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.

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.

S11x2 : WV‑S1132, WV‑S1112
S11x1 : WV‑S1131, WV‑S1111
S15x1 : WV‑S1531LTN, WV‑S1531LN, WV‑S1511LN
S25x1 : WV‑S2531LTN, WV‑S2531LN, WV‑S2511LN
S22x1 : WV‑S2231L, WV‑S2211L
S21x1 : WV‑S2131L, WV‑S2131, WV‑S2111L
S21x0 : WV‑S2130, WV‑S2110
S113x : WV‑S1132, WV‑S1131
S111x : WV‑S1112, WV‑S1111
S153x : WV‑S1531LTN, WV‑S1531LN
S151x : WV‑S1511LN
S253x : WV‑S2531LTN, WV‑S2531LN
S251x : WV‑S2511LN
S223x : WV‑S2231L
S221x : WV‑S2211L
S213x : WV‑S2131L, WV‑S2131, WV‑S2130
S211x : WV‑S2111L, WV‑S2110

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

・Firmware Ver.1.20

No.	Functions	Item (Page)	Page
1	Addition of "IEEE 802.1X" function.	User mng.	2
2	Addition of "SNMPv3" function.	Advanced(Network)	3
3	Addition of "1280x720" setting to Stream(3).	Image(Image/Audio)	5

・Firmware Ver.1.40

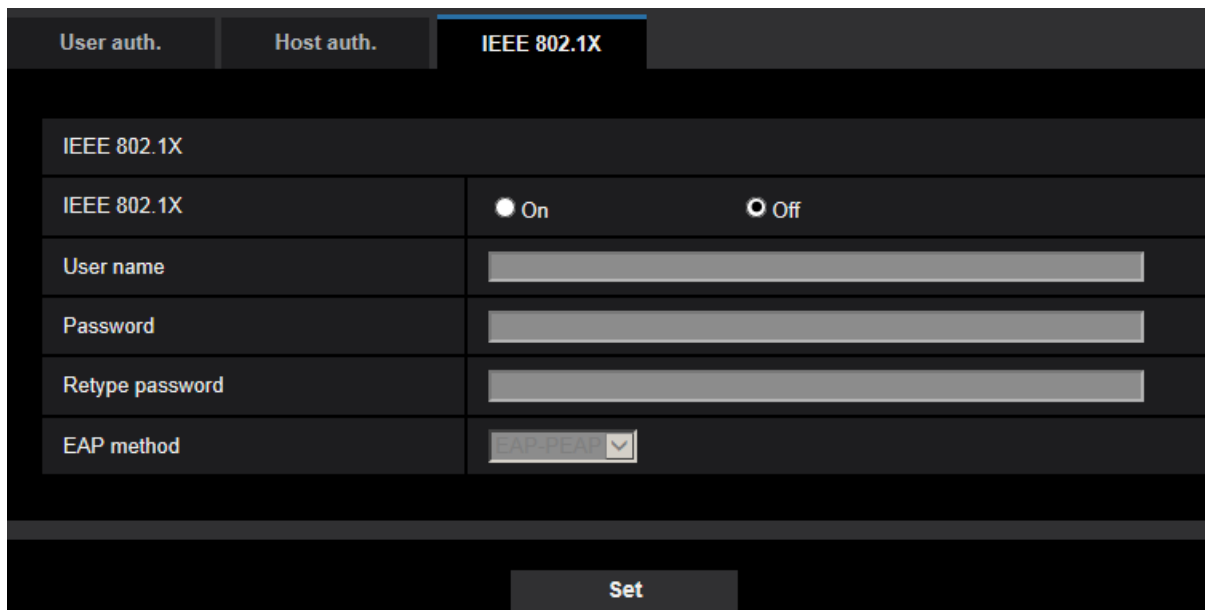| No.	Functions	Item (Page)	Page
4	"Data encryption" added to "User mng." menu	User mng.	7
5	[--FREE ENTRY--] added to [Max bit rate (per client)*]	Image(Image/Audio)	9
6	"On(Advanced)" of [Smart Coding] now available when not using "VBR"	Image(Image/Audio)	10
7	Support for 256 GB SDXC memory cards	SD memory card(Basic)	11

1. Addition of "IEEE 802.1X" function.

[IEEE 802.1X] tab of the "User mng." page has been added.

This function can be used when building a secure network using authentication LAN switches. Refer to the network administrator for information on authentication LAN switches.

