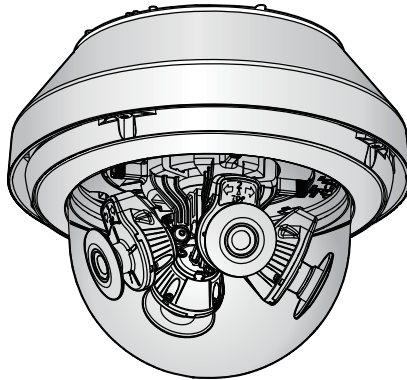# ⠿i·PRO

Basic Information

Network Camera

Model No. WV-X8571N
WV-S8531N

WV-X8571N

About the user manuals
Product documentation is composed of the following documents.
- **Installation Guide (accessory):** Provides information about "Precautions", "Precautions for installation" and the installation method.
- **Basic Information (this document):** Provides information about "Precautions for use" and "Detail specifications".
- **Operating Instructions (in the following website):** Explains how to perform the settings and how to operate this camera.
  https://i-pro.com/global/en/surveillance/documentation_database

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"<Control No.: C****>" used in these documents should be used to search for information on our support website (https://i-pro.com/global/en/surveillance/training_support/support/technical_information) and will guide you to the right information.

- SDXC/ SDHC/ SD memory card is described as SD memory card.
- The external appearance and other parts shown in this manual may differ from the actual product within the scope that will not interfere with normal use due to improvement of the product.

SD
XC ™

Contents

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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.

X8571 The functions with this notation are available when using the model WV-X8571N.

S8531 The functions with this notation are available when using the model WV-S8531N.

System requirements for a PC

CPU:	Intel® Core™ Processor family *1
	- Intel® Core™ i5-6500 or faster
	- Intel® Core™ i7-6700 or faster recommended
Memory:	4 GB (2 GB x 2, Dual Channel) or more recommended.
Network interface:	10BASE-T/100BASE-TX/1000BASE-T **X8571** 1 port
Audio interface:	Sound card (when using the audio function)
Monitor:	Image capture size: 1024 x 768 pixels or more
	High-resolution monitoring: 3840 x 2160 pixels or more **X8571**
	Color: 24-bit True color or better
OS:	Microsoft Windows 10
	Microsoft Windows 8.1
Web browser:	Internet Explorer 11 (32-bit)
	Microsoft Edge
	Firefox
	Google Chrome™
Others:	Adobe® Reader® or Acrobat Reader®
	(It is necessary to view the PDF file.)

*1 In order to view camera images with Internet Explorer, we recommend using the hardware decode function. For details, refer to our support website <Control No.: C0313>.

IMPORTANT:
- For information on the operation verification of the supported operating systems and web browsers, refer to our support website <Control No.: C0104, C0122>.
- When using a PC that does not meet the above requirements, displaying of images may become slower or the web browser may become inoperable.
- Audio may not be heard if a sound card is not installed on a PC. Audio may be interrupted depending on the network environment.
- When using Microsoft Windows 8.1, use it in the desktop. The software cannot be used in the Modern UI design.

Network security

As you will use this unit connected to a network, your attention is called to the following security risks.

① Leakage or theft of information through this unit
② Use of this unit for illegal operations by persons with malicious intent
③ Interference with or stoppage of this unit by persons with malicious intent

It is your responsibility to take precautions such as those described below to protect yourself against the above network security risks.

- Use this unit in a network secured by a firewall, etc.
- If this unit is connected to a network that includes PCs, make sure that the system is not infected by computer viruses or other malicious entities (using a regularly updated anti-virus program, anti-spyware program, etc.).
- To prevent unauthorized access, use user-authentication, set user names and passwords, and limit which users can log in.
- Apply measures such as user authentication to protect your network against leakage or theft of information, including image data, authentication information (user names and passwords), alarm mail information, FTP server information and DDNS server information.
- After the unit is accessed by the administrator, make sure to close the browser.
- Change the administrator password periodically. Additionally, save user authentication information (user names and passwords) in such a way that it is kept out of the hands of third parties.
- Do not install the camera in locations where the camera or the cables can be destroyed or damaged by persons with malicious intent.

