# New functions and addendum

- 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.
- Depending on the model used, the screens shown in the explanations may differ to the actual camera screens.
- · The model number is abbreviated in some descriptions in this manual.
- This document is for the following models. WV-X8570N, WV-S8530N,

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

# Firmware Ver.4.00

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# · Firmware Ver.4.30

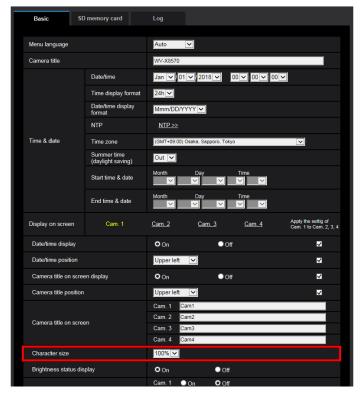
No.	Functions	Item (Page)	Page
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# 1. Improvement of readability of Date/time and characters on screen (Operating Instructions Configure the basic settings of the camera [Basic]-Configure the basic settings [Basic])

[100%\*] was added to [OSD] - [Character size] in order to improve readability.



# [OSD] - [Character size]

Select the character size of the date and time as well as text displayed in the image.

- <u>100%\*</u>: Character size is displayed at 150% for resolutions less than VGA. Characters are displayed with standard size for resolutions larger than VGA.
- 100%: Displays in the standard size.
- 150%: Displays in 150% of the standard size.
- 200%: Displays in 200% of the standard size.
- Default: 100%\*

# **IMPORTANT**

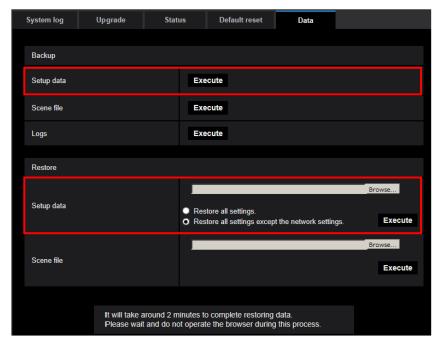
- If the settings for [Date/time position] and [Camera title position] are different, the frame rate may be lower than the specified value.
- If the settings for [Date/time position] and [Camera title position] are different, characters may be displayed incorrectly or overlapped depending on the [Character size] setting and the number of characters used. After completing the settings, confirm the result on the "Live" page.
- If "150%" or "200%" is selected for [Character size], the frame rate may be lower than the specified value.
- Depending on the setting and the numbers of characters used for [Character size], and the setting and image capture size of images for [Image rotation], characters displayed on the screen may be cut off. After completing the settings, confirm the result on the "Live" page.

#### **Note**

• If "Overlay" is "On", "Character size" cannot be set to "150%" or "200%".

# 2. Change in encryption of the settings.

(Operating Instructions Maintenance of the camera [Maintenance] - Settings data/backing up or restoring logs [Data])



# **Backup**

# [Setup data]

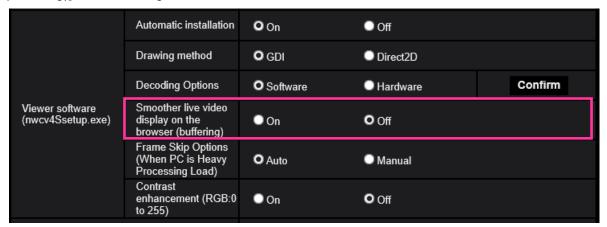
Click the [Execute] button to backup the setup data of the camera to a PC.

# Note

• Encryption of the settings has been changed after this version. Therefore, if you revert the software to the previous version, the settings cannot be restored.

# 3. Change of [Viewer software (nwcv4Ssetup.exe)] - [Smoother live video display on the browser (buffering)] default setting (Operating Instructions Configure the basic settings of the camera [Basic]-Configure the basic settings [Basic])

Change of [Viewer software (nwcv4Ssetup.exe)] - [Smoother live video display on the browser (buffering)] default setting.



[Viewer software (nwcv4Ssetup.exe)] - [Smoother live video display on the browser (buffering)] Perform settings to display camera images on the viewer software.