Click [IEEE802.1X] tab on the "User mng." page.

[IEEE 802.1X]
Select On/Off to determine whether or not to perform port authentication using IEEE 802.1X.
• **Default:** Off

[User name]
Enter the user name to access the authentication LAN switch.
• **Available number of characters:** 1-32 characters
• **Unavailable characters:** Alphanumeric characters " & : ; ¥

[Password] [Retype password]
Enter the password to access the authentication LAN switch.
• **Available number of characters:** 4-32 characters
• **Unavailable characters:** Alphanumeric characters " &

[EAP method]
Select the authentication method as EAP-MD5 or EAP-PEAP.

2. Addition of "SNMPv3" function.

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

[SNMP version]
Select the SNMP version to be used.
• **SNMPv1/v2:** SNMPv1/v2 is activated.
• **SNMPv3:** SNMPv3 is activated.
• **SNMPv1/v2/v3:** SNMPv1/v2/v3 is activated.
• **Default:** SNMPv1/v2

[SNMPv1/v2] - [Community]
Enter the community name to be monitored.
• **Available number of characters:** 0 - 32 characters
• **Default:** None (blank)

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

[SNMPv3] - [User name]
Set the SNMPv3 user name.
• **Available number of characters:** Empty field or 1-32 characters
• **Unavailable characters:** " & : ; ￥

[SNMPv3] - [Authentication]
Select the SNMPv3 authentication method from MD5/SHA1.
• **Default:** MD5

[SNMPv3] - [Encryption method]
Select the SNMPv3 encryption method from DES/AES.
• **Default:** DES
[SNMPv3] - [Password (8 to 32 characters)]
Set the SNMPv3 password.
• **Available number of characters:**
– If the authentication method is MD5: Empty field or 8-16 characters
– If the authentication method is SHA1: Empty field or 8-20 characters
• **Unavailable characters:** " &

[System name]
Enter a system name to be used to manage the camera with the SNMP function.
• **Available number of characters:** 0 - 32 characters
• **Default:** None (blank)

[Location]
Enter the name of the location where the camera is installed.
• **Available number of characters:** 0 - 32 characters
• **Default:** None (blank)

[Contact]
Enter the E-mail address or the phone number of the SNMP manager.
• **Available number of characters:** 0 - 255 characters
• **Default:** None (blank)

3. Addition of "1280x720" setting to Stream(3)

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

Stream(3)		
Stream transmission	⦿ On	○ Off
Stream encoding format	⦿ H.265	○ H.264
Internet mode (over HTTP)	○ On	⦿ Off
Image capture size	640x360 ▾	
Transmission priority	Frame rate ▾	
Frame rate*	30fps * ▾	
Max bit rate (per client) *	3072kbps * ▾	
Image quality	Normal ▾	
Smart Coding GOP control	Off ▾	
Refresh interval	1s ▾	
Transmission type	Unicast port (AUTO) ▾	
Unicast port1(Image)	32024 (1024-50000)	
Unicast port2(Audio)	33024 (1024-50000)	
Multicast address	239.192.0.22	
Multicast port	37004 (1024-50000)	
Multicast TTL/HOPLimit	16 (1-254)	

S113x   **S153x**   **S253x**   **S223x**   **S213x**

Image capture mode	Stream(1)	Stream(2)	Stream(3)	Stream(4)
2 mega pixel [16:9] (30fps mode)	1920 x 1080 1280 x 720 640 x 360 320 x 180	1920 x 1080 1280 x 720 640 x 360 320 x 180	1280 x 720 640 x 360 320 x 180	640 x 360 320 x 180
2 mega pixel [16:9] (60fps mode)	1920 x 1080 1280 x 720	1920 x 1080 1280 x 720 640 x 360 320 x 180	1280 x 720 640 x 360 320 x 180	640 x 360 320 x 180
3 mega pixel [4:3] (30fps mode)	2048 x 1536 1280 x 960 800 x 600 VGA 400 x 300 QVGA	1280 x 960 800 x 600 VGA 400 x 300 QVGA	VGA 400 x 300 QVGA	VGA 400 x 300 QVGA

S111x S151x S251x S221x S211x

Image capture mode	Stream(1)	Stream(2)	Stream(3)	Stream(4)
1.3 mega pixel [16:9] (30fps mode)	1280 x 720 640 x 360 320 x 180	1280 x 720 640 x 360 320 x 180	1280 x 720 640 x 360 320 x 180	640 x 360 320 x 180
1.3 mega pixel [16:9] (60fps mode)	1280 x 720	1280 x 720 640 x 360 320 x 180	1280 x 720 640 x 360 320 x 180	640 x 360 320 x 180
1.3 mega pixel [4:3] (30fps mode)	1280 x 960 800 x 600 VGA 400 x 300 QVGA	1280 x 960 800 x 600 VGA 400 x 300 QVGA	VGA 400 x 300 QVGA	VGA 400 x 300 QVGA

4. "Data encryption" added to "User mng." menu

[Data encryption] was added to the "User mng." page.
Click the [Data encryption] tab in the "User mng." page.