Precautions for use

When the product is accessible from the Internet

To prevent unauthorized access, note the following.
- Leave user authentication turned on.
- Periodically change passwords that are used to access the product.
  Refer to the Operating Instructions for information about how to change passwords.

To keep on using with stable performance

Do not use this product in hot and humid conditions for a long time. Failure to observe this causes component degradation resulting in life shortening of this product. Do not expose this product to direct heat sources such as a heater.

Usage such as switching the power ON/OFF frequently could lead to failure of the camera.

Handle this product with care.

Do not drop this product, nor apply shock or vibration to the product. Failure to observe this may cause trouble.

Do not subject dome cover to strong impact.

Doing so may cause damage or immersion.

Do not directly touch the dome cover and lens.

A dirty lens or dome cover causes deterioration of picture quality.

When an error is detected, this product will restart automatically.

This product will be inoperable for around 2 minutes after the restart just as when the power is turned on.

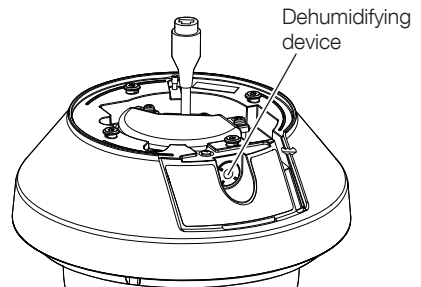**About the automatic status detection function**

When this product malfunctions due to exogenous noise, etc. for 30 seconds or more, the product will automatically restart and will return to normal state. When the product is restart, initialization will be carried out as when the power of the product is turned on. When the product repeatedly resets, exogenous noise level around the product may be high and that may cause malfunction. Contact your dealer for instructions.

Periodically images on the screen appear to be distorted

When the camera is installed in a location where it is subject to small vibrations (for example, when it is installed near devices that vibrate), images may appear distorted and stretched lengthways. This phenomenon is a characteristic of image pickup devices that use CMOS sensors and is caused by the relationship between the periodic movements of the camera and the timing that the image sensor reads images. This is not a problem with the camera. To reduce the possibility of this phenomenon occurring, install the camera in a secure location.

About the dehumidifying device

- This product has dehumidifying device to keep the inside at low moisture level, preventing condensation and quickly dissipating dew if produced.
- Dew may be produced depending on the conditions of temperature, humidity, winds, and rain, and it may take time to dehumidify.
- The dehumidifying device is mounted inside the rear cover.

Dehumidifying device

* Image when "rear cover" is removed

We shall not be liable for content compensation, losses of recorded or edited content and any direct or indirect consequent damages caused by failure to record or edit due to faults with this unit or the SD memory card. In addition, the same provisions apply after unit is reparied.

About the CMOS image sensor

- When continuously shooting a bright light source such as a spotlight, the color filter of the CMOS image sensor may become deteriorated and this may cause discoloration. Even when changing the fixed shooting direction after continuously shooting a spotlight for a certain period, the discoloration may remain.
- When shooting fast-moving subjects or objects crossing the shooting area may look to be bending askew.

Cleaning this product body

Be sure to turn off the power before cleaning. Failure to observe this may cause injury.
Do not use benzine, thinner, alcohol, or any other types of solvents or detergents. Otherwise, it may cause discoloration. When using a chemical cloth for cleaning, read the caution provided with the chemical cloth product.

- Do not loozen or remove screws unless instructed to do so in the product documentation.

Cleaning the lens

Use a lens cleaning paper (used to clean camera lenses or lenses of spectacles). When using solvent, use an alcohols solvent and do not use a glass cleaner or a thinner.

Cleaning of the dome cover

- When cleaning the front panel, hose or spray fresh water that is not containing lubricant agent or silicon substances and wash away adherents such as grain of sand. If dirt is hard to remove, use a sponge soaked into the fresh water mentioned above and wipe off.
- Do not wipe the cover with a dry cloth. (Using dry cloth may spread oil constituent adhered to the surface, and it may result in damaging the ClearSight coating.)
- If dirt cannot be wiped off with a damp cloth, use a neutral detergent for kitchen utensils, and sufficiently rinse off the detergent. When using a detergent containing wax components such as determent for washing cars, a detergent with polishing material such as a compound, etc., and a nonneutral (weakly acidic or weakly alkaline) detergent, it can decrease the hydrophilic property and peel off the surface coating.
- Do not use organic solvent such as benzine and thinner.
- Before using a spray, abandon a few sprays to eliminate impurities.
- Improper cleaning of the front panel may cause the ClearSight coating to become less effective. In this case, in order to have effective ClearSight coating, a new front panel must be purchased to replace the existing front panel. Consult with your dealer or construction contractor.

