmitted is set to JPEG(1), and the JPEG(1) resolution is larger than “1920×1080”, the maximum refresh interval will be 1fps.

• If the refresh interval is higher than 1fps, the maximum number of pre-alarm images is 10.

**[Image capture size]**

Select the image capture size of images transmitted when an alarm occurs from the following.

JPEG(1)/JPEG(2)

• **Default:** JPEG(2)

**Alarm setting (server 2) <Terminal input/output supported models only>**

**[Alarm image transmission]**

Select “On” or “Off” to determine whether or not to transmit images when an alarm is detected.

• **On:** Transmits an image to the server when an alarm has occurred.

• **Off:** Does not transmit an image to the server when an alarm has occurred.

• **Default:** Off

### **[Directory name]**

Enter the directory name where the alarm images are to be saved.

For example, enter “/ALARM” to designate the directory “ALARM” under the root directory of the server.

- **Available number of characters:** 1 - 256 characters
- **Unavailable characters:** " & ;

### **[File name]**

Enter the file name used for the alarm image to be transmitted to the server. The file name will be as follows.

- **File name:** [“Entered file name” + “Time and date (year/ month/ day/ hour/ minute/ second)”] + “Serial number”
- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & \* / : ; < > ? ¥ |

When “On” is selected for [Alarm image FTP transmission], you can select the alarm type from the following.

- **Terminal1:** Transmit the image to the server when an alarm occurs in Terminal 1.
- **Terminal2:** Transmit the image to the server when an alarm occurs in Terminal 2.
- **Terminal3:** Transmit the image to the server when an alarm occurs in Terminal 3.

### **Note**

- Terminals 1 to 3 of “Alarm setting (Server 2)” can be selected only when terminals 1 to 3 of “Alarm setting/Alarm setting (Server 1)” are not selected.
- “Alarm setting (Server 2) <only for models with terminal input/output>” uses [FTP transmission retry], [Pre alarm], [Post alarm], and [Image capture size] of “Alarm setting/Alarm setting (Server 1)”.

## **Periodic transmission settings**

Periodic image transmission is available only for “Alarm setting/Alarm setting (Server 1)”.

### **[Periodic image transmission]**

Select “On” or “Off” to determine whether or not to transmit images using the periodic image transmission function.

When “On” is selected, it is necessary to configure the settings of the server.

- **On:** Performs periodic image transmission.
- **Off:** Does not perform periodic image transmission.
- **Default:** Off

### **IMPORTANT**

- When using periodic image transmission, it is necessary to configure the schedule settings of FTP/SFTP periodic image transmission on the [Schedule] tab of the “Schedule” page. (→“Configure the settings relating to the schedules [Schedule]”)

**[Directory name]**

Enter the directory name where the alarm images are to be saved.

For example, enter "/ALARM" to designate the directory "ALARM" under the root directory of the server.

- **Available number of characters:** 1 - 256 characters
- **Unavailable characters:** " & ;
- **Default:** None (blank)

**[File name]**

Enter the file name used for the alarm image to be transmitted to the server. The file name will be as follows.

- **File name:** ["Entered file name" + "Time and date (year/ month/ day/ hour/ minute/ second)"] + "Serial number"
- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & \* / : ; < > ? ¥ |
- **Default:** None (blank)

**Note**

- When "Name w/time&date" is selected, the file name will be ["Entered file name" + "Time and date (year/ month/ day/ hour/ minute/ second)" + "Serial number (starting from 00)"] + "s" during summer time.
- If "Alarm setting 1" and "Periodic transmission settings" are set at the same time when an alarm occurs, "Alarm setting 1" will be performed when an alarm occurs.
- If "Alarm setting 2" and "Periodic transmission settings" are set at the same time when an alarm occurs, both "Alarm setting 2" and "Periodic transmission settings" will be performed when an alarm occurs.

**[Transmission interval]**

Select the interval for the periodic image transmission from the following.

1s/ 2s/ 3s/ 4s/ 5s/ 6s/ 10s/ 15s/ 20s/ 30s/ 1min/ 2min/ 3min/ 4min/ 5min/ 6min/ 10min/ 15min/ 20min/ 30min/1h/ 1.5h/ 2h/ 3h/ 4h/ 6h/ 12h/ 24h

- **Default:** 1s

**[Image capture size]**

Select the image capture size of images to be transmitted from the following.