Click the "+" mark on the left of the setup menu to expand the respective item, and enable detailed settings.
Click the "-" mark on the left of an expanded item to return to the screen displayed before the item was expanded.

[Data encryption (Batch change)]
Select "On" or "Off" to determine whether or not to activate data encryption.
On: Activates data encryption. Encrypts Stream(1), Stream(2), JPEG(1), JPEG(2), JPEG(3), and "AAC-LC" audio.
Off: Deactivates data encryption.
Default: Off

[Stream(1)], [Stream(2)], [JPEG(1)], [JPEG(2)], [JPEG(3)]
Select "On" or "Off" independently for Stream(1), Stream(2), JPEG(1), JPEG(2), and JPEG(3) to determine whether or not to activate data encryption.
Default: Off

[Encryption password], [Retype encryption password]
Set the password for data encryption.
Available number of characters: 4 - 16 characters
**Unavailable characters:** " &

IMPORTANT
•The initial password is displayed in "MAC address" on the [Upgrade] screen. When using data encryption, make sure to change the password.
•If you set data encryption to "On", "Stream(3)" and "Stream(4)" become "Off".
•When the image capture mode is "3 mega pixel [4:3](30fps mode)" and data encryption is "On", 2048x1536 JPEG or stream cannot be selected.
•If you set data encryption to "On", the upper limit of the possible bit rate for stream transmissions will be limited to maximum 16 Mbps.
•If you set data encryption to "On", the snap shot button on the "Live" page will be hidden.
•If you set data encryption to "On" for JPEG, images cannot be monitored using a cellular phone/mobile terminal. Additionally, the [Refresh interval] pull-down on the "Live" page is not displayed for JPEG with data encryption set to "On".

7

•Data encrypted JPEG cannot be viewed on the browser's "Playback" page. Download it to a PC and use the decryption tool to confirm it.
Refer to our website (http://security.panasonic.com/support/info/) for further information about the decryption tool.
•If you set data encryption to "On", audio on the [Audio detection] screen will become inaudible.

Note
•In order to view streams with data encryption set to "On", you must install the viewer software.
•If you confirm streams with data encryption set to "On" on the "Live" page, password entry for decryption is displayed. If you correctly enter the "Encryption password" that was set, you will be able to view images. When "Mic input", "Interactive(Full-duplex)", or "Interactive(Half-duplex)" is selected for [Audio transmission mode], only audio may be played until the password is entered.
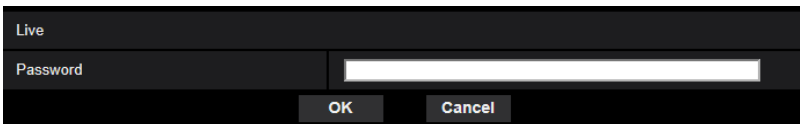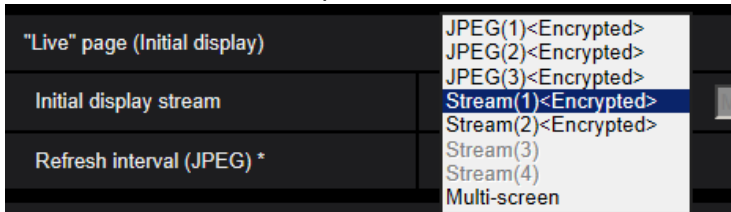

•Streams that have data encryption enabled for them are wrapped in <> in the [Live view] pull-down menu. Additionally, streams that have data encryption enabled for them are indicated by <Encrypted> in the setup menu pull-down menu.
Example: When Stream(1) and JPEG(3) are data encrypted
•[Live view] pull-down menu on the "Live" page
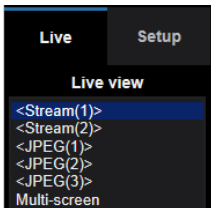
•Pull-down menu in the setup menu

•When [Data encryption (Batch change)] is "On", "AAC-LC" audio is data encrypted ("G.726" and "G.711" are not data encrypted). To encrypt both the image and audio, set [Data encryption (Batch change)] to "On" and set [Audio input encoding format] to "AAC-LC".
•For encrypted MP4 files and JPEG images, you can use the decryption tool to confirm the images.

