



Network Camera

Model No. **WV-S2231L / WV-S2211L**
WV-S2131L / WV-S2131LRF
WV-S2131LEG / WV-S2131
WV-S2130 / WV-S2111L / WV-S2110



WV-S2131L



- Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.
- For information about the basic description of this product, refer to the Important Information on the provided CD-ROM. For information about how to perform the settings and how to operate the camera, refer to the Operating Instructions on the provided CD-ROM.
- The model number is abbreviated in some descriptions in this manual.

For U.S. and Canada:

Panasonic i-PRO Sensing Solutions Corporation of America
 800 Gessner Rd, Suite 700 Houston, TX 77024
<https://www.security.us.panasonic.com/>

Panasonic Canada Inc.
 5770 Ambler Drive, Mississauga, Ontario, L4W 2T3 Canada
 1-877-495-0580
<https://www.panasonic.com/ca/>

For Europe and other countries:

Panasonic Corporation
<http://www.panasonic.com>

Panasonic i-PRO Sensing Solutions Co., Ltd.
 Fukuoka, Japan

Authorised Representative in EU:

Panasonic Testing Centre
 Panasonic Marketing Europe GmbH
 Winsbergring 15, 22525 Hamburg, Germany



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WARNING:

- To prevent injury, this apparatus must be securely attached to the wall/ceiling in accordance with the installation instructions.
- To prevent fire or electric shock hazard, do not expose this apparatus to rain or moisture.
- The apparatus should not be exposed to dripping or splashing.
- All work related to the installation of this product should be made by qualified service personnel or system installers.
- The installation shall be carried out in accordance with all applicable installation rules.
- The connections should comply with local electrical code.
- Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunlight, fire or the like.

CAUTION:

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- The network camera is only intended for a connection to an ethernet or PoE network without routing to the outside plant.

For U.S.A.

The model number and serial number of this product may be found on the surface of the unit. You should note the model number and serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____
 Serial No. _____

For U.S.A.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

For Canada

CAN ICES-3(A)/NMB-3(A)

: Direct current symbol

: Hot surface symbol

Disposal of Old Equipment and Batteries

Only for European Union and countries with recycling systems



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment. For more information about collection and recycling, please contact your local municipality. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



Note for the battery symbol (bottom symbol)

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Important safety instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Only use attachments/accessories specified by the manufacturer.
- 10) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 11) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 12) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



Troubleshooting

Before requesting service, refer to the Important Information (included in the CD-ROM) and "Troubleshooting" in the Operating Instructions (included in the CD-ROM) and confirm the trouble.

Open Source Software

- This product contains open source software licensed under GPL (GNU General Public License), LGPL (GNU Lesser General Public License), etc.
- Customers can duplicate, distribute and modify the source code of the software under license of GPL and/or LGPL.
- 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 Panasonic shall not respond to any inquiries regarding the contents of the source code.

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.

- S2131L** :The functions with this notation are available when using the model WV-S2231L / WV-S2131L / WV-S2131LRF / WV-S2131LEG / WV-S2131.
- S2130** :The functions with this notation are available when using the model WV-S2130 / WV-S2110.
- S2111L** :The functions with this notation are available when using the model WV-S2211L / WV-S2111L.

About the user manuals

Product documentation is composed of the following documents.

- **Installation Guide (this document)**: Explains installation, mounting, cable connections, and adjusting the field of view. This manual uses the WV-S2111L as an example in the explanations.
- **Important Information (included in the CD-ROM)**: Provides basic information about the product.
- **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.

Standard accessories

Installation Guide (this document)1 set CD-ROM^{*3} 1 pc.
 IMPORTANT SAFETY INSTRUCTIONS 1 pc.
 Code label^{*4} 1 pc.
 Warranty card^{*1 *2}1 set

*1 Excluding WV-S2131LRF and WV-S2131LEG.

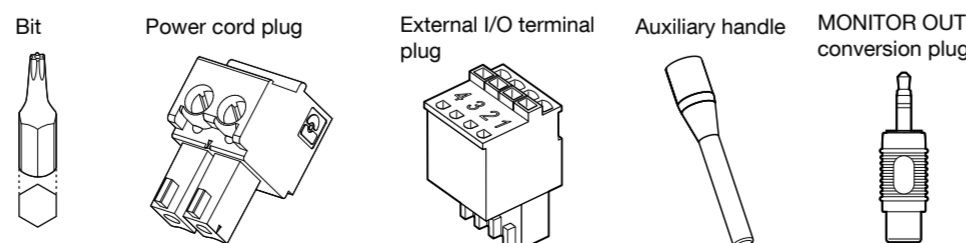
*2 This product comes with several types of warranties. Each warranty is only applicable to the products purchased in the regions indicated on the relevant warranty.