JPEG(1)/JPEG(2)

- **Default:** JPEG(2)

SFTP server 1 settings	
SFTP server address	<input type="text"/> Example of entry: 192.168.0.10
Port number	<input type="text" value="22"/> (1-65535)
Host key hash	SHA256: <input type="text"/> Example of entry: dqVcdVZ/2ySO5tz/R6YR+rpbW6dnap6P743uiMV0cf0
User name	<input type="text"/>
Password	<input type="password"/>

FTP Server 1 setting	
FTP server address	<input type="text"/> Example of entry: 192.168.0.10
User name	<input type="text"/>
Password	<input type="password"/>
Control port	<input type="text" value="21"/> (1-65535)
FTP mode	<input type="radio"/> Passive <input type="radio"/> Active

SFTP server 2 settings	
SFTP server address	<input type="text"/> Example of entry: 192.168.0.10
Port number	<input type="text" value="22"/> (1-65535)
Host key hash	SHA256: <input type="text"/> Example of entry: dqVcdVZ/2ySO5tz/R6YR+rpbW6dnap6P743uiMV0cf0
User name	<input type="text"/>
Password	<input type="password"/>

FTP server 2 settings	
FTP server address	<input type="text"/> Example of entry: 192.168.0.10
User name	<input type="text"/>
Password	<input type="password"/>
Control port	<input type="text" value="21"/> (1-65535)
FTP mode	<input type="radio"/> Passive <input type="radio"/> Active

## SFTP server settings

### SFTP server 1 settings

### SFTP server 2 settings <Terminal input/output supported models only>

#### **Note**

- When [Transmission protocol] is set to FTP, the SFTP server setting is unavailable.

#### **[SFTP server address]**

Enter the IP address or the host name of the SFTP server.

- **Available number of characters:** 1 - 128 characters
- **Unavailable characters:** Alphanumeric characters, the colon (:), the period (.), the underscore (\_), and the hyphen (-).

## **IMPORTANT**

- When entering the host name for “SFTP server address”, it is necessary to configure the DNS settings on the [Network] tab of the “Network” page. (→“Configure the network settings [Network]”)

### **[Port number]**

Enter a control port number to be used for the SFTP server.

- **Available number of characters:** 1-65535
- **Default:** 22

The following port numbers are unavailable since they are already in use.

20, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 995, 10669, 10670

### **[Host key hash]**

Enter the hash value of the public key of the SFTP server.

- **Available number of characters:** 43 - 44 characters
- **Available characters:** Alphanumeric characters, +, /, =

### **[User name]**

Enter the user name (login name) to access the SFTP server.

- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & ; ¥

### **[Password]**

Enter the password to access the SFTP server.

- **Available number of characters:** 0 - 32 characters
- **Unavailable characters:** " &

## **FTP server setting**

### **FTP server 1 setting**

### **FTP server 2 settings <Terminal input/output supported models only>**

### **Note**

- When [Transmission protocol] is set to SFTP, the FTP server setting is unavailable.

### **[FTP server address]**

Enter the IP address or the host name of the FTP server.

- **Available number of characters:** 1 - 128 characters
- **Available characters:** Alphanumeric characters, the colon (:), the period (.), the underscore (\_), and the hyphen (-).

## **IMPORTANT**

- When entering the host name for “FTP server address”, it is necessary to configure the DNS settings on the [Network] tab of the “Network” page. (→ “Configure the network settings [Network]”)

**[User name]**

Enter the user name (login name) to access the FTP server.

- **Available number of characters:** 1 - 32 characters
- **Unavailable characters:** " & ; ¥

**[Password]**

Enter the password to access the FTP server.

- **Available number of characters:** 0 - 32 characters
- **Unavailable characters:** " &

**[Control port]**

Enter a control port number to be used for the FTP server.

- **Available port number:** 1 - 65535
- **Default:** 21

The following port numbers are unavailable since they are already in use.

20, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 995, 10669, 10670

**[FTP mode]**

Select "Passive" or "Active" for the FTP mode.

Normally, select "Passive". When it is impossible to connect after select "Passive", try to connect after selecting "Active".

- **Passive:** Sets the FTP mode to passive mode.
- **Active:** Sets the FTP mode to active mode.
- **Default:** Passive

#### 40. Add 0.5s, 1s, 2s, 3s, and 4s to the alarm deactivation time

(Operating Instructions – Configure the alarm settings [Alarm] – Configure the settings relating to the camera action on alarm occurrence [Alarm])

0.5s, 1s, 2s, 3s, and 4s have been added to the alarm deactivation time.

#### Alarm

- [Alarm deactivation time]

Set the time during which no detection action is performed after an alarm is detected. For example, if the alarm is set to send email notifications to a mobile device or tablet device, this setting can be used to prevent too many emails from being sent. 0.5s, 1 - 600s.

**Default : 5s**

Alarm	VMD area	SCD area	Audio detection	Notification
Alarm				
Terminal 1	Off			
Terminal 2	Off			
Terminal 3	Off			
VMD alarm	<a href="#">VMD &gt;&gt;</a>			
SCD alarm	<a href="#">SCD &gt;&gt;</a>			
Audio detection alarm	<a href="#">Audio detection &gt;&gt;</a>			
Command alarm	Command alarm	<input checked="" type="radio"/> On <input type="radio"/> Off		
	Reception port	8181 (1-65535)		
Alarm deactivation time	5 s (0.5s,1-600s)			
Alarm test	<b>Execute</b>			

## 41. Add schedule setting to switch image quality at sunrise and sunset (Configure the settings relating to the schedules [Schedule])

A function to change the image quality according to the time of sunrise and sunset has been added to the schedule settings.