About the ClearSight coating

Due to effectiveness of the ClearSight coating, drops are likely to be accumulated right under the camera and it may cause a partial distortion of the video.

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SEE HTTP://WWW.MPEGLA.COM

Product disposal/transfer

Data saved on this product or a storage device used with this product may lead to personal information leakage. When it is necessary to dispose or give this product to someone, even when for repair, make sure that there is no data on this product.
When abandoning the memory media, it is recommended to destroy it physically after deleting data by PC.

Effects on images and image quality

Under the following conditions, image quality may deteriorate or images may become difficult to see.
- When there are raindrops on the dome cover due to wind during rainfall.
- When there is snow on the dome cover due to wind during snowfall. (varies depending on the amount and quality of snowfall).
- When the dome cover is dirty due to dust in the air or vehicle exhaust.

Router

When connecting this product to the Internet, use a broadband router with the port forwarding function (NAT, IP masquerade).
Refer to the Operating Instructions for further information about the port forwarding function.

Time & date setting

It is necessary to set the time & date before putting this product into operation. Refer to the Operating Instructions for descriptions of how to perform the settings.

Troubleshooting

Before asking for repairs, check the symptoms with the following table.

Contact your dealer if a problem cannot be solved even after checking and trying the solution in the table or a problem is not described below.

Symptom	Cause/solution	Reference pages
Power is not turned on.	**When using a PoE+ device for power supply** • Are the PoE+ device (IEEE802.3at compliant) and the RJ45 Network connector connected using an Ethernet cable? Check whether the connection is appropriately established. • Depending on the PoE+ device, the power supply will stop when the demanded power exceeds its total power limit for all PoE+ ports. Refer to the operating instructions of the PoE+ device in use.	Installation Guide
	When using DC power supply (X8571) • Is the 2P power cable (accessory) firmly inserted into the power supply cable of the camera? Confirm the power plug is firmly connected. • Is the AC adaptor in use compliant with the Specifications? Check the Specifications regarding AC adaptor.	
The LINK indicator does not light in orange even when the Ethernet cable is connected to the camera.	• Is the Ethernet cable connected appropriately? Connect the Ethernet cable appropriately. • Is the hub or router connected to the camera operating appropriately? Check if the hub or router in use is operating appropriately. • Isn't the Ethernet cable connected to the camera broken? Replace the cable with another one.	Installation Guide
Frame by frame or skipping may occur in the distributed images. (X8571)	• Is a PoE+ power supply device or hub that is compliant with 10BASE-T/100BASETX used? Use a PoE+ power supply device or hub that is compliant with 1000BASE-T.	–
SD ERROR/AF indicator lights red	**This indicator lights up red when data cannot be saved on the SD memory card.** • Isn't the write protect switch of the inserted SD memory card set to "LOCK"? Unlock the write protect switch of the SD memory card. • Hasn't the inserted SD memory card been formatted on a PC? Use an SD memory card formatted on the camera. Or install the software to format the SD memory card on the PC. Refer to our website <Control No.: C0105> for further information about the supported software. • Isn't the inserted SD memory card faulty? Replace the card with a normal one.	Installation Guide

Symptom	Cause/solution	Reference pages
Audio input contains noise. (X8571)	• Check the following. • Grounding of the camera, a switching hub or peripheral devices are not done. • The camera is used near an electrical power line. • The camera is used near a device which produces strong magnetic field or radio waves (such as near a TV/radio antenna, a motor of an air conditioning system, a transformer, etc.) When audio input still contains noise even after checking the above possibilities, use a powered microphone or connect audio output with low output impedance.	Installation Guide
The focus can not be able to be automatically adjusted. (S8531)	• In the following locations or with the following subjects, the focus may not be able to be automatically adjusted. In this case, manually adjust the focus. • When the subject moves a lot • When there are large changes to the lighting intensity • When the light level is low • When the subject or location is extremely bright or reflective • When viewing through windows • When the dome cover is in a locations where it can easily become dirty • Locations where there is not much contrast such as a white wall • When there is harsh flickering	Operating Instructions
"Power supply is operating on PoE" is still being displayed in the screen.	• Operating on PoE. Use a PoE+ hub / device that is compliant with IEEE802.3at standard. It is impossible to supply the power to this product from a PoE hub that is compliant with IEEE802.3af standard.	–

