

New functions and addendum (Firmware Ver. 1.60)

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

No.	Functions	Item	Page
1	Displays the face detection frame on the "Live" page	"Live" page "Advanced func. " page	3
2	Playback of H.264 data recorded on the SD memory card	"Live" page – Log list "Basic" page "Image/Audio" page	4
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8	Addition of "Open"/ "Close" selection for the alarm input terminal detection	"Alarm" page	21
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14	IP address display in "IP Setting Software" even after 20 minutes have passed since turning on the power of the camera	"Network" page	25
15	Addition of "Global IP Address Notification Method" to the Viewnetcam.com settings	"Network" page	25
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This document contains descriptions of how to set the new functions and their restrictions. It is recommended to read them while referring to the Operating Instructions provided with this product together.

About notations

The following notations are used when describing the functions limited for specified models.

The functions without the notations are supported by all models.

Notation	Model	Notation	Model
SW396	WV-SW396, WV-SW396A, WV-SW395, WV-SW395A, WV-SC386, WV-SC385	SC384	WV-SC384
SW355	WV-SW355, WV-SF335, WV-SF346, WV-SF336	SW352	WV-SW352, WV-SF342, WV-SF332
SW316	WV-SW316, WV-SW316L, WV-SW316A, WV-SW316LA	SW314	WV-SW314, WV-SW314A
SP306	WV-SP306, WV-SP305	SP302	WV-SP302
SW175	WV-SW175, WV-ST165	SW174W	WV-SW174W
SW172	WV-SW172, WV-ST162	SW155	WV-SW155, WV-SW155M, WV-SW155MA
SW152	WV-SW152, WV-SW152M	SF135	WV-SF135
SF132	WV-SF132	SP105	WV-SP105, WV-SP102
NP502	WV-NP502, WV-NW502S		

1. Configuration of the settings relating to the face detection [Face detection] on the “Live” page

(Operating Instructions - Configure the setting relating to the image recognition [Advanced func.] - Configure the setting relating to the image recognition [Advanced func.])



[Face detection]

Determine whether or not to attach face detection information to images. In addition, determine whether or not to display the detection frame on the “Live” page.

Off: Information about the face detection frame will not be attached to images. No face detection frame will be displayed on the image of this page.

On: Information about the face detection frame will be attached to images and the test frame will be displayed on the image of this page. The face detection frame will not be displayed on the “Live” page.

On with face frame display: Information about the face detection frame will be attached to images and the test frame will be displayed on the image of this page. The face detection frame will be displayed on the “Live” page.

Default: Off

(Operating Instructions - Monitor images on a PC - About the “Live” page)

Face detection frame

Select “On with face frame display” for “Face detection” on the setup menu to display the face detection frame on the “Live” page.

IMPORTANT

- The face detection function shall not guarantee the detection of faces in an image. The face detection accuracy varies with imaging conditions.

2. Playback of H.264 data recorded on the SD memory card

(Operating Instructions - Display the log list)

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Recording format of the SD memory card: JPEG

- **Alarm log:** Logs of the alarm occurrences such as time and date of the alarm occurrences and the alarm type will be displayed.
- **Manual/Schedule log:** Logs filed when images have been recorded manually or during the period of the schedule on the SD memory card will be displayed.
- **FTP trans. error log:** Logs filed when the FTP periodic image transmission function has failed will be displayed.

Each log list can be displayed only when “On” is selected for “Save logs” on the [Log] tab of the “Basic” page respectively.

Note

- Refer to the provided operating instructions about the descriptions of the log list when “JPEG” is selected for “Recording format” of the SD memory card.

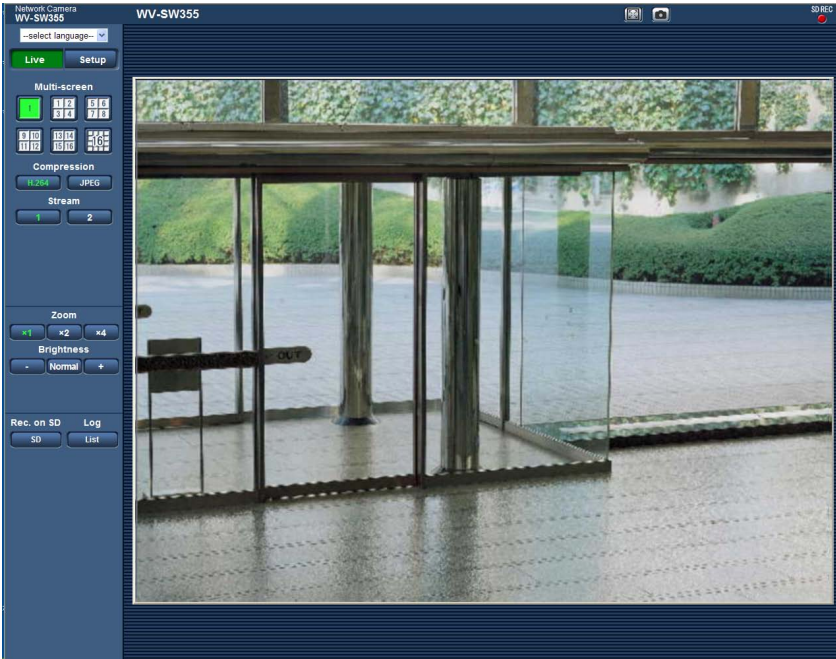
Recording format of the SD memory card: H.264(1), H.264(2)

- **Alarm log:** Logs of the alarm occurrences such as time and date of the alarm occurrences, recorded time and the alarm type will be displayed.
- **Manual/Schedule log:** Logs and the recorded time filed when video data have been recorded manually or during the period of the schedule on the SD memory card will be displayed.