Schedule		
Schedules		
Schedule 1 (White) <span style="color: white;">■</span>	Schedule mode	<Auto-Schedule> Daytime: Imaç <span style="float: right;">▼</span>
	Time range	<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"/> Sun 24h <span style="margin-left: 20px;">00:00 - 00:00</span>
Schedule 2 (Blue) <span style="color: blue;">■</span>	Schedule mode	Off <span style="float: right;">▼</span>
	Time range	<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"/> Sun 24h <span style="margin-left: 20px;">00:00 - 00:00</span>
Schedule 3 (Green) <span style="color: green;">■</span>	Schedule mode	Off <span style="float: right;">▼</span>
	Time range	<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"/> Sun 24h <span style="margin-left: 20px;">00:00 - 00:00</span>
Schedule 4 (Red) <span style="color: red;">■</span>	Schedule mode	Off <span style="float: right;">▼</span>
	Time range	<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"/> Sun 24h <span style="margin-left: 20px;">00:00 - 00:00</span>
Schedule 5 (Black) <span style="color: black;">■</span>	Schedule mode	Off <span style="float: right;">▼</span>
	Time range	<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"/> Sun 24h <span style="margin-left: 20px;">00:00 - 00:00</span>
Scene settings linked to sunrise and sunset times <a href="#">To scene setting (image quality adjustment)</a> When using this function, set the time zone. <a href="#">Basic settings &gt;&gt;</a>		
Auto Scheduler (Manual/ City Selection)	Manual <span style="float: right;">▼</span>	
Latitude	0.000000 (-90.000000 - 90.000000)	
Longitude	0.000000 (-180.000000 - 180.000000)	
Altitude	0 m(-500 - 9000)	
Automatic calculation result	Sunrise time : Sunset time :	
Sunrise time and sunset time correction	Sunrise time + 0 Minutes (-60 - 60)	
	Sunset time + 0 Minutes (-60 - 60) The time of the automatic calculation result can be corrected between -60 minutes and +60 minutes.	

## Configure the settings relating to the schedules [Schedule]

On the Schedule page, set the following schedule items.

- Alarm permission (Terminal alarm 1,2,3)
- Alarm permission (Terminal alarm 1)
- Alarm permission (Terminal alarm 2)
- Alarm permission (Terminal alarm 3)
- VMD permission
- SCD permission
- Audio detection permission
- Access permission
- Recording to SD (Recording stream)
- Scene file
- SFTP periodic image transmission
- E-mail permission
- Position refresh
- Preset position setting (1-64)
- <Auto Schedule>Daytime: Image Quality1 / Night: Image Quality 2 (Schedule 1 only)
- Reboot (Schedule 8 only)

The Schedule page consists only of the [Schedule] tab.

Up to 8 schedules can be set.

1. Select an action to be assigned to the schedule from “Schedule mode”.

“Off” is selected at the default

**Off** : No action will be taken for the respective schedule.

**Alarm permission (Terminal alarm 1,2,3)** : Alarm input (terminal alarm) will be allowed during the period of the schedule.

**Alarm permission (Terminal alarm 1)** : Alarm input (terminal alarm) will be allowed during the period of the schedule.

**Alarm permission (Terminal alarm 2)** : Alarm input (terminal alarm) will be allowed during the period of the schedule.

**Alarm permission (Terminal alarm 3)** : Alarm input (terminal alarm) will be allowed during the period of the schedule.

**VMD permission** : The video motion detection (VMD) function will be active during the period of the schedule.

**SCD permission** : The scene change detection (SCD) function will be active during the period of the schedule.

**Audio detection permission** : The audio detection function will be active during the period of the schedule.

**Access permission** : Users whose access level is set to “2. Camera control” and “3. Live only” on the [User auth.] tab. (Configure the settings relating to the user authentication [User auth.]

**Recording to SD (Recording stream)** : The SD recording will be performed at the designated time in the schedule. Further, the “Recording format” is enabled only when there is a stream.

**Image Quality 1 : Scene1 (Scene file 1)** : Images are set to the image settings of “Scene file 1” at the designated time in the schedule. When the designated time for the schedule finishes, images are set to the image settings of “Scene file is not applied”.

**Image Quality 2 : Scene1 (Scene file 2)** : Images are set to the image settings of “Scene file 2” at the designated time in the schedule. When the designated time for the schedule finishes, images

are set to the image settings of “Scene file is not applied”.

**Image Quality 3 : Scene3 (Scene file 3)** : Images are set to the image settings of “Scene file 3” at the designated time in the schedule. When the designated time for the schedule finishes, images are set to the image settings of “Scene file is not applied”.