Detail specifications

• Basic

Power source *1:	DC 12 V *2 (X8571)
	PoE+ (IEEE802.3at compliant)
Power consumption *1:	(X8571)
	DC 12 V *2: 1.2 A/ Approx. 15 W
	PoE+ DC 54 V: 350 mA/ Approx. 20 W (Class 4 device)
	(S8531)
	PoE+ DC 54 V: 390 mA/ Approx. 22 W (Class 4 device)
Operating environment	
Ambient operating temperature:	–40 °C to +60 °C {–40 °F to +140 °F}
	(Power On range: –20 °C to +60 °C {–4 °F to +140 °F})
Ambient operating humidity:	10 % to 100 % (no condensation)
Storage environment	
Storage temperature:	–30 °C to +60 °C {–22 °F to +140 °F}
Storage humidity:	10 % to 95 % (no condensation)
EXT I/O terminals:	ALARM IN1
(X8571)	(Alarm input 1/ Black & white input/ Auto time adjustment input) (x1)
	ALARM IN2 (Alarm input 2/ ALARM OUT) (x1)
	ALARM IN3 (Alarm input 3/ ALARM OUT/ AUX OUT) (x1)
Audio input: (X8571)	ø3.5 mm stereo mini jack (Audio input is stereo.)
For microphone input:	Recommended applicable microphone: Plug-in power type
	(Sensitivity of microphone: -48 dB±3 dB (0 dB=1 V/Pa, 1 kHz))
	Input impedance: Approx. 2 kΩ (unbalanced)
	Supply voltage: 2.4 V ±0.5 V
For line input:	Input level: Approx. –10 dBV
Waterproof *3:	IP66 (IEC 60529), Type 4X (UL50E)
	NEMA 4X compliant
Shock resistance:	IK10 (IEC 62262)
Wind resistance:	Up to 40 m/s {approx. 89 mph}
Dimensions:	**When using WV-QJB501-W (optional base bracket):**
	ø230 mm × 232 mm (H) {ø9-1/16 inches × 9-1/8 inches (H)}
	Dome radius 80 mm {3-5/32 inches}
	When using attachment plate only:
	ø230 mm × 196 mm (H) {ø9-1/16 inches × 7-23/32 inches (H)}
	Dome radius 80 mm {3-5/32 inches}
Mass:	**When using WV-QJB501-W (optional base bracket):**
	Approx. 3.3 kg {7.28 lbs.} (X8571)
	Approx. 3.2 kg {7.06 lbs.} (S8531)
	When using attachment plate only:
	Approx. 2.8 kg {6.18 lbs} (X8571)
	Approx. 2.7 kg {5.96 lbs.} (S8531)
Finish:	**Main body:** Aluminum die cast, i-PRO white
	Outer fixing screws: Stainless steel (Corrosion-resistant treatment)
	Dome cover: Polycarbonate resin (with ClearSight coating), Clear
Others :	Tamper-resistant enclosure*4

*1 Refer to our support website <Control No.: C0106> for further information about Power source and Power consumption information.
*2 When used with DC 12 V power source, some functions to be added on update may sometimes be unavailable.
*3 Only when installation work is properly performed according to the Installation Guide and appropriate waterproof treatment is performed.
*4 Component that has a structure on which the screws that are accessible after installation cannot be screwed or unscrewed using an ordinary screwdriver.