IMPORTANT

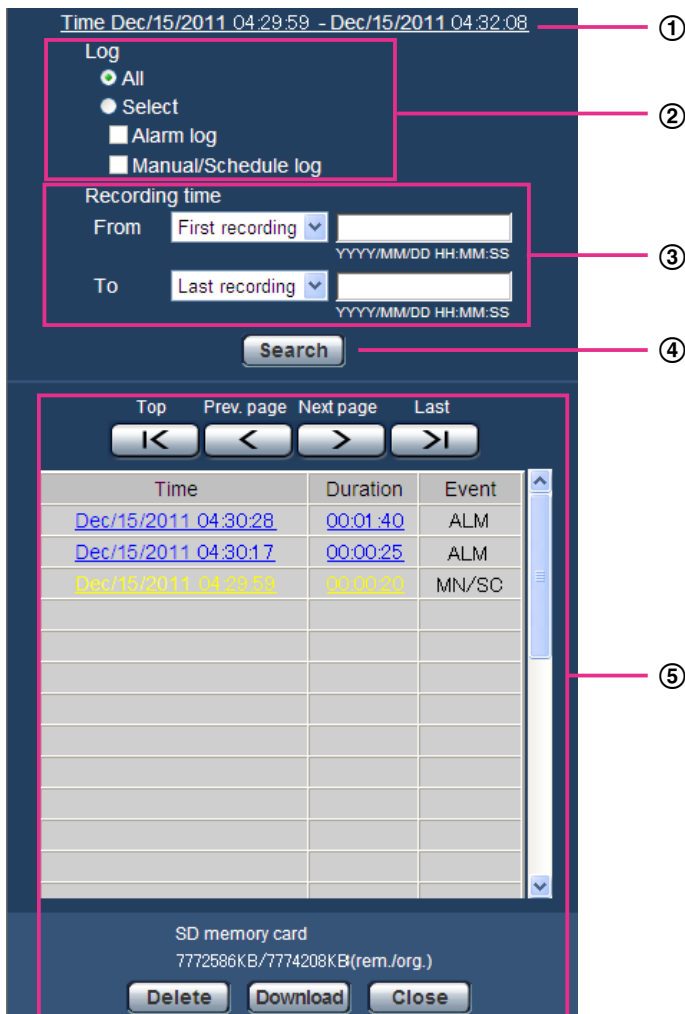
- When using SD memory cards to play recorded H.264 data using the play features (fast forward, rewind, etc.), we recommend using SDHC memory cards for best performance.
If an SD memory card (not an SDHC memory card) is used, depending on the subject and settings, images may not be displayed smoothly when they are played.
- Changes to the time & date settings by browser operations, NTP, etc., may be limited during recording.
 - When the time setting is moved forward during recording, the time is changed.
 - When the time setting is moved back by less than 5 seconds during recording, the time is not changed.
 - When the time setting is moved back by more than 5 seconds during recording, the time is changed. However, the recording is stopped and then started again.
- If the following settings are changed, displaying of the live image and recording are temporarily stopped.
 - SD memory card settings
 - Recording format settings
 - Save trigger settings
 - H.264 recording settings
 - Aspect ratio settings
 - H.264(1) and H.264(2) settings

1. Display the "Live" page.



2. Click the [List] button.

→ The log list will be displayed in a newly opened window (log list window).



IMPORTANT

- Only a single user can operate the log list window. Other users cannot access the log list window.

① **Time**

Displays the time period of the data recorded on the SD memory card.

② **Log display**

Select a log type to display on the log list.

- **All:** All logs will be displayed.
- **Select:** Only the logs of the selected log type will be displayed.
 - **Alarm log:** The log when an alarm is detected will be displayed.
 - **Manual/Schedule log:** Manual and Schedule logs will be displayed.
- **Default:** All

③ **Recording time**

Configure the time period of logs displayed on the log list.

- **From:** Configure the starting period of logs displayed on the log list.
 - **First recording:** Displays from the first log recorded on the SD memory card.
 - **Today:** Displays the logs recorded today.
 - **Yesterday:** Displays the logs recorded yesterday.
 - **Last 7 days:** Displays the logs recorded from 6 days ago to the present day.
 - **Last 30 days:** Displays the logs recorded from 29 days ago to the present day.
 - **Date/time:** Displays the logs recorded from the entered date and time on “Date/time” box.
- **To:** Configure the ending period of logs displayed on the log list when “First recording” or “Date/time” is selected for [From].
 - **Last recording:** Displays to the last log recorded on the SD memory card.
 - **Date/time:** Displays the logs recorded until the entered date and time on “Date/time” box.

④ **[Search] button**

Searches for logs according to the conditions specified in “Log display” and “Recording time”.
The search result will be displayed on the log list.

⑤ **Log list**

Displays the log search results.

You can play back recorded data by clicking on the time or duration of the recorded data displayed under [Time] and [Duration].

- **[Top] button:** Click this button to display the log listed at the top.
- **[Prev. page] button:** Click this button to display the previous page of the log list.
- **[Next page] button:** Click this button to display the next page of the log list.
- **[Last] button:** Click this button to display the log listed at the bottom.
- **[Time]:** Time and date when each log has been recorded will be displayed.

Note

- When “Off” is selected for “Time display format”, the log occurrence times are displayed in 24 hour time format.
- The recording timing of logs is as follows.
 - Alarm log: Alarm occurrence time and date will be filed as a log.
 - Manual/Schedule log: Time and date when recording of images onto the SD memory card started manually or during the period of the schedule will be filed as a log. When images are recorded sequentially, logs will be filed every one hour. However, depending on the photographic subject and the setting used, logs may be filed in periods of over an hour.
- Depending on the subject and settings, the log time and the actual start time of recordings may not match.

- **[Duration]**: Displays the period of time that the data has been recorded on the SD memory card.
- **[Event]**: The event type will be displayed.
 - **ALM**: Log by “Alarm”
 - **MN/SC**: Log by “Manual/Schedule”
- **[SD memory card]**: Available capacity and the original capacity of the SD memory card will be displayed.
The displayed descriptions are the same descriptions displayed as “Remaining capacity” on the [SD memory card] tab.
- **[Delete] button**: Click this button to delete the currently displayed log list. When using the SD memory card, images associated with the log list will also be deleted.

IMPORTANT

- If there are too many recorded data files, it may take time to delete all of them. (When the total size is 1 GB, it may require about 1 hour.) Formatting the SD memory card can shorten the time to delete all the data.
- In the process of the deletion, “Alarm” and “Manual/Schedule” can not be operated.
- Do not turn off the power of the camera until the deletion is complete. When the power of the camera is turned off in the process of the deletion, some images may remain on the SD memory card. In this case, click the [Delete] button on the same log list window used to delete the logs.

