# ⋮⋮i·PRO

Important Information

Network Camera

Model No. WV-S6131 / WV-S6111
WV-S6130
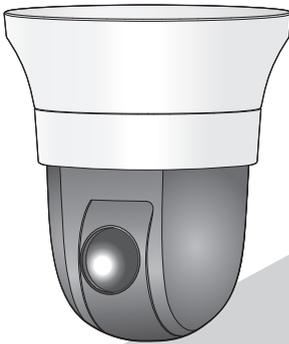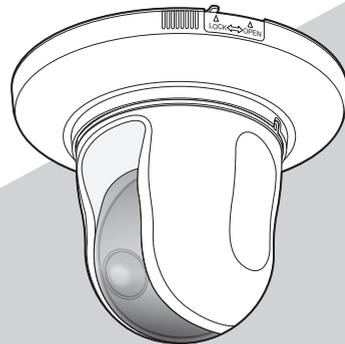
WV-S6131   WV-S6130

* For information about the installation tasks, refer to the provided Installation Guide. For information about how to perform the settings and how to operate the camera, refer to the Operating Instructions on the provided CD-ROM.

SDXC™

Before attempting to connect or operate this product,
please read these instructions carefully and save this manual for future use.

The model number is abbreviated in some descriptions in this manual.

Contents

* SDXC/SDHC/SD memory card is described as SD memory card.

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Preface

This product is an indoor use PTZ (PAN, TILT, ZOOM) type monitoring camera with a 10BASET/ 100BASE-TX network port for network connection.
By connecting to a network (LAN) or the Internet, images and audio from the camera can be monitored on a PC via a network.

Note:
 • It is necessary to configure the network settings of the PC and its network environment to monitor images from the camera on the PC. It is also necessary to install a web browser on the PC.

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.

S6131 The functions with this notation are available when using the model WV-S6131.

S6111 The functions with this notation are available when using the model WV-S6111.

S6130 The functions with this notation are available when using the model WV-S6130.

Main functions

40x optical zoom `S6131` `S6111` **, 21x optical zoom** `S6130` **and high accuracy preset position function**
A single camera provides wide area monitoring.

Delivers high image quality streaming at low bit rates thanks to a H.265 engine equipped with our own Smart Facial Coding technology[1].
This allows H.265 compression in addition to conventional H.264 compression technology, and when combined with Smart Facial Coding, reduces data load compared to our previous models.

Our own intelligent auto (iA) feature provides increased discernibility even in environments with poor visibility
Improvements to the Super Dynamic (SD) feature and shutter speed optimization provides clear discernibility even when monitoring moving people or car silhouettes or when license plates are illuminated by car headlights. Also, face recognition under the condition where brightness of the background changes is enabled by a function of recognizing face position and adjusting the brightness automatically.

Equipped with SD memory card slot
It is possible to save H.265 / H.264 videos and JPEG images on the SD memory card manually when an alarm occurs, during the period of the schedule, or on a Web browser. (Downloading is possible.) It is also possible to save JPEG images if a network failure occurs.

Encryption and alteration detection functions enhanced the security.

[1] This technology allows the camera to learn the location of faces and moving objects, and transmit only the face portion of the image in high definition, thereby greatly reducing the bandwidth required.

About the user manuals

Product documentation is composed of the following documents.
- Important Information (this document): Provides basic information about the product.
- Installation Guide: Explains installation, cable connections, mounting and removing.
- Operating Instructions (included in the CD-ROM): Explains how to perform the settings and how to operate this camera.

Adobe® Reader® is required to read these operating instructions on the provided CD-ROM. When the Adobe Reader is not installed on the PC, download the latest Adobe Reader from the Adobe web site and install it.

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.

System requirements for a PC

CPU:	Intel® Core™ Processor family
	- Intel® Core™ i5-6500 or faster
	- Intel® Core™ i7-6700 or faster recommended
Memory:	A minimum of 1 GB or more (for 32-bit OSs), 2 GB or more (for 64-bit OSs) memory is required.
	4 GB (2 GB x 2, Dual Channel) or more recommended.
Network interface:	10BASE-T/100BASE-TX 1 port
Audio interface:	Sound card (when using the audio function)
Monitor:	Image capture size: 1024 x 768 pixels or more
	Color: 24-bit True color or better
OS:	Microsoft Windows 10
	Microsoft Windows 8.1
	Microsoft Windows 8
	Microsoft Windows 7
Web browser:	Windows Internet Explorer 11 (32-bit)
	Windows Internet Explorer 10 (32-bit)
	Windows Internet Explorer 9 (32-bit)
	Windows Internet Explorer 8 (32-bit)
	Microsoft Edge
	Firefox
	Google Chrome™
Others:	CD-ROM drive
	(It is necessary to read the operating instructions and use the software on the provided CD-ROM.)
	Adobe® Reader®
	(It is necessary to view the PDF file on the provided CD-ROM.)

IMPORTANT:
- For information on the operation verification of the supported operating systems and web browsers, refer to our website at https://i-pro.com/global/en/surveillance/training_support/support/technical_information.
- 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.
- Microsoft Windows RT and Microsoft Windows 7 Starter are not supported.
- When using Microsoft Windows 8.1, Microsoft Windows 8, use it in the desktop. The software cannot be used in the Modern UI design.

Note:
- For further information about PC system requirements and precautions for when using Microsoft Windows or Windows Internet Explorer, click "Manual" - "Open" from the supplied CD-ROM and refer to "Notes on Windows / Internet Explorer versions".

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- Refer to the "readme.txt" file on the provided CD-ROM for further information about open source software licenses and the source code.
- Please note that we shall not respond to any inquiries regarding the contents of the source code.

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

Do not insert any foreign objects.
Fire or electrical shock may be caused if water or any foreign objects, such as metal objects, enter inside the unit.
Turn the power off immediately and contact qualified service personnel for service.

Do not use this product in an inflammable atmosphere.
Failure to observe this may cause an explosion resulting in injury.

Avoid installing this product in the locations where salt damage occurs or corrosive gas is produced.
Otherwise, the mounting portions will deteriorate and accidents such as a fall of the product may occur.

Do not strike or give a strong shock to this product.
Failure to observe this may cause fire or injury.

Keep SDXC/SDHC/SD memory cards away from infants and children.
Otherwise, they may swallow the cards by mistake. In this case, consult a doctor immediately.

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Do not use tripod screws when installing this product on the ceiling.
Failure to observe this may cause injury.
Use the exclusively designed mount bracket for installation.

Do not hang down from this product or use this product as a pedestal.
Failure to observe this may cause a drop resulting in accidents.

Do not damage the power cable.
Do not damage, fabricate, twist, stretch, bundle, or forcibly bend the power cable. Do not place heavy objects on it, and keep it away from heat sources.
Use of a damaged power cable may cause electric shock, short circuit, or fire.
Consult the dealer for repair.

Do not touch the main unit while this product is panning/ tilting.
Fingers may be caught up in the moving part, and that may result in injury.

S6130
Do not place this product in an unstable place.
Selecting an inappropriate installation surface may cause this product to fall down or topple over, resulting in injury or accidents.

Do not attempt to disassemble or modify this product.
Failure to observe this may cause fire or electric shock.
Consult the dealer for the repair or inspections.

Do not install or clean the camera, or touch this product, the power cable or the connected cables during thunder storms.
Failure to observe this may cause electric shock.

Refer installation work to the dealer.
Installation work requires technique and experience. Failure to observe this may cause fire, electric shock, injury, or damage to the product. Be sure to consult the dealer.

Stop the operation immediately when something is wrong with this product.
When smoke goes up from the product, the smell of smoke comes from the product, or the exterior of the product has deteriorated, continued use will cause a fire or fall of the product resulting in injury, or damage to the product.
In this case, turn the power off immediately and contact qualified service personnel for service.

Select an installation area that can support the total weight.
Selecting an inappropriate installation surface may cause this product to fall down or topple over, resulting in injury or accidents.
Installation work shall be started after sufficient reinforcement.

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Periodic inspections shall be conducted.
Rust on the metal parts or screws may cause a fall of the product resulting in injury or accidents. Consult the dealer for the inspections.