*3 The CD-ROM contains the operating instructions and different kinds of tool software programs.

*4 This label may be required for network management. Use caution not to lose this label.

The following parts are used during installation procedures.

Attachment plate 1 pc. MONITOR OUT conversion plug 1 pc.
 Template A (for the attachment plate) 1 sheet Auxiliary handle **S2111L S2130** 1 pc.
 Power cord plug^{*4} **S2131L S2111L** 1 pc. Bit (WV-S2231L/WV-S2211L only)
 External I/O terminal plug^{*5} (Hex wrench, screw size 6.35 mm [1/4 inches] T10).... 1 pc.
S2131L S2111L 1 pc.



*5 The external I/O terminal plug and power cord plug are attached to the camera. **S2131L S2111L**

Preparations

Prepare the required parts for each installation method before starting the installation. The following are the requirements for the various installation methods.

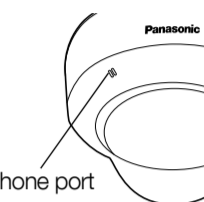
IMPORTANT:

- Procure 4 screws (M4) to secure the attachment plate (accessory) to a ceiling or a wall.
- The minimum required pull-out capacity of a single screw or anchor bolt is 196 N [44 lbf] or more when mounting with the installation method **[Type 1]** or **[Type 2]** described in the right table.
- Select screws according to the material of the location that the camera will be mounted to. In this case, wood screws and nails should not be used.
- If the mounting location such as plaster board is too weak to support the total weight, the area shall be sufficiently reinforced.

Installation method	Description of installation method
Mount the camera on the two-gang junction box using the attachment plate (accessory).	[Type 1]
Directly mount the camera onto the ceiling or wall using the attachment plate (when wiring can be installed in the ceiling or wall).	[Type 2]
Mount the camera in the ceiling using WV-Q174B ceiling mount brackets (approx. 280 g [0.62 lbs]).*1	Refer to the Instruction Manual provided with the WV-Q174B.
When mounting the camera on an insufficiently strong ceiling using the WV-Q105A ceiling mount brackets (approximately 150 g [0.33 lbs])	Refer to the Instruction Manual provided with the WV-Q105A.

*1 When using WV-Q174B camera ceiling mount bracket, if the built-in microphone port is blocked by the cover of bracket, the collectable volume may decrease and the sound of attic is likely to be collected by mistake. Therefore, please confirm the installation conditions before use. **S2130**

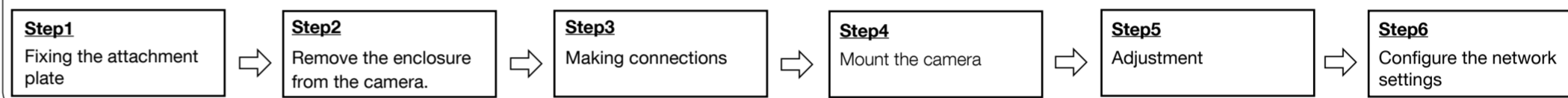
Built-in microphone port



Installation

The installation tasks are explained using 6 steps.

Remove the camera using the reverse order of the installation procedures.



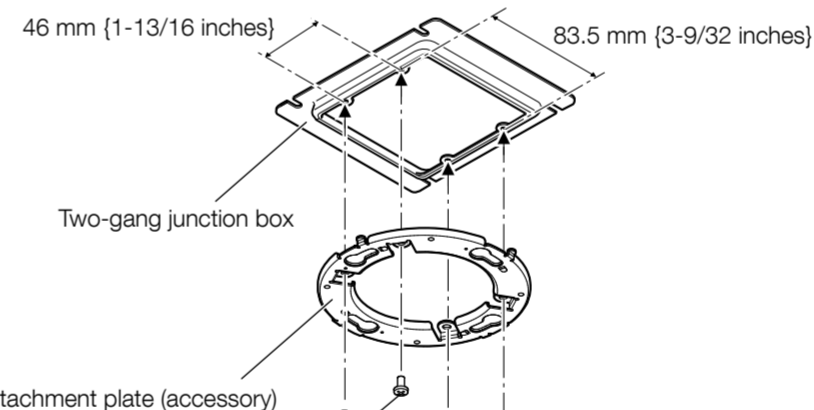
Step 1 Fixing the attachment plate *There are 2 methods to install the camera to a ceiling or wall.