- **[Download] button**: Click this button to download all logs of the selected log list onto the PC.
- **[Close] button**: Click this button to close the log list window.

(Operating Instructions - Playback of images on the SD memory card)

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When clicking a time, a duration listed on the log list window, the “Live” page will turn to the “Playback” page. When images associated with the clicked log are on the SD memory card, the first image of them will be displayed.

Note

- When playing images saved on the SD memory card, it is necessary to select “Unlimited” for “Bandwidth control(bit rate)” of [Network] tab on the “Network” page.

IMPORTANT

- Refresh interval of images may become slow during playback or download.
- When many images are saved on the SD memory card, it may take time to display images on the “Playback” page.
- Even when the size of the images saved on the SD memory card is “QVGA”, “800x600”^{*1} or “1280x960”, the images will be played back in VGA size on the playback page. When “16:9” is selected for the “Aspect ratio”, images will be displayed in an image capture size of “640x360”, even “320x180” or “1280x720” is selected. Therefore, images may look coarse on the “Playback” window.

Recording format of the SD memory card: JPEG

Refer to the provided operating instructions about the descriptions of when “JPEG” is selected for “Recording format” of the SD memory card.

Recording format of the SD memory card: H.264(1), H.264(2)



- **[PAUSE] button:** Playback will be paused when this button is clicked during playback. Playback will resume when this button is clicked during pausing.
- **[PLAY] button:** When this button is clicked, recorded data will be played.

- **[FF] button:** Each time this button is clicked, the playback speed will change.
When the [PLAY] button is clicked during fast playback, playback speed will return to the normal playback speed.

Note

- The maximum speed of the fast playback varies depending on the setting of “Max bit rate” - “H.264 recording” of the SD memory card.
- Depending on the subject and settings, images played in fast forward may not be displayed smoothly.
- **[5s backward] button:** Each time this button is clicked, the recorded data goes back by 5 seconds and starts playing.
- **[5s forward] button:** Each time this button is clicked, the recorded data goes forward by 5 seconds and starts playing.
- **[STOP] button:** Playback will stop and the “Playback” window will turn to the “Live” page.
- **[Time]:** Time and date when each log has been recorded will be displayed.
- **[Duration]:** Displays the period of time that the data has been recorded on the SD memory card.
- **[Event]:** The event type will be displayed.
 - **ALM:** Log by “Alarm”
 - **MN/SC:** Log by “Manual/Schedule”

SD card

- **[Start] button:** The selected image will be downloaded onto the PC.
Before downloading images, designate the destination directory in advance. (→ Operating Instructions - Configure the settings relating to the logs [Log])
The message window will be displayed to ask if it is OK to start download when the [Start] button is clicked. Click the [OK] button.

Note

- When the [Cancel] button is clicked in the process of the download, the download will be canceled. In this case, recorded data already downloaded before clicking the [Cancel] button will be saved on the PC.
- Video data are saved in the files of approx. 2 MB. When the file size of video data is more than 2 MB, two or more files will be downloaded.
- It is possible to play back video data saved on the PC using such applications as QuickTime Player or Windows Media Player^{*1}. However, we are not liable for performance relating to these applications.
- Depending on the status of the SD memory card, QuickTime Player, or Windows Media Player, video data cannot be played back.

^{*1} The supported operating system is Windows 7 only.

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

- SW396
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Basic		SD memory card		Log	
SD memory card		<input checked="" type="radio"/> Use <input type="radio"/> Not use		<input type="button" value="Set"/>	
Recording format		H.264(1)		<input type="button" value="Set"/>	
Common					
Remaining capacity notification		50%			
Save trigger		Alarm input			
Overwrite		<input checked="" type="radio"/> On <input type="radio"/> Off		<input type="button" value="Set"/>	
JPEG recording					
File name		img_			
Image saving interval/Number of images to be saved(Pre alarm)		Image saving interval	Number of images to be saved		
		1fps	0 pic		
Image saving interval/Number of images to be saved(Post alarm)		Image saving interval	Number of images to be saved		
		1fps	100 pics		
Image capture size		VGA			
<input type="button" value="Set"/>					
H.264 recording					
Image capture size		1280x960			
Recording priority		<input type="radio"/> Constant bit rate <input checked="" type="radio"/> Frame rate			
Frame rate*		30fps *			
Max bit rate		2048kbps *			
Image quality		Normal			
Refresh interval		1s			
<input type="button" value="Set"/>					
SD memory card information					
Remaining capacity		<input type="text" value=""/> KB / <input type="text" value=""/> KB (Remaining capacity/Original capacity)			
Format		<input type="button" value="Execute"/>			
SD memory card images					
Access img.		<input type="button" value="Execute"/>			

[Recording format]

Select “JPEG”, “H.264(1)”, or “H.264(2)” for the video encoding format of image data to be recorded on the SD memory card.

- **JPEG:** Records still image data.
- **H.264 (1):** Records video data in the MP4 video encoding format. Audio will not be recorded. Video data will be recorded in accordance with the settings of “H.264(1)” on the [JPEG/H.264] tab of the “Image/Audio” page.
- **H.264 (2):** Records video data in the MP4 video encoding format. Audio will not be recorded. Video data will be recorded in accordance with the settings of “H.264(2)” on the [JPEG/H.264] tab of the “Image/Audio” page.
- **Default:** JPEG

When recording the same data displayed on the “Live” page, it is recommended to select the same video encoding for “Recording format” on the “Live” page.

When recording different data to the data displayed on the “Live” page (in situations like when you want to limit the data size by reducing the picture quality or resolution), select different video encoding to the “Live” page in “Recording format”, and configure settings for recording video data.

IMPORTANT

- When using SD memory cards to play recorded H.264 data using the play features (fast forward, rewind, etc.), we recommend using SDHC memory cards for best performance.
If an SD memory card (not an SDHC memory card) is used, depending on the subject and settings, images may not be displayed smoothly when they are played.