The exclusively designed mount bracket shall be used.
(Except for placing WV-S6130 upside-down)
Failure to observe this may cause a drop resulting in injury or accidents.
Use the exclusively designed mount bracket for installation.

The screws and bolts must be tightened to the specified torque.
Failure to observe this may cause a drop resulting in injury or accidents.

Turn the power off when do wiring of this product.
Failure to observe this may cause electric shock. In addition, short circuit or wrong wiring may cause fire.

Install this product in a location high enough to avoid people and objects from bumping the product.
Failure to observe this may cause injury.

The measures of protection against a fall of this product shall be taken.
(Except for placing WV-S6130 upside-down)
Failure to observe this may cause a drop resulting in injury.
Be sure to install the safety wire.

Do not install this product in locations subject to vibration.
Loosening of mounting screws or bolts may cause a fall of the product resulting in injury or accidents.

Correctly perform all wiring
Short circuits in the wiring or incorrect wiring may cause fire or electrical shock.

Turn the power off when cleaning this product.
Failure to observe this may cause injury.

Do not rub the edges of metal parts with your hand.
Failure to observe this may cause injury.

[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 on the provided CD-ROM 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.

This product is designed to be used indoors. This product is not operable outdoors.

Make sure that the product does not become wet.
Keep this camera away from water and moisture.

This product has no power switch.
When turning off the power, disconnect the power supply from the 12 V DC power supply or the PoE device.

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.

About the battery
A battery is installed inside the camera. Do not leave the battery exposed in environments of excessive heat as a result of sunlight or fire.

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

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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 MOS 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 SD memory card. In addition, the same provisions apply after unit is reparied.

About the MOS image sensor
- When continuously shooting a bright light source such as a spotlight, the color filter of the MOS 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.
* The camera position may be moved inadvertently while cleaning the camera body. Restart the camera or refresh the camera position (position refresh) to correct the camera position. Refer to the Operating Instructions (included in the CD-ROM) for further information.

S6131　**S6111**
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.

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Cleaning of the dome cover
Use lens cleaning paper (used to clean camera or spectacles lenses) to remove any dirt on the dome cover.

About the stabilizer function
Depending on the conditions in the installation area, effects of the stabilizer function may not be fully achieved.

Consumable parts

The following are consumables: Replace them in accordance with their operating lifetimes. Their operating lifetimes vary depending on the usage environment and conditions. The operating lifetimes below are just guides for when using the camera at +35 °C {95 °F}.

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• Lens unit, panning motor, tilting motor, flat cable for tilting, slip ring: Approx. 3.7 million operations (Approx. 20000 hours)

* When continuing the action of moving the set position for a long period, dust may accumulate on a slip ring. It can be prevented by executing the position refresh action regularly (about once a week) using the schedule setting.

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• Lens unit, panning motor, tilting motor, flat cable for panning, flat cable for tilting: Approx. 3.7 million operations (Approx. 20000 hours)

Do not hold the dome section.

The dome section of this unit rotates. When removing this unit from a ceiling or wall, turn the unit while holding the fixed section.

Motor operating sound

The operating sound may be louder depending on the speed of panning/tilting operations. When you feel uneasy, the operating sound can be diminished by reducing the setting value of auto panning speed.

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Lens and pan/tilt head

If a lens and pan/tilt head are not performed for a long period of time, the grease coating inside these parts may become sticky. That may obstruct the parts from moving. To prevent this, move the lens or pan/tilt head periodically. Or perform position refresh.

Position refresh

During the use for a long period of time, the preset positions may become inaccurate. When "Position refresh" is set for the created schedule, the camera position will be corrected periodically. Refer to the Operating Instructions on the provided CD-ROM for how to perform the settings.

Equipment classification and power source indication label

Refer to the indication label on the bottom side of this unit for the equipment classification, power source, and other information.

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.

Meaning of symbols

⎓ : Direct current symbol

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⚠ : Hot surface symbol

Precautions for installation

i-PRO Co., Ltd. assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this documentation. For information about the installation tasks, refer to the provided Installation Guide.

In order to prevent injury, the product must be securely mounted to a wall or ceiling according to Installation Guide. (Except for placing WV-S6130 upside-down)

Power supply
This product has no power switch.
When performing electrical work, make sure the camera can be turned on and off. When an Ethernet cable or power cable is connected, the power is turned on. When the power is supplied, the product will perform panning, tilting, zooming and focusing. When cleaning the product, remove the Ethernet cable or disconnect the power cable from the main power supply.

Installation area for this product
Select an appropriate place for the installation area (such as a strong wall or ceiling) in your particular environment.

- Make sure that the installation area is strong enough to hold this product, such as a concrete ceiling.
- Install the camera in the foundation area of the architecture or where sufficient strength is assured.
- Do not mount the product on a plaster board or a wooden section because they are too weak. If the product is unavoidably mounted on such a section, the section shall be sufficiently reinforced.

In addition to fitting the camera into a ceiling directly using the camera mount bracket (accessory), the camera can be installed using the special brackets as follows.

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- When hanging the camera from a ceiling, use the WV-Q105A ceiling mount bracket (option) or the WV-Q126A ceiling embedding bracket (option).
- When installing on a wall, use wall mount bracket WV-Q119 (option).

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- When hanging the camera from a ceiling, use the WV-Q105A and WV-Q160C/WV-Q160S ceiling mount bracket (option) or the WV-Q159C/WV-Q159S ceiling embedding bracket (option).
- When installing on a wall, use wall mount bracket WV-Q158C/WV-Q158S (option).

This camera is designed to be used indoors.
This product is not operable outdoors.
Do not expose this camera to direct sunlight for hours and do not install the product near a heater or an air conditioner. Otherwise, it may cause deformation, discoloration and malfunction. Keep this camera away from water and moisture.

Do not place this product in the following places:

- Locations where a chemical agent is used such as a swimming pool
- Locations subject to moisture or oil smoke such as a kitchen
- Locations that have a specific environment that is subject to an inflammable atmosphere or solvents
- Locations where a radiation, an X-ray, a strong radio wave or a strong magnetic field is generated
- Locations near coasts directly subjected to sea breezes, or locations subject to corrosive gases such as from hot springs, volcanic regions, etc.
- Locations where the temperature is not within the specified range (☞ page 30)
- Locations subject to vibrations, such as on vehicles, marine vessels, or above product lines (This product is not designed for on-vehicle use.)
- Locations where it may get wet from rain or water splash (including under the eaves, etc.)

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- Locations subject to moisture or dust
- Locations subject to condensation as the result of severe changes in temperature

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Mounting method for this product

This product is designed to be used as a pendant mount camera. If the product is mounted on a desktop or at a slant, it may not work correctly and its lifetime may be shortened.

Sulfurization caused by rubber products

Do not place the product near rubber products (packing, rubber feet, etc.) that contain sulfur. There is a risk that sulfur components in rubber products may cause electrical parts and terminals, etc. to become sulfurized and corrode.

Screw tightening

- The screws and bolts must be tightened with an appropriate tightening torque according to the material and strength of the installation area.
- Do not use an impact driver. Use of an impact driver may damage the screws or cause tightening excessively.
- When a screw is tightened, make the screw at a right angle to the surface. After tightening the screws or bolts, perform checks to ensure that the tightening is sufficient enough so that there is no movement or looseness.

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Protective caps

The protective caps are used to prevent dirt and dust from entering inside this product. Keep the protective caps inserted in connectors that are not used.

Protection from lightning

When cables are used outdoors, there is a chance that they may be affected by lightning. In such a case, install a lightning arrestor close to the camera, and make the length of the network cable between the camera and lightning arrestor as short as possible to prevent the camera from being damaged by lightning.

When noise disturbance may happen

Conduct the power distribution work to keep a distance of 1 m {3.28 feet} or more from the 120 V (for U.S. and Canada) or 220 V – 240 V (for Europe and other countries) power line. Or conduct the electric conduit work separately (Always connect the metal pipe with grounding).

Radio disturbance

Noise may appear in video or audio near a strong electric field from a TV or radio antenna, motors and transformers, or a strong electric field/magnetic field from a power line (lamp line) of AC100 V or more.

PoE (Power over Ethernet)

Use a PoE hub/device that is compliant with IEEE802.3af standard.

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 on the provided CD-ROM 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 on the provided CD-ROM for descriptions of how to perform the settings.