5. [--FREE ENTRY--] added to [Max bit rate (per client)*]
(Operating Instructions　Configure the settings relating to images and audio [Image/Audio]
 Configure the settings relating to Stream [Image])

When setting "Max bit rate (per client)*" of Stream(1) – (4), in addition to selecting an item from the pull-down menu, you can now set the item freely.

Stream(1)<Encrypted>		
Stream transmission	○ On	● Off
Stream encoding format	○ H.265	● H.264
Internet mode (over HTTP)	● On	○ Off
Image capture size	1920x1080 ▾	
Transmission priority	Frame rate ▾	
Frame rate*	30fps * ▾	
Max bit rate (per client) *	---FREE ENTRY--- ▾	3072　kbps
Image quality	Normal ▾	
Smart Coding	GOP control	Off ▾
	Smart Facial Coding	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)

[Max bit rate (per client)*]
64kbps/ 128kbps */ 256kbps */ 384kbps */ 512kbps */ 768kbps */ 1024kbps */ 1536kbps */ 2048kbps */ 3072kbps */ 4096kbps */ 6144kbps */ 8192kbps */ 10240kbps */ 12288kbps　*/ 14336kbps　*/ 16384kbps */ 20480kbps */ 24576kbps */ --FREE ENTRY--

When "--FREE ENTRY--" is selected, you can freely enter the bit rate.

Note
The range that can be configured differs depending on the "Transmission priority" and "Image capture size".
When "Constant bit rate", "Frame rate", or "Best effort" is selected for "Transmission priority"
　QVGA, 400x300, VGA, 320x180, and 640x360 : 64kbps - 4096kbps
　800x600 : 64kbps - 4096kbps
　1280x960 and 1280x720[1] : 128kbps - 8192kbps
　1920x1080[1]: 256kbps - 12288kbps　S113x　S153x　S253x　S223x　S213x
　2048x1536 : 512kbps - 16384kbps　S113x　S153x　S253x　S223x　S213x

When "VBR" is selected for "Transmission priority"
　QVGA, 400x300, VGA, 320x180, and 640x360 : 64kbps - 12288kbps
　800x600 : 128kbps - 12288kbps
　1280x960 and 1280x720[1] : 256kbps - 12288kbps
　1920x1080[1] : 512kbps - 24576kbps　S113x　S153x　S253x　S223x　S213x
　2048x1536 : 1024kbps - 24576kbps　S113x　S153x　S253x　S223x　S213x

[1] When 60fps mode is selected, settings up until 24576kbps can be configured.

6. "On(Advanced)" of [Smart Coding] now available when not using "VBR"

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

Previously "Smart Coding" was only available for Stream(1) – (4) when the [Transmission priority] was "VBR"; now "Smart Coding" "GOP control" can be set to "On(Advanced)" even when "VBR" is not selected.

[Smart Coding] - [GOP control]

By using "GOP control", the transmission data volume can be reduced when there is little motion in the image.

When "H.265" is selected as the "Stream encoding format": Off/On(Low)/On(Mid)/On(Advanced)

When "H.264" is selected as the "Stream encoding format": Off/On(Low)/On(Mid)

Default: Off

IMPORTANT

・If "On(Low)", "On(Mid)", or "On(Advanced)" is selected, data cannot be recorded to the SD memory card.

Note

- "On(Low)"/"On(Mid)" are only available when [Transmission priority] is "VBR".
- "On(Advanced)" is available regardless of [Transmission priority].

7. Support for 256 GB SDXC memory cards `S11x2` `S11x1` `S25x1` `S22x1` `S21x1`

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

The upper limit for supported SD memory cards is 256 GB.

Compatible SD memory card (option)
Manufactured by Panasonic (SD speed class 4 or higher)
miniSD and microSD cards cannot be used.
SDXC memory card: 64 GB, 128 GB, 256 GB
SDHC memory card: 4 GB, 8 GB, 16 GB, 32 GB
SD memory card: 2 GB

av1216-1027   PGQQ1254YA