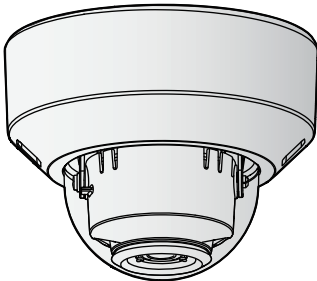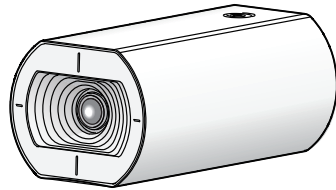# ::::i·PRO

Basic Information
Network Camera

Model No. WV-U1142A, WV-U1132A
WV-U1130A
WV-U2142LA
WV-U2132LA

WV-U2142LA

WV-U1142A

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 manual website):** Explains how to perform the settings and how to operate this camera.
  https://i-pro.com/global/en/surveillance/documentation_database

"<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.

- microSDXC/ microSDHC/ microSD memory card is described as microSD 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.

micro 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.

U1142 The functions with this notation are available when using the model WV-U1142A.
U1132 The functions with this notation are available when using the model WV-U1132A.
U2142 The functions with this notation are available when using the model WV-U2142LA.
U2132 The functions with this notation are available when using the model WV-U2132LA.
U1130 The functions with this notation are available when using the model WV-U1130A.

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 1 port
Monitor:	Image capture size: 1024 x 768 pixels or more
	High-resolution monitoring: 3840 x 2160 pixels or more **U1142** **U2142**
	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 For details on using the hardware decode function, 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.
- 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 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.

Turning the power supply ON and OFF frequently can lead to malfunctions.

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.

`U1142` `U1132` `U1130`

Do not touch the lens with your bare hands.
A dirty lens causes deterioration of picture quality.

`U2142` `U2132`

Do not touch the dome cover with your bare hands.
A dirty 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 reset and will return to normal state. When the product is reset, 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.

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 microSD 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 thinner or a glass cleaner.

U2142 **U2132**

Cleaning of the dome cover
Use lens cleaning paper (used to clean camera or spectacles lenses) to remove any dirt on the dome cover.
The mark of light-shielding parts left inside the dome or dirt on the dome cover may influence the reflection of infrared rays. Therefore, likewise remove those marks and dirt using cleaning paper.

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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
Depending on the installation location, the dome cover or lens may become dirty, causing image quality to deteriorate or images may become difficult to see.

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.	• Are the PoE device (IEEE802.3af 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
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. • Is the Ethernet cable connected to the camera broken? Replace the cable with another one.	Installation Guide

U1142 U1132
U2142 U2132
The focus can not be able to be automatically adjusted.
	• 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 lenz **U1142 U1132** the dome cover **U2142 U2132** 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

Detail specifications

• Basic

Power source [1]:	PoE (IEEE802.3af compliant)
Power consumption [1]:	PoE DC 48 V : 100 mA/ Approx. 4.8 W (Class 2 device) **U1142**
	PoE DC 48 V : 90 mA/ Approx. 4.3 W (Class 2 device) **U1132**
	PoE DC 48 V : 135 mA/ Approx. 6.5 W (Class 0 device) **U2142**
	PoE DC 48 V : 120 mA/ Approx. 5.8 W (Class 2 device) **U2132**
	PoE DC 48 V : 80 mA/ Approx. 3.8 W (Class 2 device) **U1130**
Operating environment Ambient operating temperature:	−10 °C to +50 °C {14 °F to 122 °F} (Power On range: 0 °C to 50 °C {32 °F to 122 °F})
Ambient operating humidity:	10 % to 90 % (no condensation)
Storage environment Storage temperature:	−30 °C to +60 °C {−22 °F to +140 °F}
Storage humidity:	10 % to 95 % (no condensation)
Dimensions:	**U1142** **U1132** **U1130** 59 mm (W) × 49 mm (H) × 116 mm (D) {2-5/16 inches (W) × 1-15/16 inches (H) × 4-9/16 inches (D)} (excluding projection of the slide cover) **U2142** **U2132** ø129.5 mm × 101 mm (H) {ø5-3/32 inches × 3-31/32 inches (H)} Dome radius 40 mm {1-9/16 inches}
Mass:	**U1142** Approx. 200 g {0.44 lbs} **U1132** Approx. 155 g {0.34 lbs} **U2142** **U2132** Approx. 350 g {0.77 lbs} **U1130** Approx. 150 g {0.33 lbs}
Finish:	**U1142** **U1132** **U1130** Main body : ABS/PC resin, i-PRO white **U2142** **U2132** Main body : ABS resin, i-PRO white Dome cover : Acrylic resin, Clear

[1] Refer to our support website <Control No.: C0106> for further information about Power source and Power consumption information.