• Camera

Image sensor:	(X8571) Approx. 1/1.8 type CMOS image sensor (S8531) Approx. 1/2.8 type CMOS image sensor
Effective pixels:	(X8571) Approx. 8.4 megapixels (S8531) Approx. 2.1 megapixels
Scanning area:	(X8571) 7.68 mm (H)×4.32 mm (V) {5/16 inches (H) × 5/32 inches (V)} (S8531) 5.57 mm (H)×3.13 mm (V) {7/32 inches (H) × 1/8 inches (V)}
Scanning system:	Progressive
Minimum illumination:	(X8571) Color: 0.12 lx {0.0112 footcandle} 　　　　(50IRE, F1.6, Maximum shutter: Off (1/30 s), AGC: 11) 　　　　0.008 lx {0.0007 footcandle} 　　　　(50IRE, F1.6, Maximum shutter: max. 16/30 s, AGC: 11)* BW:　0.05 lx {0.0046 footcandle} 　　　　(50IRE, F1.6, Maximum shutter: Off (1/30 s), AGC: 11) 　　　　0.003 lx {0.0003 footcandle} 　　　　(50IRE, F1.6, Maximum shutter: max. 16/30 s, AGC: 11)* (S8531) Color: 0.05 lx {0.0046 footcandle} 　　　　(50IRE, F2.0, Maximum shutter: Off (1/30 s), AGC: 11) 　　　　0.003 lx {0.0003 footcandle} 　　　　(50IRE, F2.0, Maximum shutter: max. 16/30 s, AGC: 11)* BW:　0.03 lx {0.0028 footcandle} 　　　　(50IRE, F2.0, Maximum shutter: Off (1/30 s), AGC: 11) 　　　　0.002 lx {0.0002 footcandle} 　　　　(50IRE, F2.0, Maximum shutter: max. 16/30 s, AGC: 11)* * Converted value
Intelligent Auto:	On/ Off
Super Dynamic:	On/ Off The level can be set in the range of 0 to 31.
Dynamic range:	Max. 120 dB (Super Dynamic: On, Level: 31)
Maximum gain:	The level can be set in the range of 0 to 11.
Auto contrast adjust	On/ Off
Adaptive black stretch:	The level can be set in the range of 0 to 255.
Back light compensation (BLC) / High light compensation (HLC):	BLC/ HLC/ Off The level can be set in the range of 0 to 31. (only when Super Dynamic/ Intelligent Auto: Off)
Fog compensation:	On/ Off The level can be set in the range of 0 to 8. (only when Intelligent Auto / Auto contrast adjust: Off)
Light control mode setting:	Indoor scene (50 Hz)/ Indoor scene (60 Hz)/ ELC

Maximum shutter:	**[15 fps mode]** ⬭X8571⬭ / **[30 fps mode]** ⬭S8531⬭ Max. 1/10000 s, Max. 1/4000 s, Max. 1/2000 s, Max. 1/1000 s, Max. 1/500 s, Max. 1/250 s, Max. 1/120 s, Max. 1/100 s, Max. 2/120 s, Max. 2/100 s, Max. 3/120 s, Max. 1/30 s, Max. 2/30 s, Max. 4/30 s, Max. 6/30 s, Max. 10/30 s, Max. 16/30 s **[12.5 fps mode]** ⬭X8571⬭ / **[25 fps mode]** ⬭S8531⬭ Max. 1/10000 s, Max. 1/4000 s, Max. 1/2000 s, Max. 1/1000 s, Max. 1/500 s, Max. 1/250 s, Max. 1/100 s, Max. 2/100 s, Max. 3/100 s, Max. 1/25 s, Max. 2/25 s, Max. 4/25 s, Max. 6/25 s, Max. 10/25 s, Max. 16/25 s
Color/BW:	Off/ On/ Auto1(Normal)/ Auto2(IR Light)/ Auto3(SCC)
White balance:	ATW1/ ATW2/ AWC
Digital noise reduction:	The level can be set in the range of 0 to 255.
Privacy zone:	On/ Off Up to 8 zones available
Camera title on screen:	On/ Off Up to 20 characters (alphanumeric characters, marks)
Video Motion Detection (VMD):	On/ Off 4 areas available
Upside-down:	On/ Off

Adjusting angle:	**Camera 1, 2, 3:**
	  Horizontal (PAN) angle : 360 °
	  Vertical (TILT) angle : +30 ° to +80 °
	  Azimuth (YAW) angle : ±50 °
	Camera 4:
	  Horizontal (PAN) angle : 360 °
	  Vertical (TILT) angle : −15 ° to +80 °
	  Azimuth (YAW) angle : ±50 °
	* The above is the adjustable range of each camera unit. The adjustable range varies according to the positional relationship with other camera units.