[Common]

Note:

- Attach the attachment plate (accessory) so that the marking (part number) faces toward the ceiling or wall to be installed.

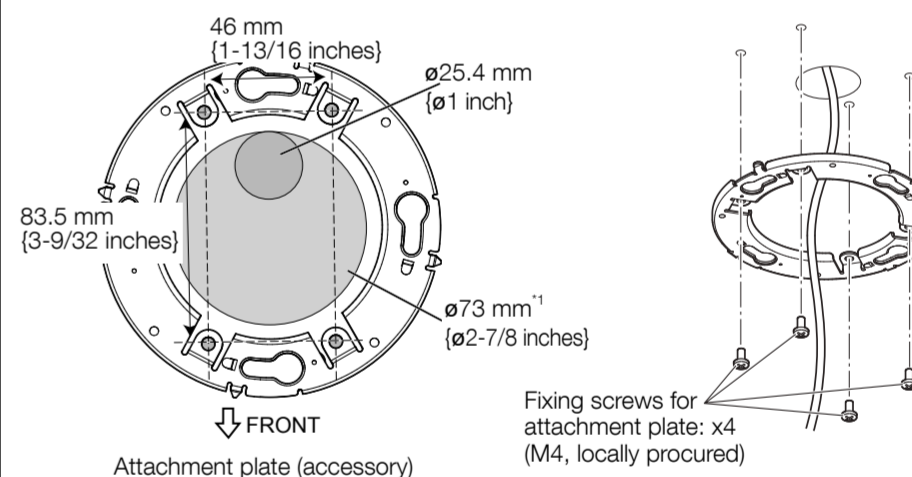
[Type 1] Mount the camera on the two-gang junction box using the attachment plate (accessory).



Fixing screws for attachment plate: x4 (M4, locally procured)

[Type 2] Directly mount the camera onto the ceiling or wall using the attachment plate (accessory).

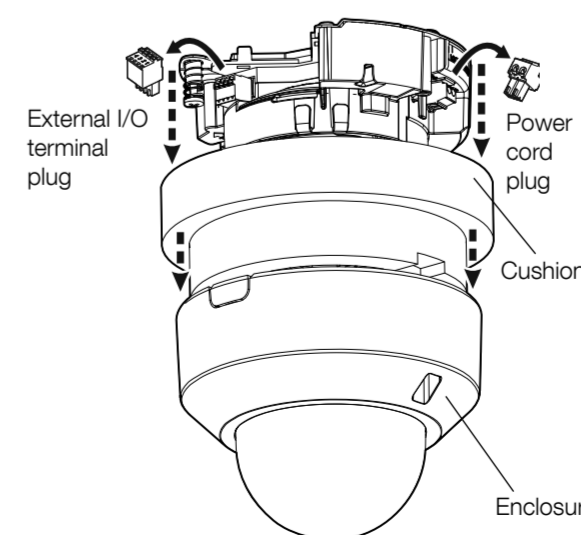
Align the **FRONT** direction of the template A (accessory) with the desired direction, and drill through a 25.4 mm {1 inch} diameter hole to attach the attachment plate. Then, the direction of the marker "FRONT" on the camera (see the figure in [3] of "Step 4 Mount the camera") should face the desired direction of the camera.



*1 If the mounting direction of the camera is not determined yet or if you want to change the direction of the camera after it has been installed. If you want to be able to change the direction of the camera, drill through a 7.3 mm {2-7/8 inches} diameter hole in the center. By doing so you can adjust the mounting direction of the camera in 90° increments.

Step 2 Remove the enclosure from the camera.

- 1) Remove the enclosure and cushion from the camera.
- 2) Remove the power cord plug (accessory) and the external I/O terminal plug (accessory) attached to the camera. **S2131L S2111L**



WV-S2231L / WV-S2211L

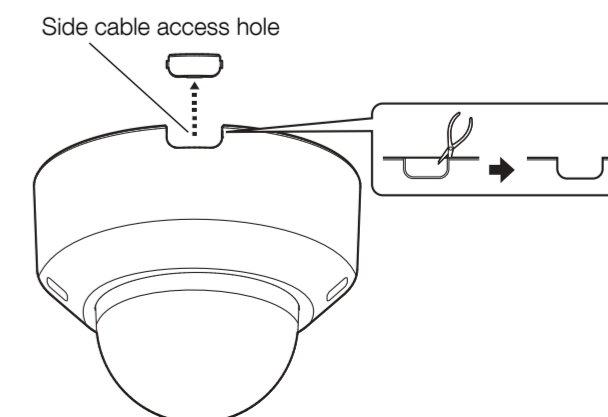
- Do not remove the auxiliary wire.