- On: Images are temporarily stored on the computer and are displayed smoother.
- Off: Images are displayed in real-time and are not stored on the computer.
- Default: Off

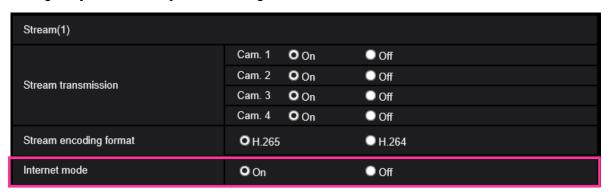
# **Note**

• If the image is not displayed smoothly, set to "On".

# 4. Change of [Internet mode] default setting

(Operating Instructions Configure the settings relating to images and audio [Image/Audio] Configure the settings relating to Stream [Image])

Change of [Internet mode] default setting.



# [Internet mode]

Select "On" when transmitting H.265 (or H.264) images via the Internet. It is possible to transmit stream without changing the broadband router settings configured for JPEG image transmission.

- **On**: H.265 (or H.264) images and audio will be transmitted using the HTTP port. Refer to [HTTP port] for further information about the HTTP port number settings.
- Off: H.265 (or H.264) images and audio will be transmitted using the UDP port.
- Default: On

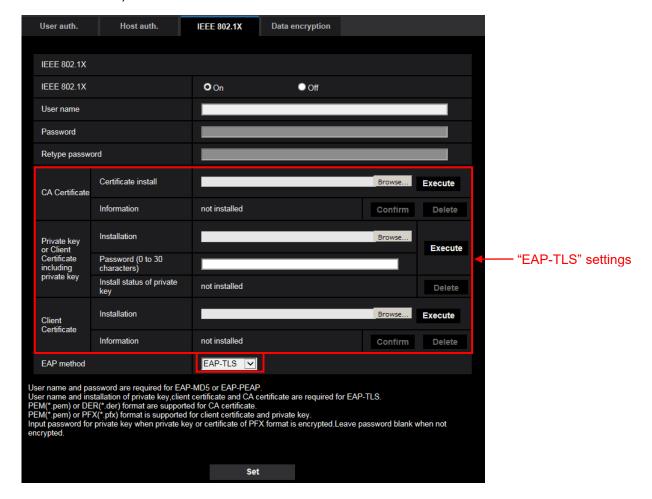
# **Note**

- When "On" is selected, only "Unicast port (AUTO)" will be available for "Transmission type".
- When "On" is selected, it may take time to start displaying stream images.
- When "On" is selected, stream images may not be displayed depending on the number of the concurrent access user and audio data availability, etc.
- When "On" is selected, only IPv4 access is available.

# 5. "EAP-TLS" is added to the EAP method for IEEE 802.1X

(Operating Instructions Configure the settings relating to the authentication [User mng.]-Configure IEEE 802.1X [IEEE 802.1X]

"EAP-TLS" is added to the EAP method for IEEE 802.1X, and the settings (CA Certificate, private key, Client Certificate) are added.



This function can be used to configure a secure network environment using the authentication LAN switch. Contact your network administrator for how to configure the authentication LAN switch and each setting.

Set up in the following procedure since the procedure differs depending on the EAP method. If "On" is already selected for "IEEE 802.1X", start setup once selecting "Off" for "IEEE 802.1X".

#### **EAP-MD5/EAP-PEAP**

- 1. Select "On" for "IEEE 802.1X".
- 2. Select "EAP-MD5" or "EAP-PEAP" for "EAP method".
- 3. Click the [Set] button after entering the user name, the password, and confirming the password.

# **EAP-TLS**

- 1. Click the [Browse] button of "CA Certificate" "Certificate install". Then, select a CA Certificate and click the [Execute] button. The host name (Common Name) designated when created the certificate will be displayed at [Information].
- 2. Click the [Browse] button of "Private key or Client Certificate including private key", and select a private key or Client Certificate that includes Private key.
- 3. Enter the password if the private key is encrypted or the password is set for Client Certificate for the PFX method. Leave password blank when not encrypted.