Make sure to remove this product if it will no longer be used.

Parts and functions

【Whole unit】

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Camera mount
bracket (accessory)

Safety wire
(fixed with the
mount bracket)

Decorative cover
(accessory)

Decorative cover -
upper part
(accessory)

Decorative cover -
lower part
(accessory)

Dome cover

Status
indicator

【Front view】

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SD memory card cover

Fixed section

i-PRO
logo plate

Dome section
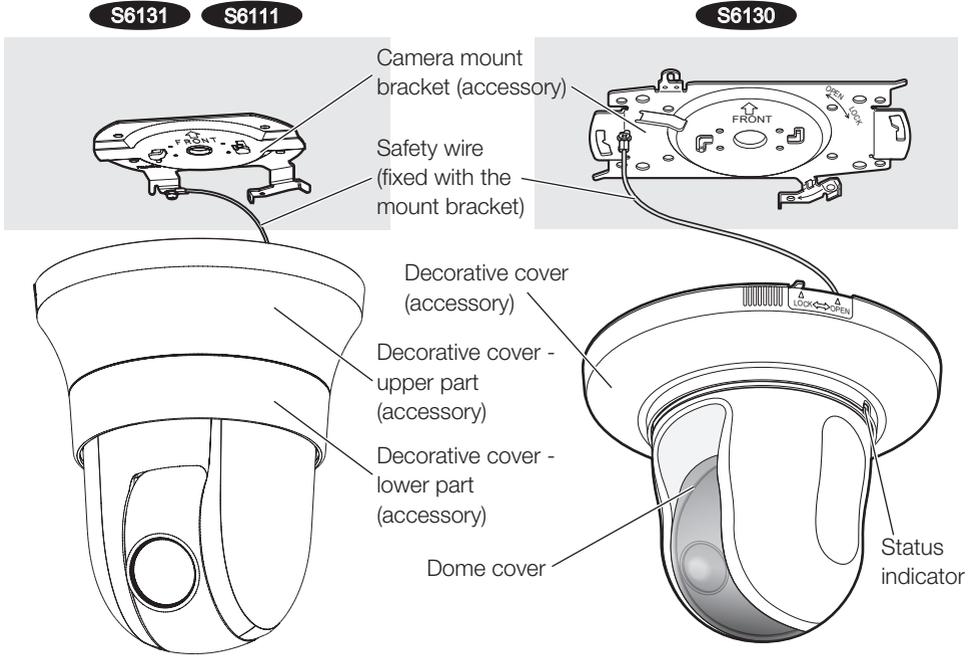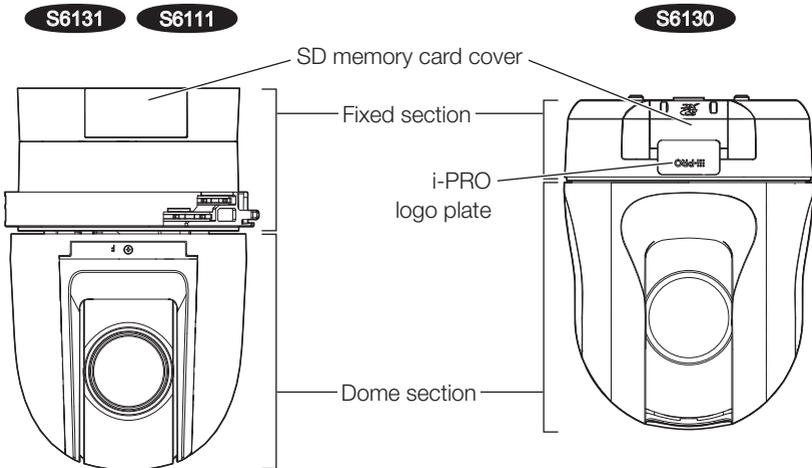
【Bottom view】

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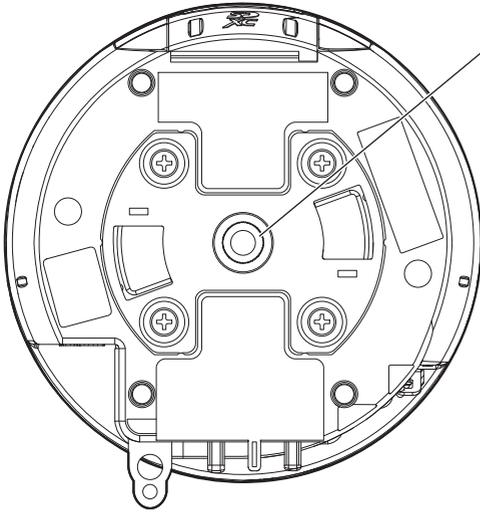
Tripod screw hole
(1/4-20 UNC for tripod: Depth 6 mm {1/4 inches})

IMPORTANT:
- Use the tripod screw hole only when installing the camera upside-down on a desk top with a camera tripod.
- Do not use a tripod screw to mount the camera on the ceiling since the fall prevention measure is unavailable.

Note: S6130

The direction of i-PRO logo plate can be changed.
①Push "i" on the right of the i-PRO logo plate (refer to the illustration of 【Front view】 in Parts and functions) to unlock and pull it out.
②Pull the i-PRO logo plate out a little and rotate it by 180°.
③Push the i-PRO logo plate to lock it again.

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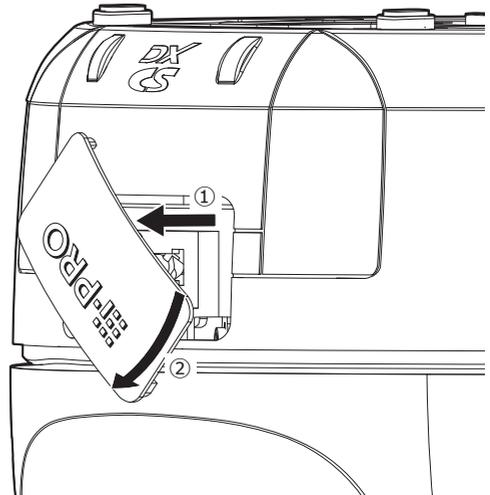
【Rear view】 ■ Terminals

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②12 V DC power supply terminal ③Audio input connector
⑤EXT I/O terminals ④Audio output connector

①Network connector Safety wire holder

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②12 V DC power supply terminal ③Audio input connector
INITIAL SET button ⑤EXT I/O terminals ④Audio output connector
⑥Monitor out connector
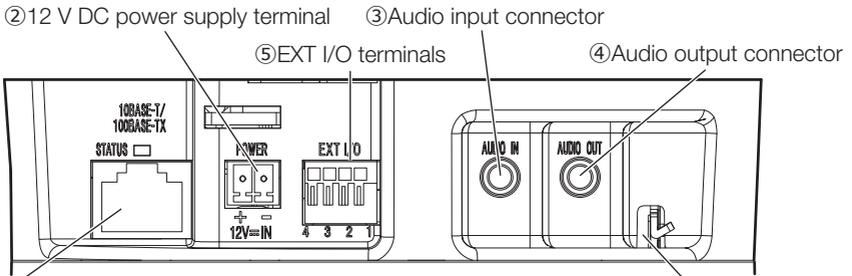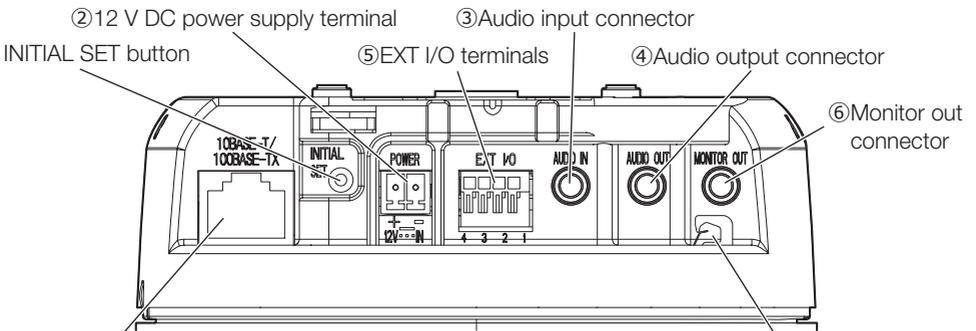
①Network connector Safety wire holder

①Network connector (RJ45)

Connect an Ethernet cable (category 5e or better) to the network connector.