Note

- When “H.264(1)” is selected, the settings for “H.264(1)” on the [JPEG/H.264] tab of the “Image/Audio” page will be changed to the settings for “H.264(1) & recording”. When “H.264(2)” is selected, the settings for “H.264(2)” on the [JPEG/H.264] tab of the “Image/Audio” page will be changed to the settings for “H.264(2) & recording”.
- When the setting value of “Video encoding format” on the [JPEG/H.264] tab of the “Image/Audio” page is changed from “H.264” to “MPEG-4”, the setting value of “Recording format” will automatically be changed to “JPEG”.
- When using the SD memory recording function of a Panasonic network disk recorder, select “JPEG” for “Recording format”.
- When the setting of “Recording format” is changed between “JPEG” and “H.264(1)” or “H.264(2)”, format the SD memory card.
- Due to the difference in file formats, the indication of remaining capacity of the SD memory card differs between the cases when “JPEG” is selected and when “H.264(1)” or “H.264(2)” is selected for “Recording format”.
- When “H.264(1)” is selected for “Recording format”, the following settings in “H.264 recording”, “Image capture size”, “Frame rate*”, “Max bit rate”, “Image quality”, and “Refresh interval” will be read from the settings in “H.264(1)”. When “H.264(2)” is selected for “Recording format”, the settings of “H.264 recording” will match settings of “H.264(2)”.
- When “H.264(1)” or “H.264(2)” is selected for “Recording format”, the settings of the following functions in the [JPEG/H.264] tab of the “Image/Audio” page may be corrected.
 - When “2s”, “3s”, “4s” or “5s” is selected for “Refresh interval”, “Refresh interval” for “H.264 recording” will be set to “1s”.
 - When “3072kbps*”, “4096kbps*”, “8192kbps*”, or “Unlimited**” is selected for “Max bit rate (per client)*”, the setting will change to “2048kbps*”.
 - “Best effort” cannot be selected for “Transmission priority”.
- When the setting value of “Recording format” is changed to “H.264(1)” or “H.264(2)”, the setting value of “Save logs” on the [Log] tab of the “Basic” page will automatically be changed.
- When “H.264(1)” or “H.264(2)” is selected for “Recording format”, alarm images are saved in accordance with the settings of “Pre alarm” and “Post alarm (recording) duration” on the [Alarm] tab of the “Alarm” page.
- When “H.264(1)” or “H.264(2)” is selected for “Recording format”, the name of the saved file will be given automatically.
- When “H.264(1)” or “H.264(2)” is selected for “Recording format”, number of users who can access the camera may be limited more.
- In “Firmware Ver. 1.60”, the number of images and logs that can be saved differs depending on the capacity and settings of the SD memory card.
- When “H.264(1)” or “H.264(2)” is selected for “Recording format”, “Alarm image attachment” (JPEG) for “E-mail notification” will be set to “Off”.

[H.264 recording]

This setting is available only when “H.264(1)” or “H.264(2)” is selected for “Recording format” of the SD memory card.

When “H.264(1)” is selected for “Recording format”, settings (“Resolution”, “Recording priority”, “Frame rate*”, “Max bit rate”, “Image quality”, “Refresh interval”) related to the settings of “H.264(1)” on the [JPEG/H.264] tab of the “Image/Audio” page are displayed. When “H.264(2)” is selected for “Recording format”, its settings will be linked to the “H.264(2)” settings on the [JPEG/H.264] tab of the “Image/Audio” page.

[Image capture size]

Select the image capture size from the following.

Aspect ratio **SC384** **SW355** **SW352** **SW316** **SP306** **SP302** **SW175** **SW172** **SW155** **SW152**

Aspect ratio 4:3	QVGA/VGA/800x600 ^{*1} /1280x960 ^{*2}
Aspect ratio 16:9	320x180/640x360/1280x720 ^{*2}

Aspect ratio **SW396**

Aspect ratio 4:3(VGA)	QVGA/VGA/1280x960
Aspect ratio 4:3(800x600)	QVGA/800x600/1280x960
Aspect ratio 16:9	320x180/640x360/1280x720

Picture (Camera) mode **NP502**

1.3 mega pixel (VGA)[4:3]	QVGA/VGA/1280x960
1.3 mega pixel (800x600)[4:3]	QVGA/800x600/1280x960
1.3 mega pixel [16:9]	320x180/640x360/1280x720
3 mega pixel [4:3]	QVGA/VGA/1280x960
3 mega pixel [16:9]	320x180/640x360

Default: VGA **SW396** **SW355** **SW352** **SW316** **SP306** **SP302** **SW155** **SW152** **NP502**
QVGA **SC384** **SW175** **SW172**

^{*1} **SW352** **SP302** **SW172** **SW152**

^{*2} **SC384** **SW355** **SW316** **SP306** **SW175** **SW155**

[Recording priority]

Select “Constant bit rate” or “Frame rate” for the H.264 recording mode.

- **Constant bit rate:** H.264 images will be recorded with the bit rate selected for “Max bit rate”.
- **Frame rate:** H.264 images will be recorded with the frame rate selected for “Frame rate*”.
- **Default:** Frame rate

[Frame rate*]

Select the frame rate for images to be recorded from the following.

1fps/ 3fps/ 5fps*/ 7.5fps*/ 10fps*/ 12fps*/ 15fps*/ 20fps*/ 30fps*

- **Default:** 30fps*

Note

- When “Frame rate” is selected for “Recording priority”, this setting is available.
- “Frame rate*” is limited by “Max bit rate”. For this reason, the frame rate may be lower than the specified value when any value marked with an asterisk (*) is selected.

[Max bit rate]

Select the bit rate for images to be recorded from the following.

64kbps/ 128kbps/ 256kbps/ 384kbps/ 512kbps/ 768kbps/ 1024kbps/ 1536kbps/ 2048kbps

- **Default:** 1536kbps (SW396) (SW355) (SW352) (SW316) (SP306) (SP302) (SW155) (SW152) (NP502) / 1024kbps (SC384) (SW175) (SW172)

IMPORTANT

- The maximum value for “Max bit rate” of H.264 recording will be limited to “2048kbps” on the Ver. 1.60 firmware.

[Image quality]

Select the quality for H.264 images to be recorded from the following.

Low(Motion priority)/ Normal/ Fine(Image quality priority)

- **Default:** Normal

Note

- When “Constant bit rate” is selected for “Recording priority”, this setting is available.