- 4. Click the [Execute] button to start installation.
  - "installed" will be displayed for "Install status of private key".
  - In the case of selecting Client Certificate including the private key, "installed" will be displayed for "Client Certificate" "Information" as well.
- 5. When the private key is installed in step 2, select a Client Certificate after clicking the [Browse] button of "Client Certificate", and then click the [Execute] button. "installed" will be displayed for "Information"
- 6. Select "On" for "IEEE 802.1X". Then, select "EAP-TLS" for "EAP method".
- 7. Enter the user name registered to the server in "User name". Then, click the [Set] button. If no user name is registered to the server, enter an arbitrary user name. "Password" and "Retype password" can be left blank.

#### Note

• To delete each certificate, set [IEEE 802.1X] to "Off".

The following explains each setting.

# [IEEE 802.1X]

Select "On" or "Off" to determine whether or not to perform port authentication using IEEE 802.1X.

• Default: Off

# [User name]

Enter the user name accessing to the authentication LAN switch or the user name registered to the server. If no user name is registered to the server, enter an arbitrary user name.

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

# [Password]

# [Retype password]

Enter the password to access the authentication LAN switch.

- Available number of characters: 4 32 characters
- Unavailable characters: " &

# [CA Certificate] - [Certificate install]

Install the root CA Certificate. Do not include the intermediate CA Certificate.

Installation is possible only when "Off" is selected for "IEEE 802.1X".

# ■Specification of CA Certificate

Item	Specifications	Remarks
Data format	Format: PEM or DER	Extension: pem or der
Max. number of certificates	1 pc.	
included in the PEM format		
Max. size of certificate	Approx. 10 Kbyte	

# [CA Certificate] - [Information]

**not installed:** indicates that the certificate is not installed.

CA certificate host name: indicates that the certificate is installed.

**Expired:** indicates that the certificate is expired.

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

### [Private key or Client Certificate including private key] - [Install]

Install the private key or Client Certificate that includes private key. Installation is possible only when "Off" is selected for "IEEE 802.1X".

■Specification of private key and Client Certificate including private key

Item	Specifications	Remarks
Data format	Format: PEM or PFX	Extension: pem or pfx
Key size [bit]	1024 /1536 /2048 /3072 /4096	
Max. number of certificates	6 pc.	
included in the PEM format		
Max. size of certificate	Approx. 10 Kbyte	
(including intermediate CA		
Certificate)		

# [Private key or Client Certificate including private key] - [Password]

Enter the password if the private key is encrypted or the password is set for Client Certificate for the PFX method. Leave password blank when not encrypted.

Available number of characters: 0 - 30 characters

# [Private key or Client Certificate including private key] - [Install status of private key]

not installed: Private key is not installed.

installed: Private key is installed.

# [Client Certificate] - [Install]

Install the Client Certificate.

If signed by the intermediate CA Certificate, install the Client Certificate including the intermediate CA Certificate.

Installation is possible only when "Off" is selected for "IEEE 802.1X".

# ■Specification of Client Certificate

Item	Specifications	Remarks
Data format	Format: PEM	Extension: pem
Max. number of certificates	6 pc.	
included in the PEM format		
Max. size of certificate	Approx. 10 Kbyte	
(including intermediate CA		
Certificate)		

# [Client Certificate] - [Information]

**not installed:** indicates that the certificate is not installed. **Certificate host name:** indicates that the certificate is installed.

**Expired:** indicates that the certificate is expired.

The details of Client Certificate can be checked with the [Confirm] button.

# [EAP method]

Select the authentication method from EAP-MD5, EAP-PEAP or EAP-TLS.

# **Example of CA Certificate check screen**



# **Example of Client Certificate check screen**



# **IMPORTANT**

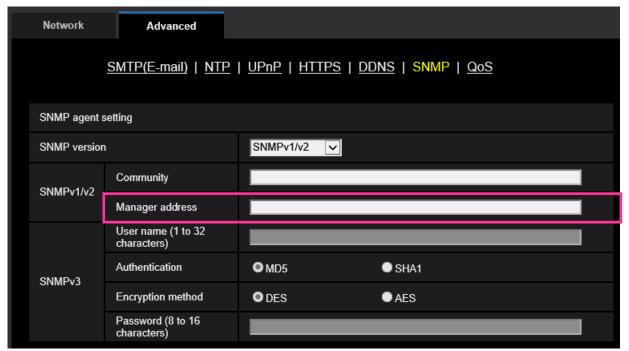
- After selecting "On" for "IEEE 802.1X", if access to the camera fails for some reason, connect to a switch or port without authentication. It disables IEEE 802.1X, and enables access to the camera.
- If the Client Certificate includes intermediate CA Certificate, the Client Certificate needs to come first, then the intermediate CA Certificate.
- When a certificate over 10 Kbyte is installed, no error will be displayed during installation. However, an error may occur at the time of connection.