IMPORTANT:
- Use all 4 pairs (8 pins) of the Ethernet cable.
- The maximum length of the Ethernet cable (locally procured) is 100 m.
- Make sure that the PoE device in use is compliant with IEEE802.3af standard.
- When connecting both the 12 V DC power supply and the PoE device for power supply, 12 V DC will be used for power supply.
- When the Ethernet cable is disconnected once, reconnect the cable after around 2 seconds. When the cable is quickly reconnected, the power may not be supplied from the PoE device.

②12 V DC power supply terminal

> **Caution:**
> - A READILY ACCESSIBLE DISCONNECT DEVICE SHALL BE INCORPORATED TO THE EQUIPMENT POWERED BY 12 V DC POWER SUPPLY.
> - ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY (UL 1310/CSA 223) or LIMITED POWER SOURCE (IEC/EN/UL/CSA 60950-1).

Connect the output cable of the DC power supply to the power cable plug (accessory).

IMPORTANT:
- Be sure to use the power cable plug (accessory) provided with this product.
- Be sure to fully insert the power cable plug (accessory) into the 12 V DC power supply terminal. Otherwise, it may damage the camera or cause malfunction.
- When installing the camera, make sure that excessive force is not applied to the power cable.
- Be sure to use an AC adaptor compliant with the specifications (written in the indication label on the bottom side of this unit) regarding power source and power consumption.

③Audio input connector

Connect a microphone or the line out of an external device using a ø3.5 mm stereo mini plug (monaural input **S6131** **S6111** / stereo input **S6130**).
- Input impedance   : Approx. 2 kΩ (unbalanced)
- Recommended cable length   : Less than 1 m {3.28 feet} (for microphone input)
                                                          Less than 10 m {32.8 feet} (for line input)
- Recommended microphone   : Plug-in power type (locally procured)
  (Sensitivity of microphone   : –48 dB ±3 dB (0 dB=1 V/Pa,1 kHz))
- Supply voltage   : 4.0 V±0.5 V **S6131** **S6111**
                                                          2.5 V±0.5 V **S6130**
- Input level for the line input   : Approx. –10 dBV

④Audio output connector

Connect an external speaker* using a ø3.5 mm stereo mini plug (monaural output **S6131** **S6111** / stereo output **S6130**).
- Output impedance   : Approx. 600 Ω (unbalanced)
- Recommended cable length   : Less than 10 m {32.8 feet}
- Output level   : –20 dBV   *Use a powered speaker.

Note: **S6131** **S6111**
- The audio output can be switched to the monitor output. Refer to the "Operating Instructions" on the provided CD-ROM for descriptions of how to switch the output.
- The monitor out is set to NTSC in the default settings of the camera. If you want to change the monitor out setting to PAL, refer to the Operating Instructions on the provided CD-ROM.

IMPORTANT:
- Connect/disconnect the audio cables and turn on the power of the camera after turning off the power of the audio output devices. Otherwise, loud noise may be heard from the speaker.
- Make sure that the stereo mini plug is connected to this cable. When a monaural mini plug is connected, audio may not be heard.
  When connecting a monaural speaker with amplifier, use a locally procured conversion cable (mono-stereo).

⑤EXT I/O terminals

Connect an external device to the external I/O terminal and fit it into the camera.

Note:
• Off, input, and output of the external I/O terminal 2 and 3 can be switched by configuring the setting. Refer to the Operating Instructions on the provided CD-ROM for further information about the EXT I/O terminal 2 and 3 (ALARM IN2, 3) settings ("Off", "Alarm input", "Alarm output" or "AUX output").

<Ratings>
• ALARM IN1 (Black & white input, Auto time adjustment input), ALARM IN2, ALARM IN3
  Input specification : No-voltage make contact input (4 V - 5 V DC, internally pulled up)
  OFF   : Open or 4 V - 5 V DC
  ON   : Make contact with GND (required drive current: 1 mA or more)
• ALARM OUT, AUX OUT
  Output specification : Open collector output (maximum applied voltage: 20 V DC)
  ON   : 4 V - 5 V DC by internal pull-up
  OFF   : Output voltage 1 V DC or less (maximum drive current: 50 mA)

External I/O terminal

GND
ALARM IN3 (Terminal 3)
(Alarm input / AUX output)
ALARM IN2 (Terminal 2)
(Alarm input / Alarm output)
ALARM IN1 (Terminal 1)
(Alarm input / Black & white input / Auto time adjustment input)
Button

4 3 2 1
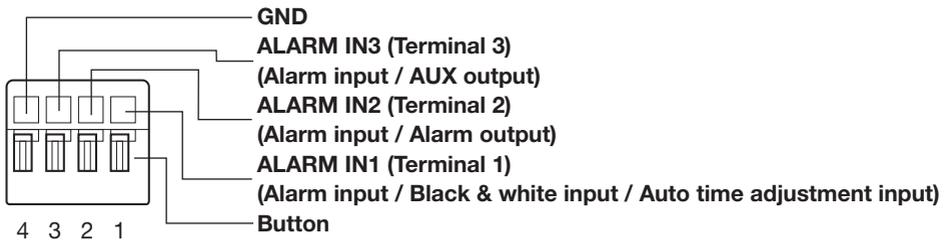
IMPORTANT:
• Install external devices so that they do not exceed the rating of the network camera.
• When using the EXT I/O terminals as the output terminals, ensure they do not cause signal collision with external signals.

S6130

⑥MONITOR OUT connector (factory shipment: NTSC monitor)

Used to connect a monitor used for confirmation when performing service.

Note:
• The monitor out is set to NTSC in the default settings of the camera. If you want to change the monitor out setting to PAL, refer to the Operating Instructions on the provided CD-ROM.

IMPORTANT:
• The confirmation monitor is used for checking the angular field of view when servicing. It is not provided for recording/monitoring use.
• Depending on the monitor, some characters (camera title, preset ID, etc.) may not be displayed on the screen.

When connecting to a network using a PoE hub

Before starting the installation, check the entire system configuration. The following illustration gives a wiring example of how to connect the camera to the network via a PoE device (hub).

Powered speaker

Confirmation monitor

PoE device (hub)

Ethernet cable (category 5e or better, straight)

Microphone

Ethernet cable (category 5e or better, straight)

PC

Powered speaker

Ethernet cable (category 5e or better, straight)

Microphone

Confirmation monitor

* Use an Ethernet cable (category 5e or better, cross) when directly connecting the camera to a PC.
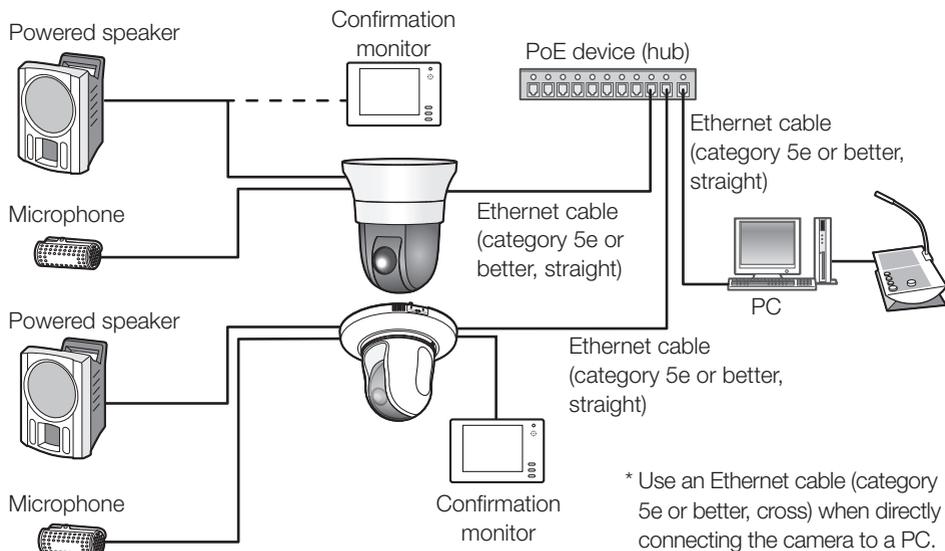
IMPORTANT:
- Use a switching hub or a router which is compliant with 10BASE-T/100BASE-TX.
- If a PoE hub is not used, each network camera must be connected to a 12 V DC power supply.
- When using 12 V DC, power supply from a PoE hub or router is not required.