[Refresh interval]

Select an interval (I-frame interval; 0.2 - 1 second) to refresh the H.264 images to be recorded from the following.

0.2s/ 0.25s/ 0.33s/ 0.5s/ 1s

- **Default:** 1s

**(Operating Instructions - Configure the settings relating to images and audio
 [Image/Audio] - Configure the settings relating to H.264 images [JPEG/H.264])**

JPEG/H.264 Image/Privacy Audio

Aspect ratio 4:3 (1280x960 / VGA / QVGA)

Set

JPEG

"Live" page (initial display)

Refresh interval (JPEG) * 5fps

Image capture size 1280x960

Image quality Quality 1

Image quality setting

1280x960 Quality 1 5 Normal Quality 2 8

VGA Quality 1 5 Normal Quality 2 8

QVGA Quality 1 5 Normal Quality 2 8

Set

Video encoding format H.264 MPEG-4

Set

H.264(1)

H.264 transmission On Off

Internet mode (over HTTP) On Off

Image capture size 1280x960

Transmission priority Frame rate

Frame rate* 30fps

Max bit rate (per client) * Max 4096kbps - Min 4096kbps

Image quality Normal

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)

Set

H.264(2)

H.264 transmission On Off

Internet mode (over HTTP) On Off

Image capture size VGA

Transmission priority Frame rate

Frame rate* 30fps

Max bit rate (per client) * Max 1536kbps - Min 1536kbps

Image quality Normal

Refresh interval 1s

Transmission type Unicast port (AUTO)

Unicast port1(Image) 32014 (1024-50000)

Unicast port2(Audio) 33014 (1024-50000)

Multicast address 239.192.0.21

Multicast port 37004 (1024-50000)

Multicast TTL/HOPLimit 16 (1-254)

Set

Smoother live video display on the browser (buffering) On Off

Set

[H.264(1)]/[H.264(2)]

When “H.264(1)” or “H.264(2)” is selected for “Recording format” on the [SD memory card] tab of the “Basic” page, “H.264(1) & recording” or “H.264(2) & recording” is displayed.

[Image capture size]

Select the image capture size from the following.

Aspect ratio SC384 SW355 SW352 SW316 SW314 SP306 SP302 SW175 SW174W SW172 SW155 SW152 SF135 SF132 SP105

Aspect ratio 4:3	QVGA/VGA/800x600 ^{*1} /1280x960 ^{*2 *3}
Aspect ratio 16:9	320x180/640x360/1280x720 ^{*2 *3}

Aspect ratio SW396

Aspect ratio 4:3(VGA)	QVGA/VGA/1280x960 ^{*3}
Aspect ratio 4:3(800x600)	QVGA/800x600/1280x960 ^{*3}
Aspect ratio 16:9	320x180/640x360/1280x720 ^{*3}

Picture (Camera) mode NP502

1.3 mega pixel (VGA)[4:3]	QVGA/VGA/1280x960 ^{*3}
1.3 mega pixel (800x600)[4:3]	QVGA/800x600/1280x960 ^{*3}
1.3 mega pixel [16:9]	320x180/640x360/1280x720 ^{*3}
3 mega pixel [4:3]	QVGA/VGA/1280x960 ^{*3}
3 mega pixel [16:9]	320x180/640x360/1920x1080 ^{*3 *4}

Default:

- SW396 SC384 SW355 SW316 SW314 SP306 SW155 SF135 NP502

H.264(1): 1280x960

H.264(2): VGA

- SW175 SW174W SW172

H.264(1): VGA

H.264(2): QVGA

- SW352 SP302 SW152 SF132 SP105

H.264(1): VGA

H.264(2): VGA

[Max bit rate (per client)*]

Select a H.264 bit rate per a client from the following. When “Best effort” is selected for “Transmission priority”, set the maximum and minimum bit rates.

64kbps/ 128kbps*/ 256kbps*/ 384kbps*/ 512kbps*/ 768kbps*/ 1024kbps*/ 1536kbps*/ 2048kbps*/ 3072kbps*/ 4096kbps*/ 8192kbps*/ Unlimited*

• **Default:**

- **SW396** **SC384** **SW355** **SW352** **SW316** **SW314** **SP306** **SP302** **SW155** **SW152** **SF135**
NP502
H.264(1): 4096kbps *
H.264(2): 1536kbps *
- **SW175** **SW174W** **SW172**
H.264(1): 1024kbps *
H.264(2): 1024kbps *
- **SF132** **SP105**
H.264(1): 1536kbps *
H.264(2): 1536kbps *

* The available range of the H.264 bit rate varies depending on the setting selected for “Image capture size”.

- When QVGA, VGA, 320x180 or 640x360 is selected for “Image capture size”: 64kbps ~ 4096kbps *
- When 800x600^{*1} is selected for “Image capture size”: 128kbps * ~ 4096kbps *
- When 1280x960^{*2} or 1280x720^{*2} is selected for “Image capture size”: 256kbps *~ 8192kbps *
- When 1920x1080^{*2} is selected for “Image capture size”: 512kbps *~ 8192kbps *

* “Unlimited*” is available only when “Frame rate” is selected for “Transmission priority”.

Note

- When “8192kbps*^{*2}” or “Unlimited*” is selected, the number of users who can access H.264 images will be limited to “1”. (Only a single user can access H.264 images.)
- The H.264 bit rate is limited by “Bandwidth control(bit rate)” on the [Network] tab of “Network” page. For this reason, the bit rate may be lower than the value when any value with an asterisk (*) on the right is selected.
- It is impossible to select “Unlimited*” for both “H.264(1)” and “H.264(2)”.
- When “H.264(1)” or “H.264(2)” is selected for “Recording format” of the SD memory card, “Max bit rate (per client)*” for video recording will be limited to “2048kbps*”.
- When “H.264(1)” or “H.264(2)” is selected for “Recording format” of the SD memory card, “Best effort” cannot be selected for “Transmission priority” of “H.264(1)” or “H.264(2)”.

