

## 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.

<b>S11x2</b>	: WV-S1132, WV-S1112
<b>S11x1</b>	: WV-S1131, WV-S1111
<b>S15x1</b>	: WV-S1531LTN, WV-S1531LN, WV-S1531LNS, WV-S1511LN
<b>S25x1</b>	: WV-S2531LTN, WV-S2531LN, WV-S2511LN
<b>S22x1</b>	: WV-S2231L, WV-S2211L
<b>S21x1</b>	: WV-S2131L, WV-S2131, WV-S2111L
<b>S21x0</b>	: WV-S2130, WV-S2110
<b>S113x</b>	: WV-S1132, WV-S1131
<b>S111x</b>	: WV-S1112, WV-S1111
<b>S153x</b>	: WV-S1531LTN, WV-S1531LN, WV-S1531LNS
<b>S151x</b>	: WV-S1511LN
<b>S253x</b>	: WV-S2531LTN, WV-S2531LN
<b>S251x</b>	: WV-S2511LN
<b>S223x</b>	: WV-S2231L
<b>S221x</b>	: WV-S2211L
<b>S213x</b>	: WV-S2131L, WV-S2131, WV-S2130
<b>S211x</b>	: WV-S2111L, WV-S2110
<b>X6531</b>	: WV-X6531N, WV-X6531NS
<b>X6511</b>	: WV-X6511N
<b>S6530</b>	: WV-S6530N
<b>S6131</b>	: WV-S6131
<b>S6111</b>	: WV-S6111
<b>S6130</b>	: WV-S6130

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

• Firmware Ver.1.20

**S113x** **S111x** **S253x** **S151x** **S253x** **S251x** **S223x** **S221x** **S213x** **S211x**

No.	Functions	Item (Page)	Page
1	Addition of "IEEE 802.1X" function.	User mng.	3
2	Addition of "SNMPv3" function.	Advanced(Network)	4
3	Addition of "1280x720" setting to Stream(3).	Image(Image/Audio)	6

• Firmware Ver.1.40

**S113x** **S111x** **S253x** **S151x** **S253x** **S251x** **S223x** **S221x** **S213x** **S211x**

No.	Functions	Item (Page)	Page
4	"Data encryption" added to "User mng." menu	User mng.	8
5	[--FREE ENTRY--] added to [Max bit rate (per client)*]	Image(Image/Audio)	10
6	"On (Advanced)" added to [Smart coding]	Image(Image/Audio)	11
7	Support for 256 GB SDXC memory cards	SD memory card(Basic)	12

• Firmware Ver.1.70

No.	Functions	Item (Page)	Page
8	Add "Support" menu	-	13

• Firmware Ver.1.80

No.	Functions	Item (Page)	Page
9	"SD memory card password lock" added to "SD memory card security settings" <b>S11x2</b> <b>S11x1</b> <b>S15x1</b> <b>S25x1</b> <b>S21x1</b> <b>S6530</b> <b>S6130</b> <b>S6111</b>	SD memory card(Basic)	14

## 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.

The screenshot shows a web interface for configuring IEEE 802.1X. At the top, there are three tabs: "User auth.", "Host auth.", and "IEEE 802.1X", with the latter being the active tab. Below the tabs, the main content area is titled "IEEE 802.1X". It contains a section with a label "IEEE 802.1X" and two radio buttons: "On" (selected) and "Off". Below this, there are four input fields: "User name", "Password", "Retype password", and "EAP method". The "EAP method" field is a dropdown menu currently showing "EAP-PEAP". At the bottom right of the form is a "Set" button.

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)

Network		Advanced	
SMTP(E-mail)   FTP   NTP   UPnP   HTTPS   DDNS   <b>SNMP</b>   QoS			
SNMP version		SNMPv1/v2 ▼	
SNMPv1/v2	Community	<input type="text"/>	
SNMPv3	User name (1 to 32 characters)	<input type="text"/>	
	Authentication	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA1	
	Encryption method	<input checked="" type="radio"/> DES <input type="radio"/> AES	
	Password (8 to 16 characters)	<input type="text"/>	
System name		<input type="text"/>	
Location		<input type="text"/>	
Contact		<input type="text"/>	
<b>Set</b>			