# ■ Indicators and buttons

S6131 S6111

<Inside of the memory card cover>

SD memory card cover

①INITIAL SET button

②SD MOUNT indicator

SD memory card slot (SD) ④SD ON/OFF button

<Connection terminals on the back>

③STATUS indicator
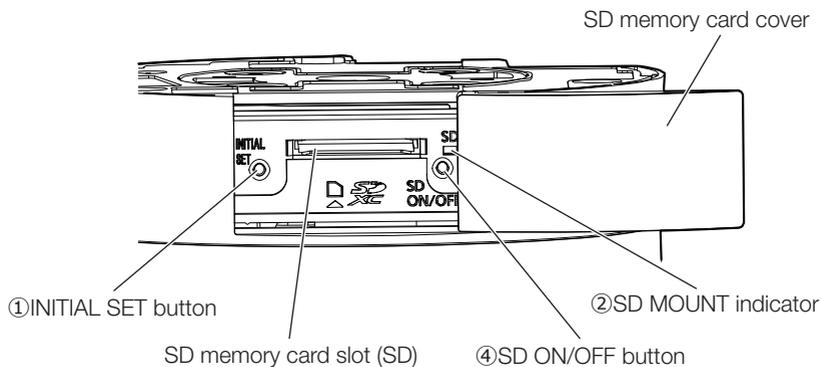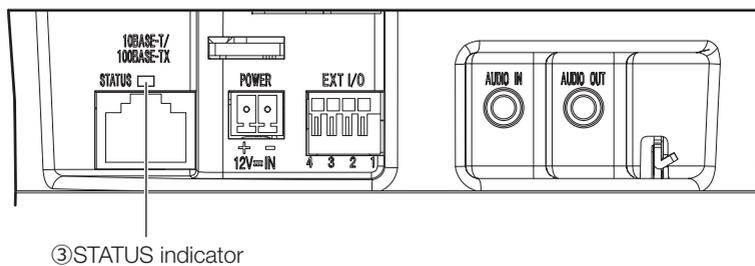
■ Indicators and buttons (continued)

S6130

<Inside of the memory card cover>

SD memory card cover

i-PRO

④SD ON/OFF button

②SD MOUNT indicator

SD memory card slot (SD)

<Connection terminals on the back>

10BASE-T/
100BASE-TX

INITIAL
SET

POWER

12V ⎓ IN

EXT I/O

4 3 2 1

AUDIO IN

AUDIO OUT

MONITOR OUT

①INITIAL SET button

<Whole unit>

LOCK ⇔ OPEN

③Status indicator
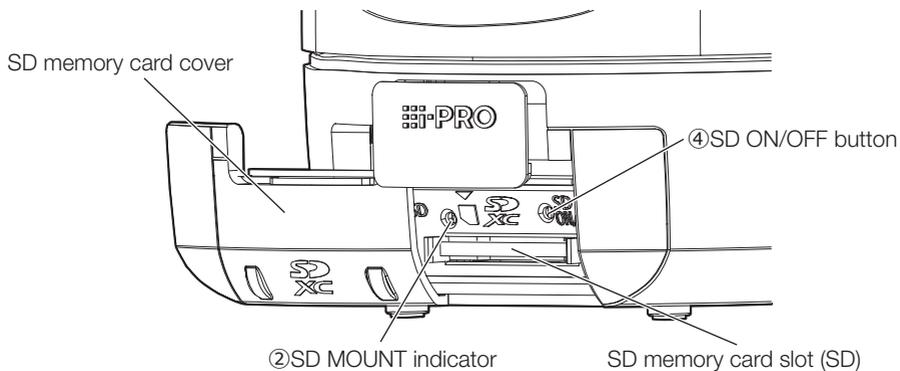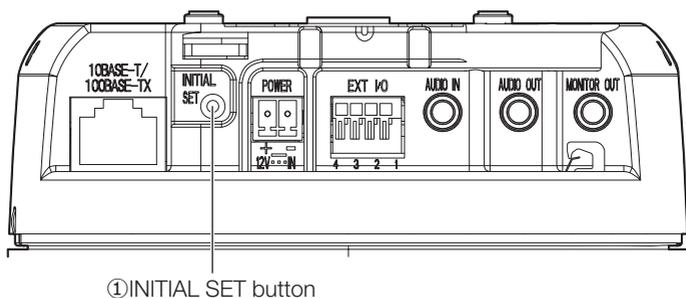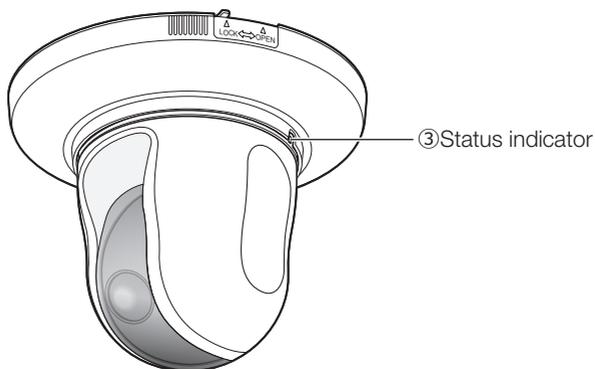
①INITIAL SET button (Initializing button)

Follow the steps below to initialize the network camera.

(1)Turn off the power of the camera. When using a PoE hub, disconnect the Ethernet cable from the camera. When using an external power supply, disconnect the power cable plug (accessory) from the 12 V DC power supply terminal.

(2)Turn on the power of the camera while pressing the INITIAL SET button, and make sure to release the button after approximately 15 seconds. In about 2 minutes later, the camera will start up and the settings including the network settings will be initialized. Retry if the camera does not start up normally.

IMPORTANT:
• When the camera is initialized, the settings including the network settings will be initialized. Before initializing the settings, it is recommended to write down the settings in advance.
• Do not turn off the power of the camera during the process of initialization. Otherwise, it may fail to initialize and may cause malfunction.

---

②SD MOUNT indicator

SD memory card status		SD MOUNT indicator status
When an SD memory card is inserted and could be recognized		Lights off → Blinks green → Lights off
When an unformatted SD memory card is inserted and formatted on the setup menu		Lights off (When inserted/formatting) → Blinks green → Lights green
When the SD memory card in use is formatted on the setup menu		Lights green → Lights off (Formatting) → Blinks green → Lights green
When data can be saved after the SD memory card is inserted and the SD ON/OFF button is pressed (less than 1 second)		Lights off → Lights green
When data can be saved to the SD memory card		Lights green
When the SD memory card is removed after holding down the SD ON/OFF button (about 2 seconds)	(recording)	Lights green → Blinks green → Lights off
	(waiting for recording)	Lights green → Lights off
When data cannot be saved to the SD memory card because an abnormality was detected or the SD memory card is configured not to be used		Lights off

③Status indicator

Operation status		Indicator status
When the power is turned on	Before the network connection is established	Lights orange → Lights off → Blinks orange → Lights orange
	When the network connection is established	Lights orange → Lights off → Blinks orange → Blinks green → Lights green
During the standby or connection	Cable is not connected	Lights orange
	Cable is connected	Lights green
During the upgrade process		Blinks orange
Initialization (When the network connection is established)		Lights orange → Lights off → Blinks orange → Lights orange → Blinks orange → Blinks green → Lights green
Port forwarding error caused by the UPnP function		Blinks orange (in 2 seconds intervals (on for 1 second / off for 1 second))
Trouble happening on the camera		Blinks red
Failure in writing data on the SD memory card		Lights red

Note:
- Lighting/blinking LED can be turned off with the software settings at any time. (The initial state is lighting or blinking.) Set the LED to be solid off if necessary, depending on the installation conditions. (☞ Operating instructions included in the CD-ROM)
- When the power is on, initialization may start with orange blinking.

④SD ON/OFF button

⑴When the SD ON/OFF button is pressed (less than 1 second), the SD MOUNT indicator lights up in green and data can be saved to the SD memory card.