Using the side cable access hole

When installing the camera directly on the ceiling or wall with cables exposed, or when mounting the camera using the ceiling mount bracket WV-Q174B (option), cut out a portion of the dome cover to open a cable access hole.

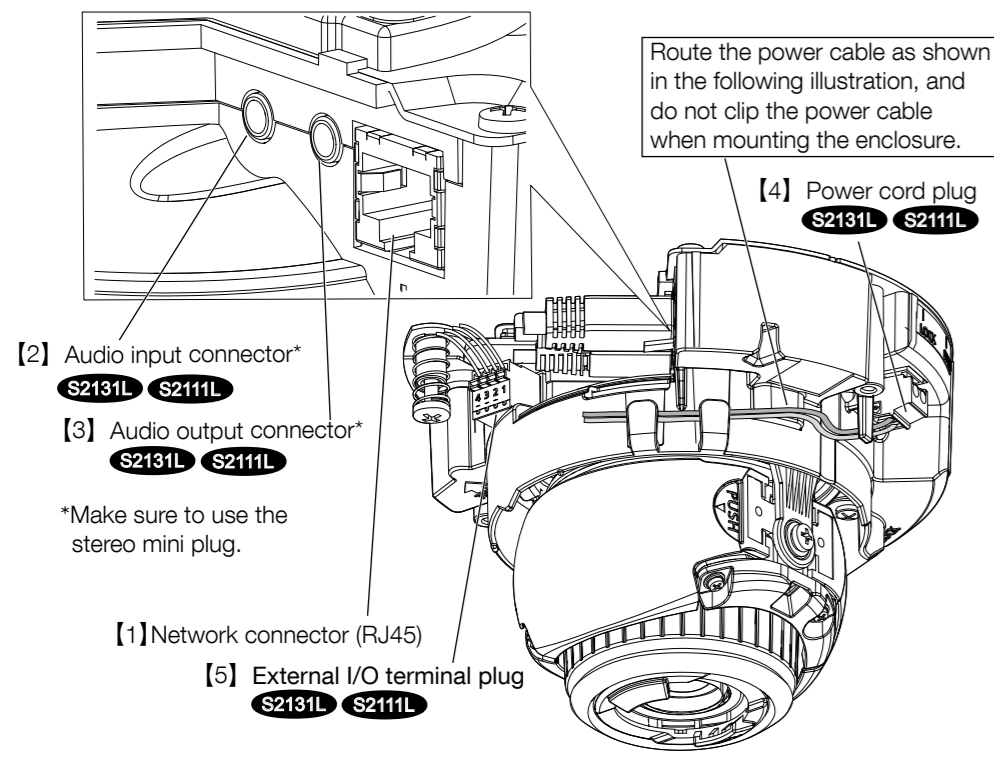
IMPORTANT:

- To prevent injuries and protect the cables, finish the side cable access hole with a file to avoid sharp edges.

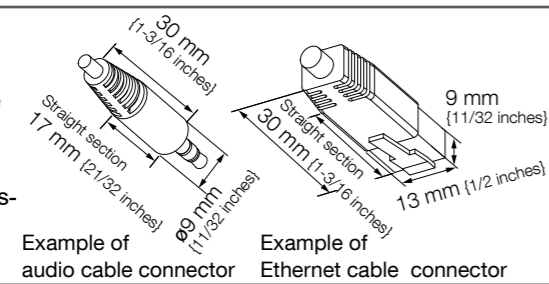


Step 3 Making connections

Refer to the Important Information on the provided CD-ROM for details about each cable.
 As necessary, use a cable tie (locally procured) to tie the cables together.



Note:
 Since the connector storage section does not have a sufficient space, use audio cables and an Ethernet cable that do not exceed the sizes described in the illustrations.



IMPORTANT:
 Turn off each system's power supply (PoE hub or device to supply power to the camera) before making a connection.
 The 12 V DC power supply shall be insulated from the commercial AC power.

- Connect an Ethernet cable (category 5e or better, straight) to the network connector.
- If needed, connect a microphone or the line out of an external device to the audio input connector.

- If needed, connect a powered speaker to the audio output connector.

Note:
 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.