• Lens

Zoom ratio:	(X8571)
Optical zoom	1.0x
Extra optical zoom	max 3.0x
	(1.0x – 3.0x when resolution is 1280x720)
	(S8531)
Optical zoom	2.5x (Motorized zoom / Motorized focus)
Extra optical zoom	max 7.5x
	(2.5x – 7.5x when resolution is 640x360)
Digital (electronic) zoom:	Choose from 3 levels of x1, x2, x4
Focal length:	(X8571)
	4.6 {3/19 inches}
	(S8531)
	2.9 mm – 7.3 mm {1/8 inches – 9/32 inches}
Maximum aperture ratio:	(X8571)
	1:1.6
	(S8531)
	1:2.0 (WIDE) – 1:3.0 (TELE)
Focus range:	(X8571)
	3.0 m {9.84 feet} – ∞
	(S8531)
	1 m {39-3/8 inches} – ∞
Aperture range (S8531):	F2.0 – F3.0
Angular field of view:	[16:9 mode*] *[4:3 mode] is not supported.
	(X8571)
	Horizontal: 97°
	Vertical: 53°
	(S8531)
	Horizontal: 45° (TELE) – 104° (WIDE)
	Vertical: 25° (TELE) – 58° (WIDE)

• Network

Network:	10BASE-T/ 100BASE-TX/ 1000BASE-T [*1], RJ45 connector
Resolution [*2]: H.265/ H.264 JPEG (MJPEG)	[16:9 mode*] *[4:3 mode] is not supported. ⬭ X8571 3840×2160/ 2560×1440/ 1920×1080/ 1280×720/ 640×360/ 320×180 ⬭ S8531 1920×1080/ 1280×720/ 640×360/ 320×180

Image compression method:
H.265/ H.264
	Transmission priority:
	Constant bit rate/ VBR/ Frame rate/ Best effort
	Frame rate:
	⬭ X8571
	[15 fps mode]
	1 fps/ 3 fps/ 5 fps*/ 7.5 fps*/ 10 fps*/ 12 fps*/ 15 fps*
	[12.5 fps mode]
	1 fps/ 3.1 fps*/ 4.2 fps*/ 6.25 fps*/ 8.3 fps*/ 12.5 fps*
	⬭ S8531
	[30 fps mode]
	1 fps/ 3 fps/ 5 fps*/ 7.5 fps*/ 10 fps*/ 12 fps*/ 15 fps*/ 20 fps*/ 30 fps*
	[25 fps mode]
	1 fps/ 3.1 fps*/ 4.2 fps*/ 6.25 fps*/ 8.3 fps*/ 12.5 fps*/ 20 fps*/ 25 fps*
	(The frame rate is limited to "bit rate". When a value with an asterisk (*) is selected, the actual frame rate may be lower that the value selected.)
	Bit rate per client:
	64 kbps/ 128 kbps*/ 256 kbps*/ 384 kbps*/ 512 kbps*/
	768 kbps*/ 1024 kbps*/ 1536 kbps*/ 2048 kbps*/ 3072 kbps*/
	4096 kbps*/ 6144 kbps*/ 8192 kbps*/ 10240 kbps*/
	12288 kbps*/ 14336 kbps*/ 16384 kbps*/ --FREE ENTRY--
	*The available range of the bit rate varies depending on the setting selected for "image capture size".
	Image quality:
	• For "Constant bit rate", "Frame rate", and "Best effort":
	  Low(Motion priority)/ Normal/ Fine(Image quarity priority)
	• "VBR":
	  0 Super fine/ 1 Fine/ 2/ 3/ 4/ 5 Normal/ 6/ 7/ 8/ 9 Low
	Transmission type:
	Unicast port (AUTO)/ Unicast port (MANUAL)/ Multicast