⑵When the SD ON/OFF button is held down (about 2 seconds), the SD MOUNT indicator lights off and the SD memory card can be removed.

Insert / remove an SD memory card

■ Insert an SD memory card

S6131 **S6111**

①**Slide the SD memory card cover to the arrow direction to open the cover**

②**Insert an SD memory card fully into the SD memory card slot, and then push the memory card straight into the slot until a click is heard**

• Insert the SD memory card with the label facing the bottom side of the camera until it makes a clicking sound.

• After the SD memory card has been inserted, press the SD ON/OFF button with a tip of the ball point pen, and make sure the SD MOUNT indicator is connubially lit.

• If you do not press the SD ON/OFF button after inserting the SD memory card, the SD MOUNT indicator is automatically lit approximately 5 minutes later.

③**Shut the SD memory card cover**

SD memory card cover

SD MOUNT indicator
SD ON/OFF button

Bottom side

* Label facing bottom side

SD memory card slot (SD)
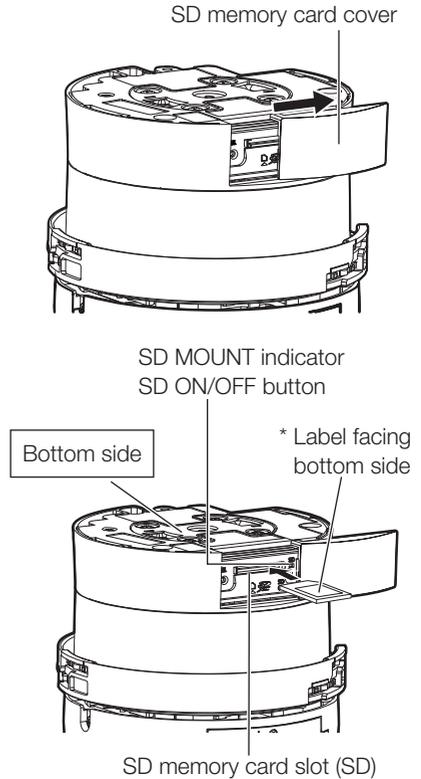
S6130

①**Place the camera upside-down, push the left of the i-PRO logo plate on the front panel to unlock the SD memory card cover, and pull it out a little.**

②**Slide the SD memory card cover to the arrow direction to open the cover**

① i-PRO logo plate

②
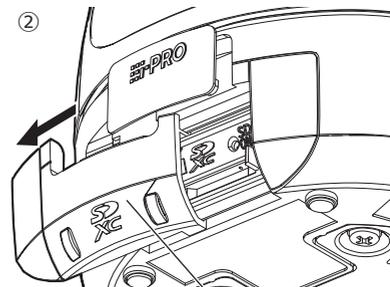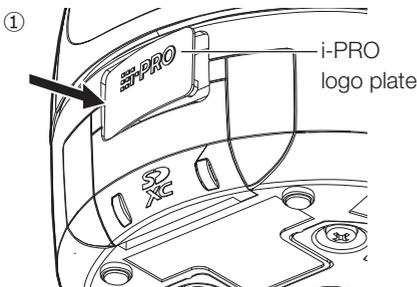
SD memory card cover

③**Insert an SD memory card fully into the SD memory card slot, and then push the memory card straight into the slot until a click is heard**

- Insert the SD memory card with its label facing the bottom side of the camera and its back end at the same height as the right and left SD guide ribs until it makes a clicking sound.
- Take your fingers off the SD memory card and check that its back end does not protrude over the SD guide ribs (on the both sides of the SD memory card slot).
- After the SD memory card has been inserted, press the SD ON/OFF button,and make sure the SD MOUNT indicator is continually lit.
- If you do not press the SD ON/OFF button after inserting the SD memory card, the SD MOUNT indicator is automatically lit approximately 5 minutes later.

④**Shut the SD memory card cover**
⑤**Lock the cover by pushing the i-PRO logo plate**

* Label facing bottom side

Label side

Bottom side

SD guide rib

SD memory card slot (SD)
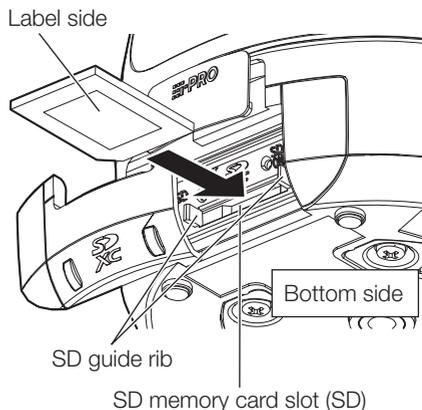
■ Remove an SD memory card

When removing an SD memory card, open the SD memory card cover again and reverse the procedures.

- To remove the SD memory card, hold down the SD ON/OFF button for about 2 seconds. When the flashing SD MOUNT indicator goes out, you can remove the SD memory card.

IMPORTANT:
- Before turning off the camera power, make sure that the SD MOUNT indicator is turned off. If you turn off the camera power while the SD MOUNT indicator is lit or flashing, the recorded data may be corrupted or damaged.

Note:
- Refer to the Operating Instructions on the provided CD-ROM for further information about the SD memory card settings.
- When using an SD memory card, format it using this product. Recorded data on the SD memory card will be deleted when formatted. If an unformatted SD memory card or an SD memory card formatted with other devices is used, this product may not work properly or performance deterioration may be caused. Refer to the Operating Instructions on the provided CD-ROM for how to format an SD memory card.
- When some SD memory cards are used with this product, the product may not work properly or performance deterioration may be caused. Use the compatible SD memory cards. (☞ page 35)

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 (IEEE802.3af compliant) device and the camera connected with 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 • Is the AC adaptor in use compliant with the specifications? Check the specifications regarding AC adaptor. • Is the power cable plug inserted to the camera firmly? Check if it is attached correctly and firmly.	
The camera does not move to the preset positions accurately.	• When the preset positions become inaccurate during use, it is possible to correct the positions by executing the position refresh function. In addition, when "Position refresh" is set for the created schedule, the camera position will be corrected periodically. In some situations, reconfigure the preset positions.	Operating Instructions (included in the CD-ROM)
When the camera is panning/tilting, the camera stops panning/tilting and mechanical noise comes from the camera.	• The camera position may have become inaccurate. Carry out the refresh position function from the [Default reset] tab of the "Maintenance" page of the setup menu.	Operating Instructions (included in the CD-ROM)
The camera starts panning unpredictably.	• This may be caused by noise. Check the exogenous noise level around the camera.	11
	S6131 S6111 • The protection circuit against high temperature may function. When the digital flip (function to turn the screen upside-down when tilting exceeds a certain angle) continues for a given time in high temperature, the system releases the digital flip and operates panning and tilting automatically to return the screen to the original position.	–

Symptom	Cause/solution	Reference pages
S6130 **When using an optional inner cover, upper side of images are hidden (become black) when the tilt angle of the camera is almost level.**	The inner cover (accessory of the optional bracket) is used to make the silver camera body inconspicuous through the dome cover when the camera is installed with the bracket (option). • This is not malfunction. This is caused by the shape of the inner cover. Also, if the setting of "Maximum gain" is too large, the image will become white depending on the subject.	–
When the power is turned on, the status indicator lights or blinks orange.	• 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.	17
Status indicator keeps on blinking orange approx. in 2 seconds intervals.	• UPnP^{TM} error has occurred since the power is not supplied to the router. Turn on the power of the router. Wait until the connections are established.	–
	• An error has occurred during the port update by the UPnP function. If the router in use does not support the UPnP function, perform the port forwarding setting for the router. In addition, deactivate the setting of auto port forwarding for the camera.	Operating Instructions (included in the CD-ROM)
	• UPnP function of the router is disabled. Refer to the operating instructions of the router to enable the UPnP function.	–
Status indicator never lights up.	• Is "Off" selected for "Indicator" on the "Basic" page? Select "On" or "On(Access)" for the indicator setting.	Operating Instructions (included in the CD-ROM)
Status indicator keeps on blinking red.	• The camera may be out of order. Contact your dealer. • Refer to the [Status information] on our support website (https://i-pro.com/global/en/surveillance/training_support/support/technical_information) after checking the displayed contents of the "Maintenance" page - the [Status] tab - [Self check] of the setup menu.	–