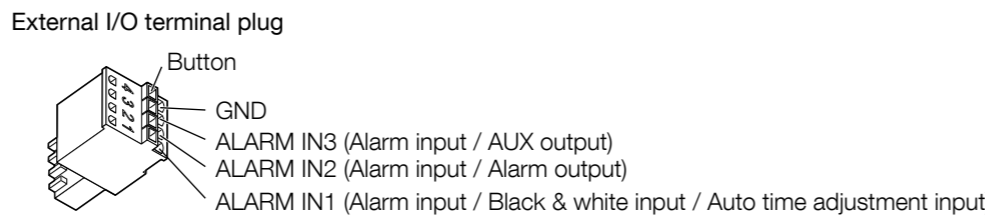
- When connecting an AC adaptor or an external power supply, use the power cable plug (accessory) to connect it to the camera.

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).

- Loosen the screw of the power cable plug (accessory), strip 3 mm to 7 mm (1/8 inches to 9/32 inches) from the end of the wire, twist the stripped part of the wire sufficiently to avoid short circuit, and then connect the output cable to the power cable plug (accessory). When connecting an external power supply to the camera, use the 16 AWG to 24 AWG single-wired or stranded wired cables.
- Tighten the screw of the power cable plug (accessory). (Recommended tightening torque: 0.34 N·m (0.25 lbf·ft))
- Connect the power cable plug to the camera.

- If needed, connect the alarm input/output cables to the EXT I/O terminal plug (accessory).

Connect the cables of external devices to the EXT I/O terminal plug (accessory).
 When connecting an external device, remove 8 mm - 9 mm (5/16 inches - 11/32 inches) of the outer jacket of the cable and twist the cable core to prevent the short circuit first.
 Specification of cable (wire): 20 AWG - 26 AWG, Single core, twisted
 Push down the button of the desired terminal on the external I/O terminal plug with a ballpoint pen, and release the button when the cable of the external device is fully inserted into the terminal hole.



Note:
 Do not connect 2 wires or more directly to a terminal. When it is necessary to connect 2 or more wires, use a splitter.
 Check whether the stripped part of the wire is not exposed and is securely connected.
 The default of EXT I/O terminals is "Off". Refer to the Operating Instructions on the provided CD-ROM for further information about the EXT I/O terminal settings.

Step 5 Adjustment

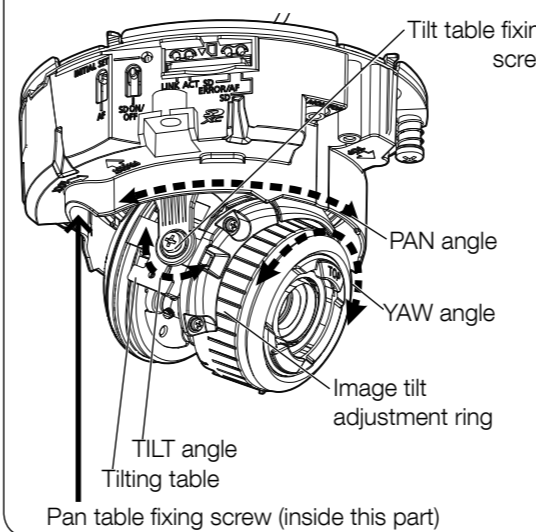
- Turn on power for the camera.

- Loosen the pan table fixing screw. Adjust the angle of the camera with the tilt table, pan table, and image tilt adjustment ring.

Horizontal: +120° - -240°
 Image tilt adjustment range: ±100°
WV-S2131/WV-S2130/WV-S2110
 Vertical: ±85°
Others
 Vertical: +85° - -30°

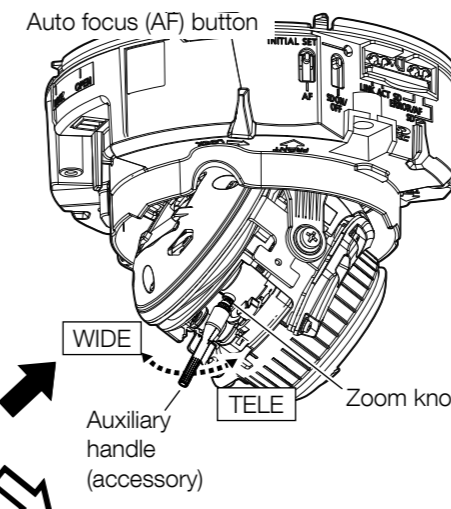
Note:
 When mounting the camera on a ceiling, adjust the tilt angle so that the TOP mark above the lens always comes to the top side.
 When mounting the camera on a wall, rotate the pan table by 180° to the left and rotate the tilt table till the TOP mark above the lens always comes to the top side.