**Image Quality 4 : Scene4 (Scene file 4)** : Images are set to the image settings of “Scene file 1” at the designated time in the schedule. When the designated time for the schedule finishes, images are set to the image settings of “Scene file is not applied”.

**SFTP periodic image transmission** : SFTP periodic image transmission will be performed at the designated time in the schedule.

**E-mail permission**: While the schedule is set, e-mail notification is sent when alarm is input.

**Position refresh** : The camera position will be refreshed at the designated time in the schedule.

**1-64** : The camera will move to the selected position from the preset position at the designated time in the schedule.

<Automatic schedule> Daytime: Image Quality 1 / Night: Image Quality 2: At sunrise, the image quality is set to “Scene file 1”, and at sunset, the image quality is set to “Scene file 2”. Only schedule 1 can be selected. This cannot be selected if the sunrise/sunset times have not been set. For the setting procedure, see “How to change the image quality based on the time of sunrise/sunset”.

**Reboot**: The camera reboots at the scheduled time. Can only be selected with Schedule 8.

### **Note**

- Select “On” for “User auth.” on the [User auth.] tab of “User mng.” page (“Configure the settings relating to the user authentication [User auth.]”) and “Off” for “Host auth.” on the “Host auth.” page (“Configure the settings relating to the host authentication [Host auth.]”) to validate “Access permission”.
- When selecting “Recording to SD (Recording stream)”, select “Stream(1)”, “Stream(2)”, “Stream(3)”, or “Stream(4)” for “Recording format” on the [SD memory card] tab and select “Schedule” for “Save trigger”. ([Save trigger]).
- Schedule 1 “<Automatic schedule> Daytime: Image Quality 1/ Night: Image Quality 2” and Schedules 2 to 8 “Image Quality 1: Scene 1 (Scene file 1)”, “Image Quality 2: Scene 2 (Scene file 2)”, “Image Quality 3: Scene 3 (Scene file 3)”, and “Image Quality 4: Scene 4 (Scene file 4)” cannot be selected at the same time.

2. Select the checkbox for the day of the week to set the schedule in “Schedule”.

### **Note**

- If “<Auto Schedule> Daytime: Image Quality 1/ Night: Image Quality 2” is selected in Schedule 1, the time zone setting will be disabled.

3. To specify the time, click [▼] and set the time. If you do not want to set the time period, select “24h”.

### **Note**

- If “<Auto Schedule> Daytime: Image Quality 1/ Night: Image Quality 2” is selected in Schedule 1, the time zone setting will be disabled.

4. Click the [Set] button after completing the settings.  
→ The setting details are displayed at the bottom of the screen.

**Note**

- The colors displayed in Schedule 1 to Schedule 8 represent the colors of the lines displayed in the schedule column at the bottom of the screen.
- If the setting time for position refresh and image quality is set at the same time, the image quality will be applied after position refresh is completed.
- When the operation mode of Schedules 1 to 8 is set to "Off", the following are always allowed to operate.
  - Alarm permission (Terminal alarm 1,2,3)
  - Alarm permission (Terminal alarm 1)
  - Alarm permission (Terminal alarm 2)
  - Alarm permission (Terminal alarm 3)
  - VMD permission
  - SCD permission
  - Audio detection permission
  - Access permission

## How to change the image quality based on the time of sunrise/sunset

1. Set the sunrise/sunset times from [Scene settings linked to sunrise and sunset times].

### **[To scene setting (image quality adjustment)]**

This is a link to the image quality adjustment for scene setting.

### **[Basic settings]**

This is a link to the basic settings for setting the time zone.

### **[Auto Scheduler (Manual/City Selection)]**

Select the input method for [Latitude], [Longitude], and [Altitude].

- Not used: Disable operation mode “<Auto Schedule> Daytime: Image Quality 1 / Night: Image Quality 2”.
- Manual: Manually enter [Latitude], [Longitude], and [Altitude].
- (City name): Displays a list of cities. The [Latitude], [Longitude], and [Altitude] of the selected city are entered and used for [Automatic calculation result].

**Default:** Not used

### **[Latitude]**

Enter the latitude of the region of the camera you are using.

Input range: -180 to 180 (valid up to 6 decimal places)

**Default:** 0

### **[Longitude]**

Enter the longitude of the region of the camera you are using.

Input range: -90 to 90 (valid up to 6 decimal places)

**Default:** 0

### **[Altitude]**

Enter the altitude of the region of the camera you are using.

If left blank, it will be calculated as “10m”.

Input range: -500 to 9000 (m)

**Default:** 10

### **[Automatic calculation result]**

The sunrise/sunset time is calculated from [Latitude], [Longitude], and [Altitude].

If you do not click the [Set] button, the calculation result will not be applied.

### **[Sunrise time and sunset time correction]**

Perform time correction on the sunrise/sunset times in [Automatic calculation result] to determine the time applied for the image quality.