Symptom	Cause/solution	Reference pages
Status 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 (https://i-pro.com/global/en/surveillance/training_support/support/technical_information) for further information about the supported software. • Isn't the inserted SD memory card faulty? Replace the card with a normal one.	Operating Instructions (included in the CD-ROM)
Audio input contains noise.	• 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.	14
The image refresh interval on the web browser is longer or the image is displayed intermittently.	• When using the camera with the high frame rate and high image quality, the image update delays due to the PC specifications. These cases may be improved by using a PC with the following specifications. CPU: Intel® Core™ i7 6700 or faster Memory: 8 GB dual channel (4 GB×2) or more 【Example of using the camera in case that the image refresh interval is longer or intermittent】 • Image capture size: 1920×1080, Frame rate: 60 fps, Bit rate: 4096 kbps S6130 S6131 • Image capture size: 1280×720, Frame rate: 60 fps, Bit rate: 3072 kbps • Image capture size: 1280×720, Frame rate: 30 fps, Bit rate: 2048 kbps (When referring to multiple browsers 4 images or more)	6

Specifications

• Basic

	WV-S6131 / WV-S6111	WV-S6130
Power source *1:	DC 12 V PoE (IEEE802.3af compliant)	
Power consumption *1:	DC 12 V : 1 A/12 W PoE DC 48 V : 250 mA/12 W (Class 0 device)	
Operating environment Ambient operating temperature:	–10 °C to +50 °C {14 °F to 122 °F}	**Ceiling/ Place the camera upside-down *2** –10 °C to +50 °C {14 °F to 122 °F} **Desktop/ Tripod** –10 °C to +40 °C {14 °F to 104 °F}
Ambient operating humidity:	10 % to 90 % (no condensation)	10 % to 90 % (no condensation)
Storage environment Storage temperature: Storage humidity:	–30 °C to +60 °C {–22 °F to 140 °F} 10 % to 95 % (no condensation)	
Monitor output (for confirmation):	None	VBS: 1.0 V [p-p]/75 Ω, composite, ø3.5 mm mini jack
External I/O terminals:	ALARM IN 1 (Black & white input, Auto time adjustment input) (x1) ALARM IN 2 (ALARM OUT) (x1) ALARM IN 3 (AUX OUT) (x1)	

Audio input:
 	
For microphone input:
 	
For line input:
	ø3.5 mm stereo mini jack
	(Monaural input)
	Input impedance:
	    Approx. 2 kΩ (unbalanced)
	Recommended applicable microphone: Plug-in power type
	(Sensitivity of microphone:
	    -48 dB±3 dB
	    (0 dB=1 V/Pa, 1 kHz))
	Supply voltage: 4.0 V ±0.5 V
	Input level: Approx. –10 dBV
		ø3.5 mm stereo mini jack
		(Stereo input)
		Input impedance:
		    Approx. 2 kΩ (unbalanced)
		Recommended applicable microphone: Plug-in power type
		(Sensitivity of microphone:
		    -48 dB±3 dB
		    (0 dB=1 V/Pa, 1 kHz))
		Supply voltage: 2.5 V ±0.5 V
		Input level: Approx. –10 dBV

Audio output:	ø3.5 mm stereo mini jack
	(Monaural output) *3
	Output impedance:
	    Approx. 600 Ω (unbalanced)
	Output level: –20 dBV
		ø3.5 mm stereo mini jack
		(Stereo output)
		Output impedance:
		    Approx. 600 Ω (unbalanced)
		Output level: –20 dBV

Dimensions:	ø185 mm × 214 mm (H) {ø7-9/32 inches × 8-7/16 inches (H)} (including the decorative covers)	**Including the decorative cover** ø185 mm × 157 mm (H) {ø7-9/32 inches × 6-3/16 inches (H)} **Excluding the decorative cover (place the camera upside-down)** ø115 mm × 155 mm (H) {ø4-17/32 inches × 6-3/32 inches (H)}

	WV-S6131 / WV-S6111	WV-S6130

Mass:	Main body:
	    Approx. 1.74 kg {3.84 lbs}
	Including camera mount bracket,
	decorative cover:
	    Approx. 240 g {0.53 lbs}
		Main body:
		    Approx. 1.1 kg {2.43 lbs}
		Including camera mount bracket,
		decorative cover:
		    Approx. 200 g {0.44 lbs}

Finish:	**Camera:** ABS resin Black
	Decorative cover:
	    ABS resin (Sail white)
		Camera: PC+ABS resin
		    Fine silver
		Dome: PMMA resin Clear
		Decorative cover:
		    PC+ABS resin
		    Fine silver

*1 Refer to our website (https://i-pro.com/global/en/surveillance/training_support/support/technical_information) for further information about Power source and Power consumption information.

*2 The camera is fixed on the camera mount bracket (accessory).

*3 The audio output can be switched to the monitor output. Refer to the "Operating Instructions" on the provided CD-ROM for descriptions of how to switch the output.

• Camera

	WV-S6131 / WV-S6111	WV-S6130
Image sensor:	1/2.8 type MOS image sensor	1/2.9 type MOS image sensor
Effective pixels:	Approx. 2.1 mega pixels	Approx. 2.4 mega pixels
Scanning area:	5.57 mm (H) × 3.13 mm (V) {7/32 inches (H) × 1/8 inches (V)}	5.28 mm (H) × 2.97 mm (V) {7/32 inches (H) × 1/8 inches (V)}
Scanning system:	Progressive	

Minimum illumination:	**S6131**
	
	Color: 0.015 lx {0.00139 footcandle}
	        (F1.6, Maximum shutter: Off (1/30 s), AGC: 11)
	        0.001 lx {0.00009 footcandle}
	        (F1.6, Maximum shutter: max. 16/30 s, AGC: 11)*
	BW : 0.006 lx {0.00056 footcandle}
	        (F1.6, Maximum shutter: Off (1/30 s), AGC: 11)
	        0.0004 lx {0.00004 footcandle}
	        (F1.6, Maximum shutter: max. 16/30 s, AGC: 11)*
	
	S6111
	Color: 0.011 lx {0.00102 footcandle}
	        (F1.6, Maximum shutter: Off (1/30 s), AGC: 11)
	        0.0007 lx {0.00007 footcandle}
	        (F1.6, Maximum shutter: max. 16/30 s, AGC: 11)*
	BW : 0.005 lx {0.00046 footcandle}
	        (F1.6, Maximum shutter: Off (1/30 s), AGC: 11)
	        0.0003 lx {0.00003 footcandle}
	        (F1.6, Maximum shutter: max. 16/30 s, AGC: 11)*	

	WV-S6131 / WV-S6111	**WV-S6130**
Minimum illumination:	S6130	

	Color: 0.015 lx {0.00139 footcandle}
	       (F1.6, Maximum shutter: Off (1/30 s), AGC: 11)
	       0.001 lx {0.00009 footcandle}
	       (F1.6, Maximum shutter: max. 16/30 s, AGC: 11)*
	BW : 0.006 lx {0.00056 footcandle}
	       (F1.6, Maximum shutter: Off (1/30 s), AGC: 11)
	       0.0004 lx {0.00004 footcandle}
	       (F1.6, 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. * When 60 fps is selected, the Super Dynamic function is automatically set to off.	
Dynamic range:	144 dB typ. (Super Dynamic: On)	
Maximum gain (AGC):	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 (only when Super Dynamic/ Intelligent auto: Off)	
Fog compensation:	On/ Off (only when Intelligent auto/ auto contrast adjust: Off)	
Light control mode setting:	Outdoor scene/ Indoor scene (50 Hz)/ Indoor scene (60 Hz)/ Fix shutter	
Shutter speed:	1/30 Fix, 3/120 Fix, 2/100 Fix, 2/120 Fix, 1/60 Fix, 1/100 Fix, 1/120 Fix, 1/250 Fix, 1/500 Fix, 1/1000 Fix, 1/2000 Fix, 1/4000 Fix, 1/10000 Fix *1/30 Fix to 2/120 Fix is available during 30 fps mode only. *1/60 Fix is available during 60 fps mode only.	
Maximum shutter:	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 *Max.2/100 s and Max.3/120 s are available during 30 fps mode only.	
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.	
Stabilizer	On/ Off (Available only set to the 30 fps mode)	
Privacy zone:	Filling/ Pixelate/ Off (up to 32 zones available)	
Camera title on screen:	On/ Off Up to 20 characters (alphanumeric characters, marks)	
Video Motion Detection (VMD):	On/ Off, 4 areas available	