- Tighten the cross-head side of tilt table fixing screw (on one side) and the pan table fixing screw, and fix the camera. (Recommended tightening torque: 0.59 N·m (0.44 lbf·ft))



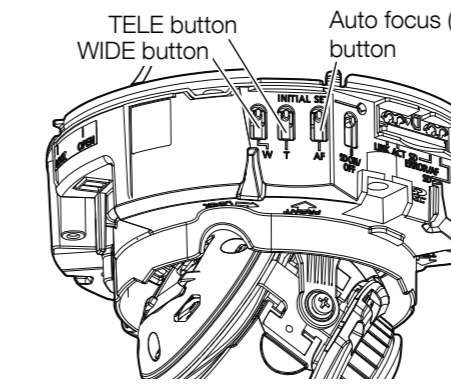
- Adjust the zoom and focus.

Loosen the zoom knob equipped with auxiliary handle (accessory) by rotating the knob to the left, and move it between TELE and WIDE to obtain the appropriate angle of view. Then, lock the zoom knob by rotating it back to the right.
 Adjust the focus by pressing the auto focus (AF) button.



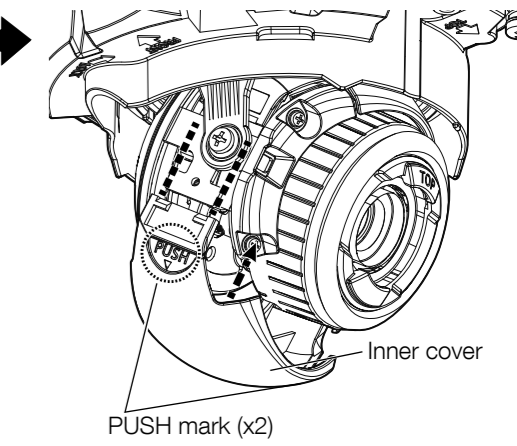
- Adjust the zoom and focus.

adjust the viewing angle by pressing the WIDE or TELE buttons.
 Adjust the focus by pressing the auto focus (AF) button.



- Adjust the screen size and focus by repeating steps 1 and 2. Readjust the angle of the camera with the tilt table, pan table, and azimuth adjustment ring if necessary.

- Press the PUSH mark on both sides of the inner cover, and install the inner cover to the place where it was removed.

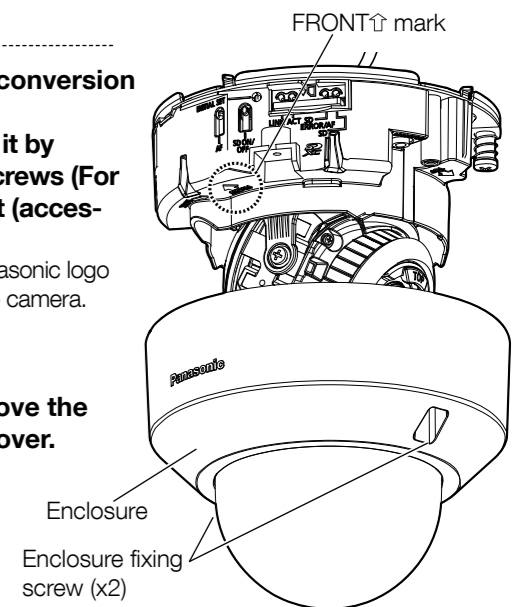


- Adjust the screen size and focus by repeating steps 1 and 2. Readjust the angle of the camera with the tilt table, pan table, and azimuth adjustment ring if necessary.

- Disconnect the MONITOR OUT conversion plug (accessory).

Attach the enclosure and secure it by tightening the enclosure fixing screws (For WV-S2231L/WV-S2211L, use a bit (accessory) to tighten the screws.)
 Attach the enclosure by aligning the Panasonic logo to the direction marker (FRONT) on the camera. (Recommended tightening torque: 0.59 N·m (0.44 lbf·ft))

- After complete installation, remove the protection film from the dome cover.