Input range: -60 to 60 (minutes)

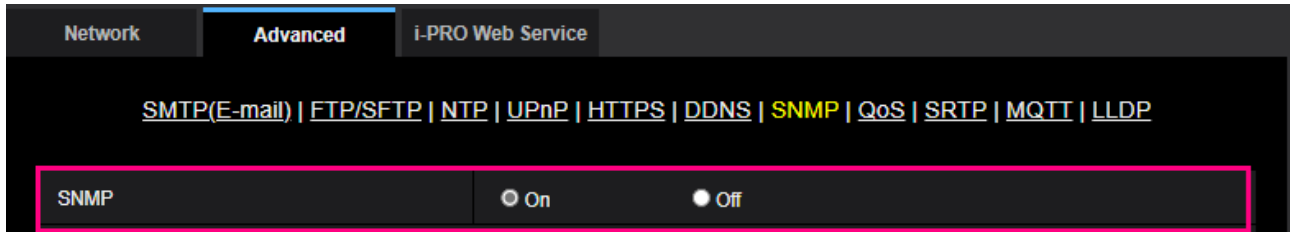
**Default:** 0

2. Click the [Set] button.
3. Configure the schedule settings.  
For the setting procedure, see “Configure schedule settings [Schedule]”.

## 42. Add enable/disable setting to SNMP agent setting

(Operating Instructions – Configuring the network settings [Network] – Configure the settings relating to SNMP)

“Enable/Disable” setting for “SNMP” has been added to “SNMP” in the “Advanced” tab of the Network page.



### SNMP setting

- **[SNMP setting]**

Set whether to Enable/Disable the SNMP function

Default: Enable

### **Note**

If “SNMP setting” is set to “Disable”, “SNMP agent setting” and “SNMP trap setting” cannot be set.

### 43. Add corridor view mode to image capture mode

#### (Operating Instructions – About the live image types – About image capture mode)

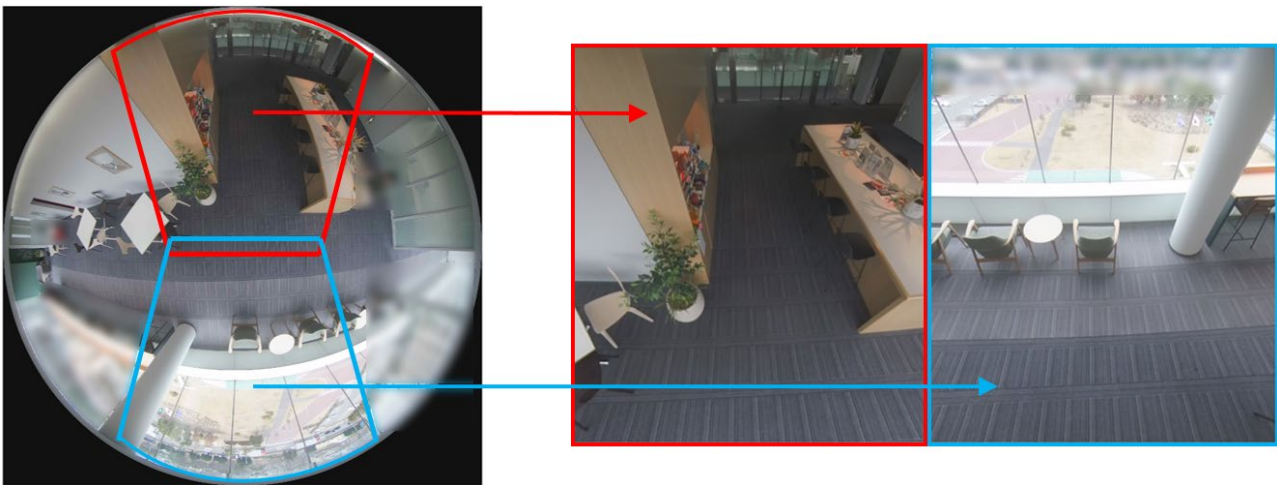
Corridor view is a function that corrects the distortion of the upper and lower parts of the fisheye image and displays them side by side.

“Corridor” and “Fisheye + Corridor” have been added to the image capture mode to display in corridor view.

#### 43.1 Image types

Corridor view corrects the distortion of the upper and lower parts of the fisheye image and displays them on the left and right.

The center, left, and right areas of fisheye are blind spots and are not visible in the corridor view image.