• Camera

Image sensor:	Approx. 1/2.7 type CMOS image sensor `U1142` `U2142`
	Approx. 1/3 type CMOS image sensor `U1132` `U2132` `U1130`
Effective pixels:	Approx. 5.2 megapixels `U1142` `U2142`
	Approx. 2.4 megapixels `U1132` `U2132` `U1130`

Scanning area:	`U1142` `U2142`
	5.38 mm (H)×3.02 mm (V) {7/32 inches (H) × 1/8 inches (V)}
	`U1132` `U2132` `U1130`
	5.28 mm (H)×2.97 mm (V) {7/32 inches (H) × 1/8 inches (V)}

Scanning system:	Progressive

Minimum illumination:	`U1142` `U2142`
	Color: 0.21 lx {0.0195 footcandle}
	　　　　(30IRE, F2.0, Maximum shutter: Off (1/30 s), AGC: 11)*
	　　　　0.3 lx {0.0279 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: Off (1/30 s), AGC: 11)
	　　　　0.019 lx {0.0018 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: max. 16/30 s, AGC: 11)*
	BW　: 0 lx {0 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: OFF (1/30 s), AGC: 11, when
	　　　　the IR LED is lit) `U2142`
	　　　　0.12 lx {0.0111 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: Off (1/30 s), AGC: 11)
	　　　　0.0075 lx {0.0007 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: max. 16/30 s, AGC: 11)*
	
	`U1132` `U2132` `U1130`
	Color: 0.07 lx {0.0065 footcandle}
	　　　　(30IRE, F2.0, Maximum shutter: Off (1/30 s), AGC: 11)*
	　　　　0.1 lx {0.0093 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: Off (1/30 s), AGC: 11)
	　　　　0.006 lx {0.0006 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: max. 16/30 s, AGC: 11)*
	BW　: 0 lx {0 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: OFF (1/30 s), AGC: 11, when
	　　　　the IR LED is lit) `U2132`
	　　　　0.04 lx {0.0037 footcandle}
	　　　　(50IRE, F2.0, Maximum shutter: Off (1/30 s), AGC: 11)
	　　　　0.0025 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. 102 dB `U1142` `U2142` Max. 120 dB `U1132` `U2132` `U1130` (Super Dynamic: On, Level: 31)
Maximum gain:	The level can be set in the range of 0 to 11.
Back light compensation (BLC) / High light compensation (HLC):	BLC/ HLC/ Off (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:	ELC/ Indoor scene (50 Hz)/ Indoor scene (60 Hz)
Maximum shutter:	**[30 fps mode]**
	Max.1/10000s, 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
	[25 fps mode]
	Max.1/10000s, 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:	**U1142** **U1132** **U1130**
	Off/On/Auto1(Normal)/Auto2(IR Light)/Auto3(SCC)
	U2142 **U2132**
	Off/ On(IR Light Off)/ On(IR Light On)/
	Auto1(IR Light Off)/ Auto2(IR Light On)/ Auto3(SCC)
IR LED Light: **U2142** **U2132**	High/ Middle/ Low
	U2142
	Maximum irradiation distance: 28 m {Approx. 91 ft} (30IRE)*
	20 m {Approx. 65 ft} (50IRE)
	U2132
	Maximum irradiation distance: 40 m {Approx. 131 ft} (30IRE)*
	30 m {Approx. 100 ft} (50IRE)
	* Converted value
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
VIQS:	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
SCD (scene change detection)	On/ Off
	1 area available
Image rotation:	0° (Off)/ 90°/ 180° (Upside-down)/ 270°

• Lens

Zoom ratio: Optical zoom	**U1142** **U1132** **U2142** **U2132** 2.5x (Motorized zoom / Motorized focus) **U1130** 1x Optical zoom