# 6. Enhanced the access restriction function of SNMP v1/v2

(Operating Instructions "Configuring the network settings" [Network]

- "Configure advanced network settings" [Advanced]
- "Configure the settings relating to SNMP")

The address range setting of the SNMP manager that receives requests from the camera is newly added.



# • [Manager address]

Enter the IP address of the SNMP manager from which requests are to be permitted when the SNMP version is v1 or v2. When left blank, requests from all IP addresses will be permitted.

# **Note**

When "IP address/subnet mask" is entered, it is possible to restrict IP address of SNMP manager from which request is permitted by subnet.

For example, when "192.168.0.1/24" is entered, all requests from the SMNP managers in the range from "192.168.0.1" to "192.168.0.254" will be permitted.

Available number of characters: 0 - 128 characters

Available characters: Alphanumeric characters, the colon (:), the period (.) and the slash (/).

**Default:** None (blank)

# 7. Added "SNMP transmission upon alarm detection" to "Camera action on alarm"

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

"SNMP transmission upon alarm detection" is newly added to the settings relating to the camera action on alarm.

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. ( $\rightarrow$  8. Added "SNMP trap setting" to "SNMP")

Camera action on alarm		
Alarm E-mail notification	E-mail server >>	
Alarm image recording(SD memory card)	SD memory card setup >>	
Panasonic alarm protocol	Panasonic alarm protocol notification >>	
HTTP alarm notification	HTTP alarm notification setup >>	
SNMP transmission upon alarm detection	To SNMP setting	

# 8. Added "SNMP trap setting" to "SNMP"

(Operating Instructions "Configuring the network settings" [Network] - "Configure advanced network settings" [Advanced] - "Configure the settings relating to SNMP")

"SNMP trap setting" is newly added to the settings relating to SNMP. Configure settings relating to SNMP trap when an alarm occurs.

SNMP trap setting		On On	O Off
Destination	Address		
of Trap	Port number	162 (1-65535)	
SNMPv2c	Community		
Trap setting		Enable/Disable	Trap string
SNMP Ger	neric trap	■ coldStart	cold start
		■linkUp	linkup
		■ authenticationFailure	auth error
Alarm		■ Terminal 1	terminal alarm 1
		■ Terminal 2	terminal alarm 2
		■ Terminal 3	terminal alarm 3
		■ VMD	VMD alarm
		Command alarm	cmd
SD memory card		■ Diag.	sd alarm

# • [SNMP trap setting]

Set On/Off of the SNMP trap.

Default: Off

# • [Destination of Trap] - [Address]

Enter the destination address of the SNMP trap. **Available number of characters:** 0 - 128 characters

Available characters: Alphanumeric characters, the colon (:) and the period (.).

Default: None (blank)

# • [Destination of Trap] - [Port number]

Enter the port number of the destination address of the SNMP trap.

Available port number: 1 - 65535

Default: 162

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

20, 21, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 443, 554, 995, 10669, 10670, 59000 - 61000

# • [SNMPv2c] - [Community]

Enter the community name of the destination address of the SNMP trap.

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

**Default:** None (blank)

# **IMPORTANT**

• When using the SNMP trap function, it is necessary to enter the community name. When no community name is entered, the SNMP trap function will not work.

# • [SNMP Generic trap] - [coldStart] - [Enable/Disable]

When the check box is checked, a trap (SNMPv2-MIB::coldStart) will be sent.

**Default:** Not checked (Disable)

# • [SNMP Generic trap] - [coldStart] - [Trap string]

When a camera startup trap is to be extended and sent, set the string of characters of the extended trap.