#### 43.2 About image capture modes

The resolutions and maximum frame rates that can be used for “Corridor” and “Fisheye + Corridor” are as follows. (Excluding multi-screen)

Image capture mode	Stream(1)	Stream(2)	JPEG(1)	JPEG(2)	Maximum frame rate
Corridor	2560×1440 <b>(fisheye9M)</b>	1920×1080 <b>(fisheye9M)</b>	2560×1440 <b>(fisheye9M)</b>	1920×1080 <b>(fisheye9M)</b>	30fps <sup>*2</sup> / 25fps <b>(fisheye5M)</b>
	1920×1080	1280×720	1920×1080	1280×720	15fps / 12.5fps
	1280×720	640×360	1280×720	640×360	<b>(fisheye9M)</b>
	640×360	320×180	640×360	320×180	
	320×180		320×180		
Fisheye + Corridor	Fisheye : 2992×2992 <b>(fisheye9M)</b>	Corridor <sup>*1</sup> : 1280×720	Fisheye : 2992×2992	Corridor : 1280×720	30fps <sup>*2</sup> / 25fps <b>(fisheye9M)</b>
	2192×2192	640×360	2192×2192	640×360	15fps / 12.5fps
	1280×1280	320×180	1280×1280	320×180	<b>(fisheye5M)</b>
			640×640		
			320×320		

\*1 Auto VIQS not available.

\*2 If “Audio out” is set to “Monitor out”, the maximum frame rate may drop.

### 43.2.1 Types of images that can be displayed by image capture mode type

The types of images that can be displayed in “Corridor” and “Fisheye + Corridor” are as follows.

Image capture mode type	Image capture mode	Image type	Corresponding installation location
<b>1 monitor</b> This type streams one type of image.	Corrido	Corrido	Ceiling
<b>2 monitors</b> This type streams two types of images.	Fisheye + Corrido	Fisheye + Corrido	Ceiling

\*If the image capture mode type is “2 monitors”, “Stream (1)” will be fisheye, and “Stream (2)” will be Panorama, Double Panorama, Corridor, or Quad PTZ.

### 43.2.2 View images from mobile devices (including smartphones)



The resolutions that can be displayed from a mobile device for “Corridor” and “Fisheye + Corridor” are as follows.

Image capture mode type	Image capture size
Corrido	1920×1080 / 1280×720 / 640×360 / 320×180
Fisheye + Corrido	For Fisheye : 2192×2192 / 1280×1280 / 640×640 / 320×320 For Corridor : 1280×720 / 640×360 / 320×180

### 43.2.3 Restrictions on JPEG images when streaming

When “Stream transmission” (→Stream (1), Stream (2)) is set to “On”, H.265 (or H.264) images are displayed according to the “Stream encoding format” setting. When set to “Off”, JPEG images are displayed.

JPEG images can be displayed even when “Stream transmission” is set to “On”. In this case, the refresh interval of JPEG images (30fps mode/25fps mode) is restricted as follows.

Model	Image capture mode	Stream transmission	
		On	Off
	Corridor	Max.5fps / 4.2fps	Max.15fps / 12.5fps
	Fisheye + Corridor	Max.5fps / 4.2fps	Max.5fps / 4.2fps
	Corridor	Max.5fps / 4.2fps	Max.30fps / 25fps
	Fisheye + Corridor	Max.5fps / 4.2fps	Max.15fps / 12.5fps

\*The refresh interval of JPEG images may slow down depending on the network environment, PC performance, subject, resolution, image quality, and access number.

### 43.3 Play back images on the SD memory card

Regardless of the resolution of the images saved on the SD memory card, they will be displayed in the size determined according to the “Image capture mode” and “Recording format” settings on the playback page. Therefore, it may look grainy on the playback page.

Image capture mode	Video compression method	Playback size
Corridor	All	640×360
Fisheye + Corridor	「JPEG(1)」 or 「Stream(1)」	480×480
	「JPEG(2)」 or 「Stream (2)」	VGA

\*While recording to the SD memory card, the playback refresh interval may slow down.

### 43.4 Set preset position

The preset position settings for “Corridor” and “Fisheye + Corridor” are the same as for “Double panorama” and “Fisheye + Double panorama” respectively.

For the initial position setting of the corridor image, you can adjust it by 90° to the left and right by clicking the [Position adjust] button. The left and right corridor images then move together.

### 43.5 Set motion detection

The motion detection settings when the image capture mode is Corridor are the same as for “Double panorama” except for the following.

- Two motion detection areas can be set for each of the left and right images (left: “1 (white)” “2 (blue)”, right: “3 (green)” “4 (red)”).
- When the entire area is selected, “1 (white)” and “3 (green)” of “Area” are set.

### 43.6 Set scene change detection

The scene change detection settings when the image capture mode is Corridor are the same as for “Double panorama” except for the following.

- You can set one scene change detection area for each of the left and right images (left: “white”, right: “green”).