Extra optical zoom	**U1142** **U2142**
	max 10.0x
	  (2.5x – 3.3x when resolution is 1920x1080)
	  (2.5x – 10.0x when resolution is 640x360)
	U1132 **U2132**
	max 7.5x
	  (2.5x – 3.8x when resolution is 1280x720)
	  (2.5x – 7.5x when resolution is 640x360)
	U1130
	max 3.0x
	  (1.0x – 1.5x when resolution is 1280x720)
	  (1.0x – 3.0x when resolution is 640x360)

Digital (electronic) zoom:	Choose from 3 levels of x1, x2, x4
Focal length:	**U1142** **U2142** **U1132** **U2132** 2.9 mm – 7.3 mm {1/8 inches – 9/32 inches} **U1130** 3.2 mm {1/8 inches}
Maximum aperture ratio:	**U1142** **U2142** **U1132** **U2132** 1:2.0 (WIDE) – 1:3.0 (TELE) **U1130** 1:2.0
Focus range:	1 m {39-3/8 inches} – ∞
Aperture range: **U1142** **U1132** **U2142** **U2132**	F2.0 – F3.0

Angular field of view:	**U1142**
	[16:9 mode*] *[4:3 mode] is not supported.
	Horizontal: 44° (TELE) – 103° (WIDE)
	Vertical: 25° (TELE) – 57° (WIDE)
	U1132
	[16:9 mode]
	Horizontal: 44° (TELE) – 102° (WIDE)
	Vertical: 24° (TELE) – 56° (WIDE)
	[4:3 mode]
	Horizontal: 36° (TELE) – 84° (WIDE)
	Vertical: 27° (TELE) – 63° (WIDE)
	U2142
	[16:9 mode*] *[4:3 mode] is not supported.
	Horizontal: 44° (TELE) – 102° (WIDE)
	Vertical: 25° (TELE) – 57° (WIDE)
	U2132
	[16:9 mode]
	Horizontal: 43° (TELE) – 100° (WIDE)
	Vertical: 24° (TELE) – 56° (WIDE)
	[4:3 mode]
	Horizontal: 36° (TELE) – 83° (WIDE)
	Vertical: 27° (TELE) – 62° (WIDE)
	U1130
	[16:9 mode]
	Horizontal: 102°
	Vertical: 55°
	[4:3 mode]
	Horizontal: 83°
	Vertical: 61°
DORI *1:	**U1142**
Detect (25 ppm / 8 ppf)	126.7 m {415.8 ft} (TELE) – 40.7 m {133.6 ft} (WIDE)
Observe (62.5 ppm / 19 ppf)	50.7 m {166.3 ft} (TELE) – 16.3 m {53.4 ft} (WIDE)
Recognize (125 ppm / 38 ppf)	25.3 m {83.2 ft} (TELE) – 8.1 m {26.7 ft} (WIDE)
Identify (250 ppm / 76 ppf)	12.7 m {41.6 ft} (TELE) – 4.1 m {13.4 ft} (WIDE)
	U1132
Detect (25 ppm / 8 ppf)	98.5 m {323.1 ft} (TELE) – 35.5 m {116.6 ft} (WIDE)
Observe (62.5 ppm / 19 ppf)	39.4 m {129.2 ft} (TELE) – 14.2 m {46.6 ft} (WIDE)
Recognize (125 ppm / 38 ppf)	19.7 m {64.6 ft} (TELE) – 7.1 m {23.3 ft} (WIDE)
Identify (250 ppm / 76 ppf)	9.8 m {32.3 ft} (TELE) – 3.6 m {11.7 ft} (WIDE)
	U2142
Detect (25 ppm / 8 ppf)	126.7 m {415.8 ft} (TELE) – 41.5 m {136.0 ft} (WIDE)
Observe (62.5 ppm / 19 ppf)	50.7 m {166.3 ft} (TELE) – 16.6 m {54.4 ft} (WIDE)
Recognize (125 ppm / 38 ppf)	25.3 m {83.2 ft} (TELE) – 8.3 m {27.2 ft} (WIDE)
Identify (250 ppm / 76 ppf)	12.7 m {41.6 ft} (TELE) – 4.1 m {13.4 ft} (WIDE)