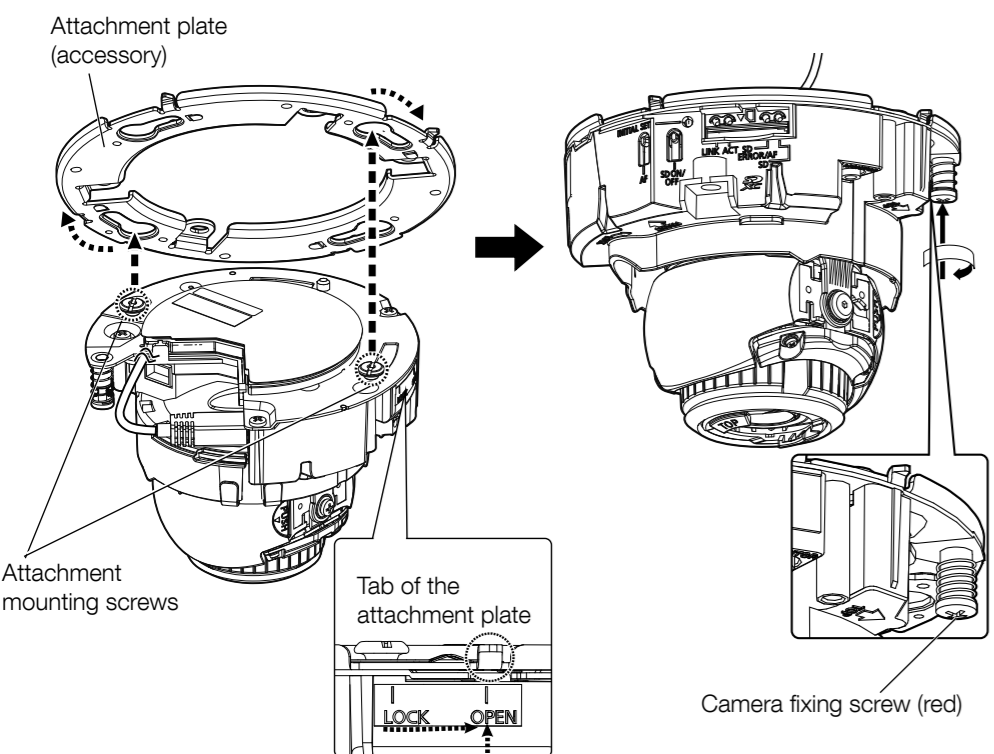
Step 4 Mount the camera

- Align the OPEN mark of the camera side panel with the tab of the attachment plate, insert 2 attachment mounting screws into the attachment plate, and rotate the camera by approximately 15°. The LOCK mark is moved to the tab position of the attachment plate and the camera is temporarily secured.

- Secure the camera by tightening the camera fixing screw (red).

IMPORTANT:
 Be sure to tighten the camera fixing screw. Failure to observe this may cause camera trouble due to camera falling. (Recommended tightening torque: 0.78 N·m (0.58 lbf·ft))

The fixing angle of this unit can be adjusted in the interval of 90°.