^{*1} **SW352** **SP302** **SW172** **SW152**

^{*2} WV-SW396, WV-SW396A, WV-SW395, WV-SW395A, WV-SC386, WV-SC385, WV-SC384, WV-SW355, WV-SF346, WV-SF336, WV-SF335, WV-SW316, WV-SW316L, WV-SW314, WV-SW316A, WV-SW316LA, WV-SW314A, WV-SP306, WV-SP305, WV-SW175, WV-ST165, WV-SW174W, WV-SW155, WV-SW155M, WV-SW155MA, WV-SF135, WV-SP105, WV-NP502, WV-NW502S

^{*3} Cannot be selected simultaneously for “H.264(1)” and “H.264(2)”.

^{*4} Cannot be selected when it is already selected for “Recording format” of the SD memory card.

3. Perform pre alarm recording using the JPEG recording function

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

SW396 SC384 SW355 SW352 SW316 SP306 SP302 SW175 SW172 SW155 SW152
NP502

JPEG recording		
File name	img_	
Image saving interval/Number of images to be saved(Pre alarm)	Image saving interval 1fps	Number of images to be saved 0 pic
Image saving interval/Number of images to be saved(Post alarm)	Image saving interval 1fps	Number of images to be saved 100 pics
Image capture size	VGA	
Set		

[JPEG recording] - [Image saving interval/Number of images to be saved (Pre alarm) - Image saving interval]

When “Alarm input” or “Manual” is selected for “Save trigger”, select an interval (frame rate) of saving pre alarm images on the SD memory card from the following.

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

- **Default:** 1fps

[JPEG recording] - [Image saving interval/Number of images to be saved (Pre alarm) - Number of images to be saved]

Select a number of pre alarm images to be saved on the SD memory card from the following.

0pics/ 1pics/ 2pics/ 3pics/ 4pics/ 5pics

- **Default:** 0pics

Note

- When “H.264(1)” or “H.264(2)” is selected for “Recording format”, Pre alarm and Post alarm can be set on “H.264 recording” of [Alarm] tab.
- “Number of images to be saved” can be configured only when “Alarm input” is selected for “Save trigger”.

4. Perform image refresh automatically on a cellular phone screen

(Operating Instructions - Monitor images on a cellular phone/mobile terminal - Monitor images on a cellular phone)



(5) [Manual Refresh] [Auto Refresh] button

Press the dial key "5" to refresh the camera images.

Press the [Auto Refresh] button to refresh the images from the camera in 5-second intervals.

When the dial key "5" or the [Manual Refresh] button is pressed again, the refresh mode of the camera will return to manual refresh.

IMPORTANT

- Transmission will be periodically performed when "Auto Refresh" has been selected. Confirm the contract plan of the cellular phone in use before using this function.
- Depending on the cellular phone in use, "Auto Refresh" may be unavailable.

5. Displays the screen of the cellular phone in Chinese

When Chinese is selected in [Language] in the [Basic] settings, Chinese can be displayed on the screen of the cellular phone.

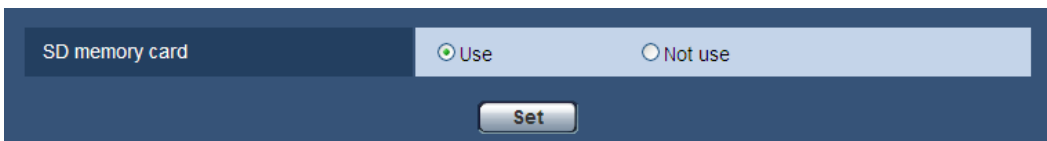
6. Insert and remove SD memory cards with the power of the camera turned on

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

SW396 SC384 SW355 SW352 SW316 SP306 SP302 SW155 SW152 NP502

* The other models already support this function.

SD memory cards can be inserted and removed with the power of the camera turned on.



IMPORTANT

- Before removing the SD memory card from the camera, it is necessary to select "Not use" first. The recorded data may be corrupted if the SD memory card is removed when "Use" is selected for [SD memory card].
- When an SD memory card is inserted when "Use" is selected for [SD memory card], data will be saved in accordance with the setting of "Save trigger".

7. Addition of the “selfcamera” registration function for camera 1 of the multi-screen in the default settings/Addition of BB-HCM series multi-screen display support.

(Operating Instructions - Configure the multi-screen settings [Multi-screen])

SW396 SC384 SW355 SW352 SW316 SW314 SP306 SP302 SW155 SW152 SF135
SF132 SP105 NP502

* The other models already support this function.

[IP address]

Enter the IP address or the host name of the camera to be used for the multi-screen. 4 cameras can be registered as a group and up to 4 groups (16 cameras) can be registered.

When the HTTP port number for the camera of which images are to be displayed had been changed, enter as follows:

Example of entry:

– Example when entering an IPv4 address: `http://192.168.0.10:8080`

– Example when entering an IPv6 address: `http://[2001:db8:0:0:0:0:1]:8080`

To access the cameras using the HTTPS protocol, enter as follows:

Example of entry: `https://192.168.0.10/`

- Available number of characters: 1 - 128 characters
- **Default:** (camera 1) selfcamera, (camera 2-16) not registered

IMPORTANT

- When accessing the camera using the HTTPS protocol, install the security certificate of the camera to display images on the monitor.
- “Network Camera Recorder with Viewer Software Lite” which supports live monitoring and recording images from multiple cameras is available. For further information, refer to our website (<http://security.panasonic.com/pss/security/support/info.html>).
- This camera is specified when “selfcamera” is displayed for the IP address or host name.

Note

- When using the host name, it is necessary to configure the DNS settings of the PC to be used for the multi-screen display. Refer to the network administrator for information on the DNS setting of PCs.
- BB-HCM series cameras can now register to the multi-screen and display their images there.

8. Addition of “Open”/ “Close” selection for the alarm input terminal detection

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

SW396 SC384 SW355 SW352 SW316 SP306 SP302 NP502

* The other models already support this function.

[Alarm]

• [Terminal], [Terminal 1]

Determine how to use terminal 1.

- **Off:** Not used.
- **Alarm input:** Receives alarms.
 - 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”.
- **Black & white input^{*1}:**

Receives the black & white switchover input. (When the input is set to “Close”, the black & white mode is activated.)