DORI *1: Detect (25 ppm / 8 ppf) Observe (62.5 ppm / 19 ppf) Recognize (125 ppm / 38 ppf) Identify (250 ppm / 76 ppf) Detect (25 ppm / 8 ppf) Observe (62.5 ppm / 19 ppf) Recognize (125 ppm / 38 ppf) Identify (250 ppm / 76 ppf)	**U2132** 98.5 m {323.1 ft} (TELE) – 36.2 m {118.7 ft} (WIDE) 39.4 m {129.2 ft} (TELE) – 14.5 m {47.5 ft} (WIDE) 19.7 m {64.6 ft} (TELE) – 7.2 m {23.7 ft} (WIDE) 9.8 m {32.3 ft} (TELE) – 3.6 m {11.9 ft} (WIDE) **U1130** 36.2 m {118.7 ft} 14.5 m {47.5 ft} 7.2 m {23.7 ft} 3.6 m {11.9 ft}
Adjusting angle: **U2142** **U2132**	Horizontal (PAN) angle: ±180°
	Vertical (TILT) angle: -30° – +85°
	Azimuth (YAW) angle: ±100°

*1 Maximum distance at which a camera's tele and wide lens can meet DORI specifications. This value does not indicate the performance of the camera. Calculations made with the camera installed horizontally at resolution of maximum resolution.

• Network

Network:	10BASE-T/100BASE-TX, RJ45 connector
Resolution: H.265/ H.264[1] JPEG (MJPEG)	**U1142** **U2142** [16:9 mode*] *[4:3 mode] is not supported. 2560×1440/ 1920×1080/ 640×360/ 320×180 **U1132** **U2132** **U1130** [16:9 mode] 1920×1080/ 1280×720/ 640×360/ 320×180 [4:3 mode] 1600×1200/ 1280×960/ VGA/ QVGA
Image compression method[2]: H.265/ H.264[1]	**Transmission priority:** Constant bit rate/ VBR/ Frame rate/ Best effort **Frame rate:** [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*/ 20480 kbps*/ 24576 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 quality 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
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:** [30 fps mode] 0.1 fps/ 0.2 fps/ 0.33 fps/ 0.5 fps/ 1 fps/ 2 fps/ 3 fps/ 5 fps/ 6 fps/ 10 fps/ 12 fps/ 15 fps/ 30 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 fps/ 8.3 fps/ 12.5 fps/ 25 fps (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

Bandwidth control:	Unlimited/ 64 kbps/ 128 kbps/ 256 kbps/ 384 kbps/ 512 kbps/ 768 kbps/ 1024 kbps/ 2048 kbps/ 4096 kbps/ 6144 kbps/ 8192 kbps/ 10240 kbps/ 15360 kbps/ 20480 kbps/ 25600 kbps/

Protocol:	**IPv6:** TCP/IP, UDP/IP, HTTP, HTTPS, SSL/TLS, SMTP, DNS, NTP,
	      SNMPv1/v2/v3, DHCPv6, RTP, MLD, ICMP, ARP, IEEE 802.1X,
	      DiffServ
	IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, SSL/TLS, RTSP, RTP, RTP/RTCP,
	      SMTP, DHCP, DNS, DDNS, NTP, SNMPv1/v2/v3, UPnP, IGMP,
	      ICMP, ARP, IEEE 802.1X, DiffServ

Security:	User authentication, Host authentication, HTTPS* * The certification is pre-installed.
OS *3:	Microsoft Windows 10 Microsoft Windows 8.1
Browser *3:	Internet Explorer 11 (32-bit) Microsoft Edge Firefox Google Chrome
Maximum concurrent access number:	14* (Number of sessions that can connect to cameras at the same time) * Depends on network conditions
microSD memory card *4, *5, *6, *7, *8, *9 :	microSDXC memory card: 64 GB, 128 GB, 256 GB, 512 GB microSDHC memory card: 4 GB, 8 GB, 16 GB, 32 GB microSD memory card: 2 GB
Mobile terminal/ Tablet terminal compatibility:	iPad / iPhone (iOS 8 or later), Android™ terminals

*1 H.265/ H.264 can be selected for each stream.

*2 Transmission for 3 streams can be individually set.

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

*4 When recording video on a microSD memory card, only use H.265/ H.264 compression.

*5 Refer to our support website <Control No.: C0107> for latest information about the compatible microSD memory cards.

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

*7 Use the microSD memory card with SD Speed Class 6 or higher. Use the microSD memory card that complies with UHS-1(Ultra High Speed-1) in the case of SD Speed Class 10.

*8 Refer to our support website <Control No.:C0117> for the replacement cycle (target) of a microSD memory card.

*9 When repeatedly recording images on a microSD memory card using the auto overwrite function, make sure to use a microSD memory card with high reliability and durability.