### [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	<input type="radio"/> On <input checked="" type="radio"/> Off	
Stream encoding format	<input type="radio"/> H.265 <input checked="" type="radio"/> H.264	
Internet mode (over HTTP)	<input checked="" type="radio"/> On <input type="radio"/> 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	<b>1280 x 720</b> 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	<b>1280 x 720</b> 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**

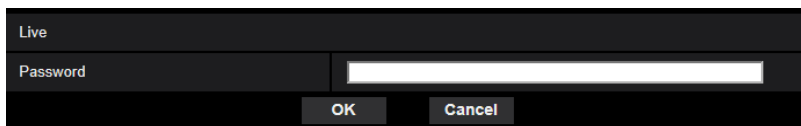
- The initial password is displayed in "MAC address" on the [Upgrade] screen. When using data encryption, make sure to change the password.
- If you set data encryption to “On”, “Stream(3)” and “Stream(4)” become “Off”.
- When the image capture mode is “3 mega pixel [4:3](30fps mode)” and data encryption 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”.



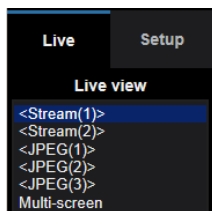
- Data encrypted JPEG cannot be viewed on the browser's "Playback" page. Download it to a PC and use the decryption tool to confirm it.  
Refer to our website (<https://security.panasonic.com/support/info/>) for further information about the decryption tool.
- If you set data encryption to "On", audio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

### **Note**

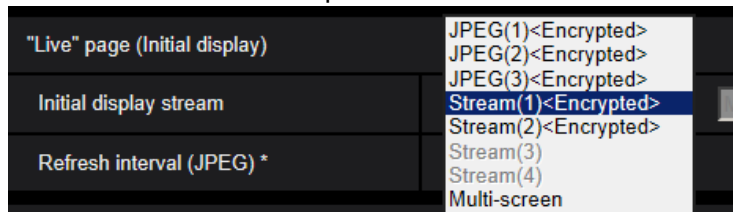
- In order to view streams with data encryption set to "On", you must install the viewer software.
- If you confirm streams with data encryption set to "On" on the "Live" page, password entry for decryption is displayed. If you correctly enter the "Encryption password" that was set, you will be able 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	<input type="radio"/> On <input checked="" type="radio"/> Off
Stream encoding format	<input checked="" type="radio"/> H.265 <input type="radio"/> H.264
Internet mode (over HTTP)	<input checked="" type="radio"/> On <input type="radio"/> 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
	Smart Facial Coding
Refresh interval	1s
Transmission type	Unicast port (AUTO)
Unicast port1(Image)	32004 (1024-50000)
Unicast port2(Audio)	33004 (1024-50000)
Multicast address	238.192.0.20
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\*<sup>1</sup> : 128kbps - 8192kbps

1920x1080\*<sup>1</sup> : 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 : 64kbps - 12288kbps

1280x960 and 1280x720\*<sup>1</sup> : 128kbps - 12288kbps

1920x1080\*<sup>1</sup> : 256kbps - 24576kbps **S113x** **S153x** **S253x** **S223x** **S213x**

2048x1536 : 512kbps - 24576kbps **S113x** **S153x** **S253x** **S223x** **S213x**

\*<sup>1</sup> When 60fps mode is selected, settings up until 24576kbps can be configured.

## 6. “On(Advanced)” added to [Smart coding]

**(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.

Stream(1)<Encrypted>	
Stream transmission	<input type="radio"/> On <input checked="" type="radio"/> Off
Stream encoding format	<input type="radio"/> H.265 <input checked="" type="radio"/> H.264
Internet mode (over HTTP)	<input checked="" type="radio"/> On <input type="radio"/> Off
Image capture size	1920x1080
Transmission priority	Frame rate
Frame rate*	30fps
Max bit rate (per client) *	3072kbps 3072 kbps
Image quality	Normal
Smart Coding	<div><div>GOP control</div><div>Off</div></div>
	<div><div>Smart Facial Coding</div><div>Off</div></div>
Refresh interval	1s
Transmission type	Unicast port (AUTO)
Unicast port1(Image)	32004 (1024-50000)
Unicast port2(Audio)	32004 (1024-50000)
Multicast address	239.192.0.20
Multicast port	37004 (1024-50000)
Multicast TTL/HOPLimit	16 (1-254)

### [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

## 8. Add “Support” menu

Methods for accessing the Panasonic support website are explained on the “Support” page.