- **Default:** Off

• [Terminal 2] SW396 SC384 SW355 SW352 SW316 NP502

Determine how to use terminal 2.

- **Off:** Not used.
- **Alarm input** SW396 SC384 NP502: Receives alarms.
 - 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”.

- **Alarm output:** Alarm output will be carried out according to the settings for “Alarm output terminal setup”.
- **Default:** Off

• [Terminal 3] SW396 SC384 SW355 SW352 SW316 NP502

Determine how to use terminal 3.

- **Off:** Not used.
- **Alarm input** SW396 SC384 NP502: Receives alarms.
 - 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”.

- **AUX output:** AUX output will be supplied. The [AUX] buttons will be displayed on the “Live” page.

- **Exposure output** NP502: CCD exposure timing pulse output will be supplied (Close output is only supplied during CCD exposure).

- **Default:** Off

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.

^{*1} WV-SW396, WV-SW396A, WV-SW395, WV-SW395A, WV-SC386, WV-SC385, WV-SW355, WV-SW352, WV-SW316, WV-SW316L, WV-SW316A, WV-SW316LA, WV-SP306, WV-NP502, WV-NW502S

9. Addition of “Notification per VMD area” setting to the “Panasonic alarm protocol notification” function

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

- SW355
- SW352
- SW316
- SW314
- SP306
- SP302
- SW155
- SW152
- SF135
- SF132
- SP105
- NP502

Destination of notification	Alarm	Diag.	Destination Server address	
Address 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Delete
Notification per VMD area	<input type="radio"/> On	<input checked="" type="radio"/> Off	Alarm area No.	1
Address 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Delete
Notification per VMD area	<input type="radio"/> On	<input checked="" type="radio"/> Off	Alarm area No.	1
Address 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Delete
Notification per VMD area	<input type="radio"/> On	<input checked="" type="radio"/> Off	Alarm area No.	1
Address 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Delete
Notification per VMD area	<input type="radio"/> On	<input checked="" type="radio"/> Off	Alarm area No.	1
Address 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Delete
Notification per VMD area	<input type="radio"/> On	<input checked="" type="radio"/> Off	Alarm area No.	1
Address 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Delete
Notification per VMD area	<input type="radio"/> On	<input checked="" type="radio"/> Off	Alarm area No.	1
Address 7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Delete
Notification per VMD area	<input type="radio"/> On	<input checked="" type="radio"/> Off	Alarm area No.	1
Address 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	Delete
Notification per VMD area	<input type="radio"/> On	<input checked="" type="radio"/> Off	Alarm area No.	1

Set

[Notification per VMD area]

Select whether to perform Notification per VMD area setup.

When “Notification per VMD area” is set to “On”, the Panasonic alarm protocol notification is only implemented when the “Alarm area No.” conforms with the VMD alarm detection number. Notification destinations for Panasonic alarm protocol notification can be configured for each alarm area number.

In accordance with the areas detected in VMD alarm, cameras can be coordinated together to perform operations such as moving the preset position by using the “Camera action on alarm” of the dome cameras.

10. Addition of the face detection function (Only WV-SP105, WV-SP102)

(Operating Instructions - Configure the setting relating to the image recognition [Advanced func.]

SP105 * The other models already support this function.

The face detection function has been added.

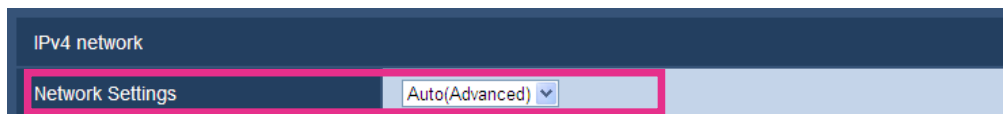
Refer to the provided operating instructions about the descriptions of face detection function.

11. Addition of “Auto(Advanced)” to the network settings and changes to the default setting

(Operating Instructions - Configuring the network settings [Network] - Configure the network settings [Network])

SW396 **SC384** **SW355** **SW352** **SW316** **SW314** **SP306** **SP302** **SW155** **SW152** **SF135**
SF132 **SP105** **NP502**

* The other models already support this function.



[Network Settings]

Select the method of how to configure the IP address from the following.

- **Static:** The IP address is configured by entering manually on “IP address(IPv4)”.
- **DHCP:** The IP address is configured using the DHCP function.
- **Auto(AutoIP):** The IP address is configured using the DHCP function. When the DHCP server is not found, the IP address is automatically configured.
- **Auto(Advanced):** The IP address and other network addresses are obtained using the DHCP function. Available IP addresses are determined by searching for IP addresses. When the DHCP server is not found, the IP address is set to 192.168.0.10, or the already determined IP addresses are used the same way as static IP addresses.
- **Default:** Auto(Advanced)

Note

- When “Auto(AutoIP)” is selected and the IP address cannot be obtained from the DHCP server, an IP address not used in the same network will be searched within 169.254.1.0 - 169.254.254.255.

12. Addition of “Default gateway” to the IPv6 network settings

(Operating Instructions - Configuring the network settings [Network] - Configure the network settings [Network])

IPv6 network	
Manual	<input type="radio"/> On <input checked="" type="radio"/> Off
IP address(IPv6)	<input type="text"/>
Default gateway	<input type="text"/>
DHCPv6	<input type="radio"/> On <input checked="" type="radio"/> Off
Primary DNS server address	<input type="text"/>
Secondary DNS server address	<input type="text"/>

IPv6 network

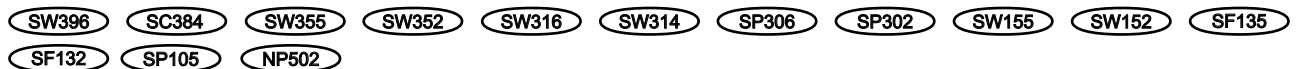
[Default gateway]

When “On” is selected for “Manual” of IPv6 network, enter the default gateway of IPv6 network of the camera.

- **Default:** None (blank)

13. Addition of “Limited(1280byte)” to [HTTP max segment size(MSS)]

(Operating Instructions - Configuring the network settings [Network] - Configure the network settings [Network])



* The other models already support this function.