#### 44 Add 1280x720 image capture size for Stream (1) and Stream (2) (4 mega pixel model only)

(Operating Instructions – Configure the settings relating to images [Stream])

(Operating Instructions – Detailed Settings – Configure the settings relating to images and audio [Image/Audio] – Configure the settings relating to Stream [Image])

Image		Image quality	Audio
Image capture mode		16:9 mode(60fps mode) ▾	
"Live" page (Initial display)			
Initial display stream		Stream(1) ▾	
Refresh interval (JPEG) *		5fps ▾	
JPEG			
JPEG(1)	Image capture size	1920x1080 ▾	
	Image quality	5 Normal ▾	
JPEG(2)	Image capture size	640x380	
	Image quality	5 Normal ▾	
Stream(1)			
Stream transmission		<input type="radio"/> On <input checked="" type="radio"/> Off	
Stream encoding format		<input checked="" type="radio"/> H.265 <input type="radio"/> H.264	
Image capture size		1280x720 ▾	
Transmission priority		Frame rate ▾	
Frame rate*		60fps* ▾	
Max bit rate (per client) *		3072kbps* ▾ 3072 kbps	
Image quality		Normal ▾	
Smart Coding	Smart VIQS	Off ▾	
	Smart P-picture control	<input checked="" type="radio"/> On <input type="radio"/> Off	
	GOP control	Off ▾	
Refresh interval		1s ▾	
Transmission type		Unicast port (AUTO) ▾	
Unicast port1(Image)		32004 (1024-50000)	
Unicast port2(Audio)		33004 (1024-50000)	
Multicast address		239.192.0.20	
Multicast port		37004 (1024-50000)	
Multicast TTL/HOPLimit		16 (1-254)	

## Stream

### Stream (1)/ Stream (2)

#### [Image capture size]

Image capture mode	Stream(1)	Stream(2)
4 mega pixel [16:9] (30fps mode)	2688x1520	<u>1280x720</u>
4 mega pixel [16:9] (25fps mode)	2560x1440 1920x1080 <u>1280x720</u>	640x360 320x180
4 mega pixel [16:9] (30fps Quad mode)	2688x1520	<u>1280x720</u>
4 mega pixel [16:9] (25fps Quad mode)	2560x1440	640x360
4 mega pixel [16:9] (30fps Stitching mode)	1920x1080	
4 mega pixel [16:9] (25fps Stitching mode)	<u>1280x720</u>	