To access the Panasonic support website from a web browser, click the link for the support page.

To access from a cellular phone/mobile terminal, scan the “Data Matrix” or “QR Code” with your cellular phone/mobile terminal to display the Panasonic support website.

If you cannot display the website, access the Panasonic website

([https://security.panasonic.com/support/qr\\_sp\\_select/](https://security.panasonic.com/support/qr_sp_select/)).

## 9. “SD memory card password lock” added to “SD memory card security settings” **S11x2** **S11x1** **S15x1** **S25x1** **S22x1** **S21x1** **S6530** **S6130** **S6111**

(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 password lock] function added to SD memory card security setting.

Basic		SD memory card	Log
Operating mode			
SD memory card	<input type="radio"/> Use <input checked="" type="radio"/> Not use		
Audio recording	<input checked="" type="radio"/> On <input type="radio"/> Off		
Remaining capacity notification	50% <input type="button" value="v"/>		
Overwrite	<input checked="" type="radio"/> On <input type="radio"/> Off		
SD memory card security			
Additional info for detecting alteration		<input type="button" value="Setup &gt;&gt;"/>	
SD memory card password lock	Password	<input type="button" value="Set"/>	<input type="button" value="Remove"/> <input type="button" value="Change"/>
	Status	<input type="button" value="Unlock"/>	
Recording stream 1			
Recording format	JPEG(2) <input type="button" value="v"/> (640x360)		
Save trigger	FTP periodic image transmission error <input type="button" value="v"/>		
	<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"/> Command alarm	<input checked="" type="checkbox"/> Audio detection

### [SD memory card password lock]

Configure a password for the SD memory card. When configuring a password, devices other than the camera will be unable to write to or read the SD memory card. If the SD memory card is stolen or lost, the risk of recorded data being leaked can be reduced.

### [Set]

When an SD memory card with no configured password is inserted, a password can be configured using the [Set] button.

SD memory card password lock(Set)	
Password	<input type="text"/>
Retype password	<input type="text"/>
<input type="button" value="Set"/>	

### [Password]/[Retype password]

Enter the password.

**Available number of characters:** 4 - 16 characters

**Unavailable characters:** " &

**Default:** None (blank)

### [Remove]

When an SD memory card with a configured password is inserted, the password can be removed using the [Remove] button.

SD memory card password lock(Remove)	
Password	<input type="password"/>
<input type="button" value="Set"/>	

### [Password]

Enter the password.

**Available number of characters:** 4 - 16 characters

**Unavailable characters:** " &

### [Change]

When an SD memory card with a configured password is inserted, the password can be changed using the [Change] button.

SD memory card password lock(Change)	
Old password	<input type="password"/>
New password	<input type="password"/>
Retype new password	<input type="password"/>
<input type="button" value="Set"/>	

### [Old password]/[New password]/[Retype new password]

Enter the password.

**Available number of characters:** 4 - 16 characters

**Unavailable characters:** " &

### [Status]

Display the configuration status of the password lock.

- **Lock:** A password is configured on the SD memory card, and the lock function is enabled.
- **Unlock:** The lock function is disabled.

Also display the password configuration status of SD memory card respectively.

**Password is set.:** The password is configured correctly.

- **Error(Unsupported SD memory card):** A card that does not support password lock is inserted. Check that an SDHC memory card or SDXC memory card is inserted.
- **Error(Password mismatch):** The SD memory card cannot be used because the password configured for the SD memory card and the password configured for the camera do not match. Check that the passwords are correct.

### Note

- The password lock function supports only SDHC memory cards and SDXC memory cards.
- If you will use the SD memory card on a device other than the camera with password lock configured, remove the password using the password lock remove button before removing the SD memory card.  
The password cannot be removed on devices (such as PCs) other than the camera.
- When the "Status" of "SD memory card password lock" is "Lock", if an SD memory card with no configured password is inserted, the password is automatically configured to the SD memory card.

### **IMPORTANT**

- If you forget the configured password, the password cannot be removed. The SD memory card with the configured password will become unusable, so manage passwords with great care.
- If you forget the configured password and you want to replace the SD memory card with a new one, perform the following step to set the “Status” of “SD memory card password lock” to “Unlock” before replacing the SD memory card.
  - Initialize settings from the “Maintenance” page.