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

Default: cold start

# • [SNMP Generic trap] - [linkUP] - [Enable/Disable]

When the check box is checked, a trap (SNMPv2-MIB:: linkup) will be sent at the time when the camera is linked up.

**Default:** Not checked (Disable)

#### • [SNMP Generic trap] - [linkUP] - [Trap string]

When a camera linkup trap is to be extended and sent, set the string of characters of the extended trap.

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

Default: linkup

# • [SNMP Generic trap] - [authenticationFailure] - [Enable/Disable]

When the check box is checked, a trap (SNMPv2-MIB::coldStart) will be sent at the time when an SNMP authentication error occurs.

Default: Not checked (Disable)

# • [SNMP Generic trap] - [authenticationFailure] - [Trap string]

When a SNMP authentication error occurrence trap is to be extended and sent, set the string of characters.

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

**Default:** auth error

# • [Alarm] - [Terminal 1] - [Enable/Disable] (WV-X8570N)

When the check box is checked, a trap will be sent at the time when an alarm occurs in terminal 1.

**Default:** Not checked (Disable)

# • [Alarm] - [Terminal 1] - [Trap string] (WV-X8570N)

Set the string of characters to be used for the trap of [Terminal 1].

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

Default: terminal alarm 1

# • [Alarm] - [Terminal 2] - [Enable/Disable] (WV-X8570N)

When the check box is checked, a trap will be sent at the time when an alarm occurs in terminal 2.

Default: Not checked (Disable)

# • [Alarm] - [Terminal 2] - [Trap string] (WV-X8570N)

Set the string of characters to be used for the trap of [Terminal 2].

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

Default: terminal alarm 2

# • [Alarm] - [Terminal 3] - [Enable/Disable] (WV-X8570N)

When the check box is checked, a trap will be sent at the time when an alarm occurs in terminal 3.

**Default:** Not checked (Disable)

# • [Alarm] - [Terminal 3] - [Trap string] (WV-X8570N)

Set the string of characters to be used for the trap of [Terminal 3].

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

**Default:** terminal alarm 3

# • [Alarm] - [VMD] - [Enable/Disable]

When the check box is checked, a trap will be sent at the time when a video motion detection is activated.

**Default:** Not checked (Disable)

# • [Alarm] - [VMD] - [Trap string]

Set the string of characters to be used for the trap of [VMD].

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

**Default: VMD alarm** 

#### • [Alarm] - [Command alarm] - [Enable/Disable]

When the check box is checked, a trap will be sent at the time when a command alarm occurs.

**Default:** Not checked (Disable)

# • [Alarm] - [Command alarm] - [Trap string]

Set the string of characters to be used for the trap of [Command alarm].

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

Default: cmd

# • [SD memory card] - [Diag.] - [Enable/Disable]

When the check box is checked, a trap will be sent in the following cases.

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

**Default:** Not checked (Disable)

# • [SD memory card] - [Diag.] - [Trap string]

Set the string of characters to be used for the trap of [Diag.]

Available number of characters: 0 - 32 characters

Unavailable characters: 2-byte characters

Default: sd alarm

# 9. Add a notify to the [SNMP trap setting]

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

Add the notifications to [SNMP trap settings].

# Note

• In order to activate SNMP trap notifications for when alarms occur, alarm operation settings are required.

For information on settings related alarm operations, refer to Configure the alarm settings [Alarm] in Operating Instructions.

# 10. 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	<sd>Format</sd>	Successfully formatted the SD memory card.
card	<sd>Format error</sd>	Error occurred when formatting the SD
		memory card.
	<sd> Write-protect ON</sd>	A write-protected SD memory card is
	(Locked card)	inserted.
	<sd> Detection error</sd>	The SD memory card could not be correctly recognized.
	<sd> Write error</sd>	An error occurred when writing to the SD memory card.
	<sd> Read error</sd>	An error occurred when reading from the SD
		memory card.
	<sd> Delete error</sd>	An error occurred when deleting data from
		the SD memory card.
	<sd> File system error</sd>	An error occurred in File system of the SD memory card.
	<sd> Undefined error</sd>	An error other that 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.</sd>	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.</sd>	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.

# 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.

# 12. 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.

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