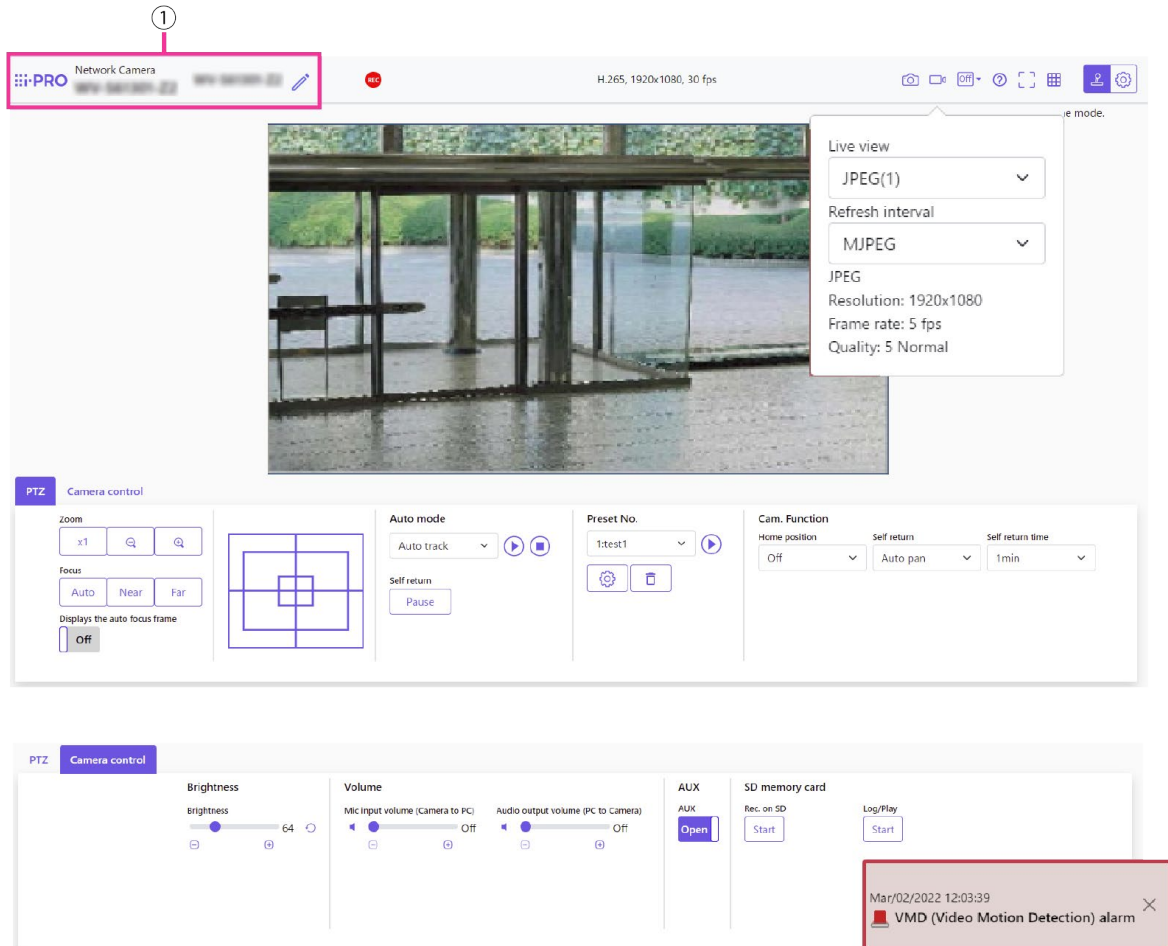
#### **Note**

- When "Image rotation" is set to "90°" or "270°" on the [Basic] tab, the image capture size of 320x180 cannot be set.
- When Stream (1) is 2688x1520 and Stream (2) is 1280x720, the frame rate is limited to a maximum of 15fps (maximum 12.5fps in 25fps mode).

## 45. Add title edit icon next to camera title

### (Operating Instructions – Monitor images on a PC – About the “Live” page)

You can edit the camera title by adding a title edit icon next to the camera title, and then clicking it.



#### ① Camera title

Displays the camera title entered in "Camera title" on the [Basic] tab. (→ [Camera Title])

If you click the icon, the camera title becomes a text box and you can edit the string.

## 46. Add SD memory card file system format to the “SD memory card” settings

(Operating Instructions – Configure the basic settings of the camera [Basic]) – Configure the settings relating to the SD memory card [SD memory card])

SD memory card file system type has been added to [SD Memory Card File System Format].

Basic		SD memory card		Overlay image							
Operating mode											
SD memory card		<input type="radio"/> Use		<input type="radio"/> Not use							
Ext. software mode		<input type="radio"/> On		<input type="radio"/> Off							
SD Memory Card File System Format		<input checked="" type="radio"/> FAT(FAT16/FAT32/exFAT)		<input type="radio"/> ext(ext4)							
Audio recording		<input type="radio"/> On		<input type="radio"/> Off							
Remaining capacity notification		50% ▾									
Overwrite		<input type="radio"/> On		<input type="radio"/> Off							
<small>* If [SD Memory Card File System Format] is set to [ext(ext4)], SD memory card can be used only from Ext. software.If SD memory card function is set to Use, set [FAT(FAT16/FAT32/exFAT)] to Set and then Execute [Format].</small>											
SD memory card security											
Additional info for detecting alteration		Setup >>									
SD memory card password lock	Password	Set		Remove		Change					
	Status	Unlock									
Recording stream											
Recording format		Off ▾									
Save trigger	Manual ▾		<input checked="" type="checkbox"/> Terminal 1			<input checked="" type="checkbox"/> Terminal 2			<input checked="" type="checkbox"/> Terminal 3		
	<input checked="" type="checkbox"/> VMD		<input checked="" type="checkbox"/> SCD			<input checked="" type="checkbox"/> Command alarm					
<small>* For alarms by the "Ext. software", saving will be performed only by selecting "Alarm input".</small>											
SD memory card information											
Remaining capacity		60782MB/60874MB(Remaining capacity/Original capacity)									
Format		Execute									
Set											

### **[Ext. software mode]**

Set this setting to “On” when the installed Ext. software uses the SD memory card of this product.

- **On:** The Ext. software can use the SD memory card of this product. In that case, you will not be able to use functions of this product such as recording to the SD memory card.
- **Off:** The Ext. software cannot use the SD memory card of this product.

**Default:** Off

### **Note**

- For more information about the extension software, refer to our technical information website <Control No.:C0103>.

### **[SD memory card file system type]**

You can select the file system format of the SD memory card. This can be selected only when “Ext. software mode” is “On”.

- **FAT (FAT16/FAT32/exFAT):** FAT formatted SD memory cards can be used.
- **ext (ext4):** ext formatted SD memory cards can be used.

### **IMPORTANT**

- If you change [SD Memory Card File System Format], click the [Execute] button in [Format] to format the SD memory card.

### **Note**

- When “ext(ext4)” is selected, the SD memory card can be used only with function extension software. Therefore, you will not be able to use functions such as recording video and audio to the SD memory card, or notification of remaining space in the SD memory card.
- When “ext(ext4)” is selected, the past information on the SD memory card will be deleted and cannot be displayed in the [Status] tab of the Maintenance page. (→Check the status [Status])
- When “ext(ext4)” is selected, the capacity of the SD memory card cannot be displayed.  
(→ Setting SD Memory Card [SD Memory Card])  
(→ Displaying the log list)  
(→ Viewing images from a tablet device)

### **[Format]**

To format the SD memory card, click the [Execute] button.

Format in the file format selected in [SD Memory Card File System Format].

### **Note**

- When formatting an SD memory card with “ext(ext4)” selected for [SD Memory Card File System Format], formatting may take about 20 minutes until it is completed depending on the SD memory card.
- After formatting the SD memory card in ext format, check the operation of the extension software using the SD memory card.