• Lens

	WV-S6131 / WV-S6111	WV-S6130
Zoom ratio:	40x Optical zoom 60x with HD Extra Optical Zoom [1] (Motorized zoom / Motorized focus)	21x Optical zoom 31x with HD Extra Optical Zoom [1] (Motorized zoom / Motorized focus)
Digital (electronic) zoom:	16x (Max 640x)	16x (Max 336x)
Focal length:	4.25 mm – 170 mm {5/32 inches – 6-11/16 inches}	4.0 mm – 84.6 mm {5/32 inches – 3-11/32 inches}
Maximum aperture ratio:	1:1.6 (WIDE) – 1:4.95 (TELE)	1:1.6 (WIDE) – 1:4.5 (TELE)
Focus range:	3 m {9 ft 10-1/8 inches} – ∞	1.5 m {4 ft 11-1/16 inches} – ∞
Aperture range:	F1.6 – CLOSE	
Angular field of view:	[16:9 mode] Horizontal: 1.9 ° (TELE) – 66 ° (WIDE) Vertical: 1.1 ° (TELE) – 39 ° (WIDE) [4:3 mode] Horizontal: 1.4 ° (TELE) – 51 ° (WIDE) Vertical: 1.1 ° (TELE) – 39 ° (WIDE)	[16:9 mode] Horizontal: 3.5 ° (TELE) – 74 ° (WIDE) Vertical: 2.0 ° (TELE) – 42 ° (WIDE) [4:3 mode] Horizontal: 3.0 ° (TELE) – 61 ° (WIDE) Vertical: 2.3 ° (TELE) – 46 ° (WIDE)

[1] Resolution 1280×720.

• Panning/tilting platform

	WV-S6131 / WV-S6111	WV-S6130
Panning range:	360 ° Endless panning	0 ° – 350 °
Panning speed:	Manual: Approx. 0.065 °/s – 120 °/s Preset: Up to approx. 300 °/s	Manual: Approx. 0.5 °/s – 100 °/s Preset: Up to approx. 300 °/s
Tilting range:	Operational range: –25 ° – 205 ° (level – downward – level)	Operational range: -30° – 90° (level – downward)
Tilting speed:	Manual: Approx. 0.065 °/s – 120 °/s Preset: Up to approx. 300 °/s	Manual: Approx. 0.5 °/s – 100 °/s Preset: Up to approx. 100 °/s
Number of the preset positions:	256	
Auto mode:	Auto track/ Auto pan/ Preset sequence/ Patrol	
Self return:	10 s/ 20 s/ 30 s/ 1 min/ 2 min/ 3 min/ 5 min/ 10 min/ 20 min/ 30 min/ 60 min	

• Network

Network:	10BASE-T/100BASE-TX, RJ45 connector

Resolution[1]:
H.265/ H.264
JPEG (MJPEG)
	⬤ S6131 ⬤ S6130
	2 mega pixel [16:9] (30 fps mode)/
	2 mega pixel [16:9] (60 fps mode)
	    1920x1080, 1280x720, 640x360, 320x180
	3 mega pixel [4:3] (30 fps mode)
	    2048x1536[2], 1280x960, 800x600, VGA, 400x300, QVGA
	⬤ S6111
	1.3 mega pixel [16:9] (30 fps mode)/
	1.3 mega pixel [16:9] (60 fps mode)
	    1280×720, 640×360, 320×180
	1.3 mega pixel [4:3] (30 fps mode)
	    1280×960, 800×600, VGA, 400×300, QVGA

Image compression method*3: H.265/ H.264	**Transmission priority:**
	Constant bit rate / Variable bit rate / Frame rate / Best effort
	Frame rate:
	1 fps/ 3 fps*/ 5 fps*/ 7.5 fps*/ 10 fps*/ 12 fps*/ 15 fps*/ 20 fps*/ 30 fps*/ 60 fps*
	* The frame rate is limited to "bit rate". When a value with an aster-isk (*) 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": Motion priority/ Normal/ Quality priority
	• "VBR": 0 Super fine/1 Fine/ 2/ 3/ 4/ 5 Normal/ 6/ 7/ 8/ 9 Low
	Transmission type:
	Unicast/ 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/ Push **Refresh interval:** 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 (JPEG frame rates are limited when using JPEG and H.265/H.264 simultaneously)
Smart coding	**Smart Facial Coding*** On(Smart Facial Coding)/ On(AUTO VIQS)/ Off * Smart Facial Coding is only available with Stream(1). **GOP(Group of pictures) control** On(Advanced)*/ On(Low)/ On(Mid)/ Off *On(Advanced) is only available with H.265.
Audio compression method:	G.726 (ADPCM) : 16 kbps/ 32 kbps G.711 : 64 kbps AAC-LC*4 : 64 kbps/ 96 kbps/ 128 kbps
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/ 30720 kbps/ 35840 kbps/ 40960 kbps/ 51200 kbps

Protocol:	IPv6: TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, RTP, MLD, ICMP, ARP, IEEE 802.1X, DiffServ IPv4: TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTP/RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP, IEEE 802.1X, DiffServ
Security	User authentication / Host authentication / HTTPS* / Alteration detection of video file* * The certification is pre-installed.
OS*5:	Microsoft Windows 10 Microsoft Windows 8.1 Microsoft Windows 8 Microsoft Windows 7
Browser*5, *6:	Windows Internet Explorer 11 (32-bit) Windows Internet Explorer 10 (32-bit) Windows Internet Explorer 9 (32-bit) Windows Internet Explorer 8 (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
FTP client:	Alarm image transmission, FTP periodic transmission (When the FTP transmission is failed, backup on an optional SD memory card is available.)
Multi-screen:	Up to 16 camera images can be displayed simultaneously on a multi-screen. (Including the camera itself)
Compatible SDXC/SDHC/SD memory card*7, *8	It is recommended to use an SDXC/SDHC/SD memory card for i-PRO devices. (SD speed class 4 or higher) 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 (except miniSD memory card and microSD memory card) * Use of cards above Class 10 is recommended.
Cellular phone compatibility:	JPEG image, AUX control (by access level)
Mobile terminal compatibility: (As of July, 2017)*9	iPad / iPhone (iOS 4.2.1 or later), Android™ mobile terminals

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

*2 Used by super resolution techniques.

*3 Transmission for 4 streams can be individually set.

*4 Only use AAC-LC (Advanced Audio Coding - Low Complexity) when recording audio on an SD memory card.

*5 For further information about PC system requirements and precautions for when using Microsoft Windows or Windows Internet Explorer, click "Manual" - "Open" from the supplied CD-ROM and refer to "Notes on Windows / Internet Explorer versions".

*6 Refer to our website (https://i-pro.com/global/en/surveillance/training_support/support/technical_information) for latest information about the browser.

*7 Refer to our website (https://i-pro.com/global/en/surveillance/training_support/support/technical_information) for latest information about the compatible SD memory cards.

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

*9 For further information about compatible devices, refer to our website (https://i-pro.com/global/en/surveillance/training_support/support/technical_information).

Optional accessories

S6131 **S6111**

Wall Mount Bracket	WV-Q119
Ceiling Embedding Bracket	WV-Q126A
Ceiling Mount Bracket	WV-Q105A
Dome cover (Smoke dome type)	WV-CS5S
Dome cover (Clear dome type)	WV-CS5C

S6130

Wall Mount Bracket (Smoke dome type)	WV-Q158S
Wall Mount Bracket (Clear dome type)	WV-Q158C
Ceiling Embedding Bracket (Smoke dome type)	WV-Q159S
Ceiling Embedding Bracket (Clear dome type)	WV-Q159C
Ceiling Mount Bracket (Smoke dome type)	WV-Q160S
Ceiling Mount Bracket (Clear dome type)	WV-Q160C
Ceiling Mount Bracket	WV-Q105A
Inner Cover	WV-Q161

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