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)"/>

[HTTP max segment size(MSS)]

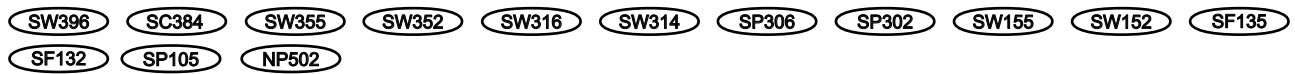
Select whether or not to restrict the maximum segment size (MSS) when viewing images from the camera using the HTTP protocol. It is recommended to use with the default setting.

When the MSS is restricted in the network line in use, select “Limited(1024byte)”/ “Limited(1280byte)”. Refer to the network administrator for further information about the MSS in the network line.

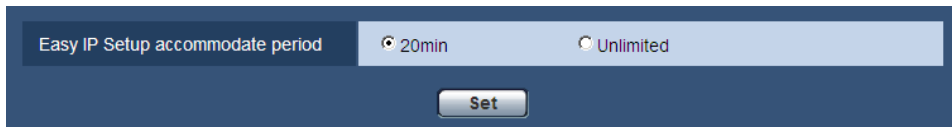
- **Default:** Unlimited(1460byte) SW396 SC384 SW355 SW352 SW316 SW314 SP306 SP302 SW155 SW152 SF135 SF132 SP105 NP502 / Limited(1280byte) SW175 SW174W SW172

14. IP address display in “IP Setting Software” even after 20 minutes have passed since turning on the power of the camera

(Operating Instructions - Configuring the network settings [Network] - Configure the network settings [Network])



* The other models already support this function.



[Easy IP Setup accommodate period]

Select “20min” or “Unlimited” to determine how long the network setting operation using the Panasonic “IP Setting Software” can be allowed.

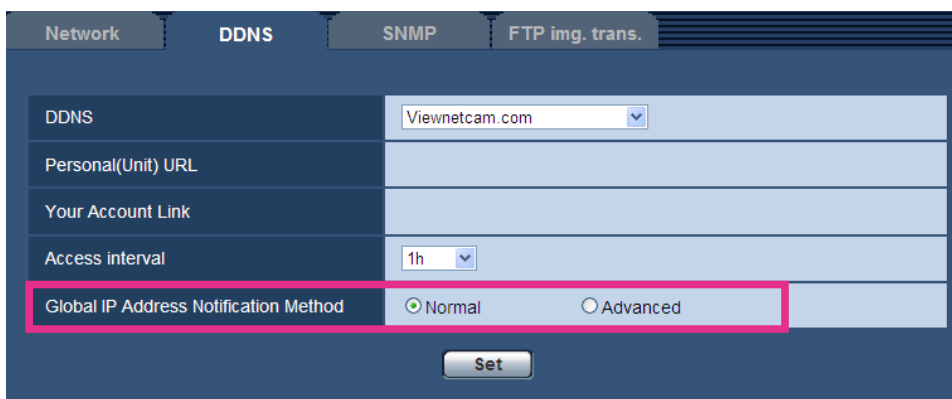
- **20min:** The network setting operation using the Panasonic “IP Setting Software” are allowed for 20 minutes since the camera starts up.
- **Unlimited:** The network setting operation using the Panasonic “IP Setting Software” are allowed without time limitation.
- **Default:** 20min

Note

- The camera information display using the Panasonic “IP Setting Software” is allowed without time limitation, and camera images can be opened.

15. Addition of “Global IP Address Notification Method” to the Viewnetcam.com settings

(Operating Instructions - Configuring the network settings [Network] - Configure the settings relating to DDNS [DDNS])



[Global IP Address Notification Method]

Typically [Global IP Address Notification Method] should be set to “Normal”.

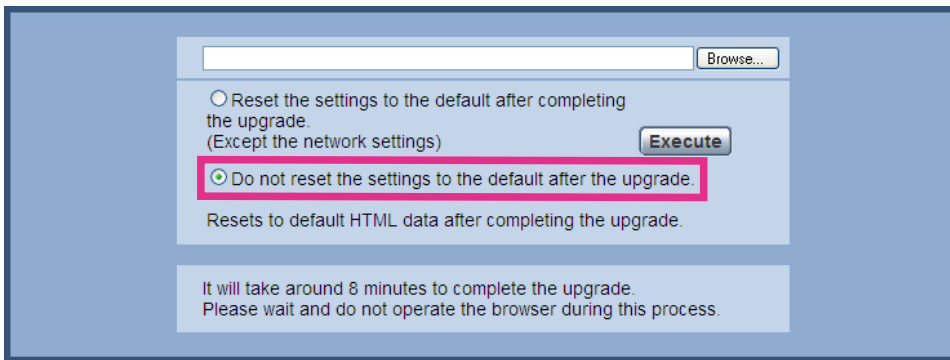
If you cannot access the camera using the registered URL 30 minutes after registering with “Viewnetcam.com”, select “Advanced”.

In this case, UPnP must be enabled for the camera and for the router.

- **Default:** Normal

16. Default “Upgrade” setting changes to “Do not reset the settings to the default after the upgrade”

(Operating Instructions - Maintenance of the camera [Maintenance] - Upgrade the firmware [Upgrade])



The default setting of the following setting has been changed.

Setting item	Until now	Ver. 1.60 or later
Reset the settings to the default after completing the upgrade. (Except the network settings)	Reset the settings to the default after completing the upgrade.	Do not reset the settings to the default after the upgrade.

17. Change to exclude DNS server addresses from the settings reset when initialization is executed

(Operating Instructions - Maintenance of the camera [Maintenance] - Upgrade the firmware [Upgrade])

Even when “Reset the settings to the default after completing the upgrade.” is selected, the “Primary server address” and “Secondary server address” IPv4 DNS settings, and the “Primary DNS server address” and “Secondary DNS server address” IPv6 settings are not reset.

(Operating Instructions - Maintenance of the camera [Maintenance] - Reset the settings/Reboot the camera [Default reset])

Even when “Reset to the default (Except the network settings)” or “Reset to the default and load the default HTML files.” is executed, the “Primary server address” and “Secondary server address” IPv4 DNS settings, and the “Primary DNS server address” and “Secondary DNS server address” IPv6 settings are not reset.