Image compression method: JPEG (MJPEG)	**Image quality:** 0 SUPER FINE/ 1 FINE/ 2/ 3/ 4/ 5 NORMAL/ 6/ 7/ 8/ 9 LOW (10 steps: 0-9) **Transmission type:** Pull (Refresh interval)/ Push (MJPEG) **Refresh interval:** X8571 [15 fps mode] 0.1 fps/ 0.2 fps/ 0.33 fps/ 0.5 fps/ 1 fps [12.5 fps mode] 0.08 fps/ 0.17 fps/ 0.28 fps/ 0.42 fps/ 1 fps S8531 [30 fps mode] 0.1 fps/ 0.2 fps/ 0.33 fps/ 0.5 fps/ 1 fps/ 2 fps/ 3 fps/ 5 fps [25 fps mode] 0.08 fps/ 0.17 fps/ 0.28 fps/ 0.42 fps/ 1 fps/ 2.1 fps/ 3.1 fps/ 4.2 fps/ 5 fpss (JPEG frame rates are limited when using JPEG and H.265/H.264 simultaneously.)
Smart coding:	GOP(Group of pictures) control On(Frame rate control) */ On(Advanced) */ On(Mid)/ On(Low)/ Off *On(Frame rate control) and On(Advanced) are only available with H.265. Auto VIQS On/ Off
Audio compression method: X8571	G.726 (ADPCM): 16 kbps/ 32 kbps G.711: 64 kbps AAC-LC *3: 64 kbps/ 96 kbps/ 128 kbps
Bandwidth control:	X8571 Unlimited/ 4096 kbps/ 6144 kbps/ 8192 kbps/ 10240 kbps/ 12288 kbps/ 15360 kbps/ 20480 kbps/ 25600 kbps/ 30720 kbps/ 35840 kbps/ 40960 kbps/ 51200 kbps/ 61440 kbps/ 81920 kbps/ 102400 kbps/ 153600 kbps S8531 Unlimited/ 256 kbps/ 384 kbps/ 512 kbps/ 768 kbps/ 1024 kbps/ 2048 kbps/ 4096 kbps/ 6144 kbps/ 8192 kbps/ 10240 kbps/ 12288 kbps/15360 kbps/ 20480 kbps/ 25600 kbps/ 30720 kbps/ 35840 kbps/ 40960 kbps/ 51200 kbps/ 61440 kbps/ 81920 kbps/ 102400 kbps/ 153600 kbps

Protocol:	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, SMTP, DNS, NTP, SNMP,
	      DHCPv6, RTP, MLD, ICMP, ARP, IEEE 802.1X, DiffServ, LLDP
	IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, SMTP,
	      DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP,
	      IEEE 802.1X, DiffServ, LLDP

Security:	User authentication, Host authentication, HTTPS*, Alteration detection of video file* * The certification is pre-installed.
OS *4:	Microsoft Windows 10 Microsoft Windows 8.1

Browser [4]:	Internet Explorer 11 (32-bit) Microsoft Edge Firefox Google Chrome
Maximum concurrent access number:	24* (Number of sessions that can connect to cameras at the same time) * Depends on network conditions
Compatible SDXC/SDHC/SD memory card [5], [6], [7], [8] :	SD speed class 6 or higher **SDXC memory card:** 64 GB, 128 GB, 256 GB, 512 GB **SDHC memory card:** 4 GB, 8 GB, 16 GB, 32 GB **SD memory card:** 2 GB (except miniSD memory card and microSD memory card)
Mobile terminal/ Tablet terminal compatibility:	iPad / iPhone (iOS 8 or later), Android™ terminals

[1] Use the devices that are compliant with 1000BASE-T. ⬭X8571

[2] H.265/H.264 can be selected for each stream.

[3] When recording audio on an SD memory card, only use AAC-LC (Advanced Audio Coding - Low Complexity) .

[4] For information on the operation verification of the supported operating systems and web browsers, refer to our support website <Control No.: C0104, C0122>.

[5] For possible number of images and duration (an indication) that can be saved on the SD memory card, refer to our support website below.
Possible number of JPEG images that can be saved: <Control No.: C0306>
Possible duration of stream images (H.265 or H.264) that can be saved: <Control No.: C0307>

[6] Refer to our support website <Control No.: C0107> for latest information about the compatible SD memory cards.

[7] Use the SD memory card that complies with UHS-1(Ultra High Speed-1) in the case of SD Speed Class 10.

[8] When using with the image capture size of 3840x2160, use an SD memory card supporting Class10 specifications. ⬭X8571