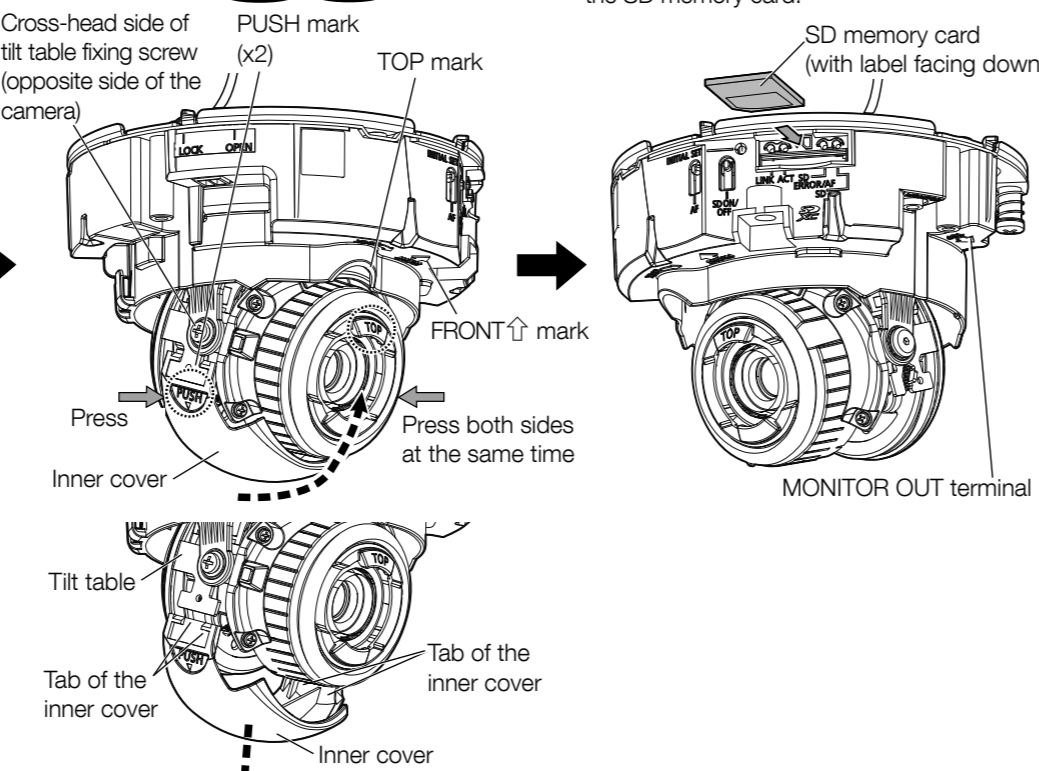


- Loosen the cross-head side of tilt table fixing screw (on one side), and incline the tilt table while keeping the TOP mark on the camera lens head facing the front (i.e. the direction of FRONT mark on the camera).

- Unhook each piece of four nails provided at both sides of the inner cover from the tilting table by pressing surroundings of the PUSH mark of the cover, and remove the inner cover.

- Connect the MONITOR OUT conversion plug (accessory) to the MONITOR OUT terminal of the camera, and then connect the monitor for adjustment with a RCA pin cable (locally procured).

- Insert an SD memory card into the slot, if necessary.



Note:
 When using WV-S2231L / WV-S2131L / WV-S2131LRF / WV-S2131LEG / WV-S2131, do not remove the inner cover.

Step 6 Configure the network settings

Configure the setting of the camera after temporarily invalidating the firewall software. Once the camera configuration is completed, return to the original state. Contact the network administrator or your Internet service provider for information about configuring the settings of the network.

- Insert the provided CD-ROM into the CD-ROM drive of your PC.

The License Agreement will be displayed. Read the Agreement and choose "I accept the term in the license agreement", and click [OK].
 The launcher window will be displayed.

Note:
 If the launcher window is not displayed, double click the "CDLauncher.exe" file on the CD-ROM.
 Refer to "Using the CD-ROM" in the Operating Instructions on the provided CD-ROM for further information about CDLauncher

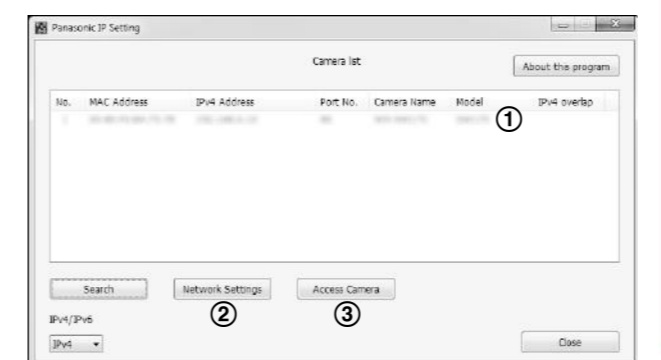


- Click the [Run] button next to [IP Setting Software].

The [Panasonic IP Setting] screen will be displayed.
 The MAC Address / IP address of the detected camera will be displayed.

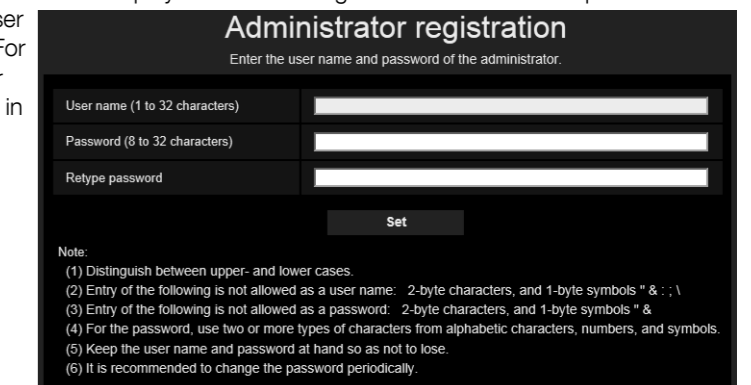
- Select the camera you want to configure (1), and click [Network Settings] (2) to change the network settings. Then, click [Access Camera] (3).

Note:
 Select the camera with same MAC address as the MAC address printed or want to configure.



- When the administrator registration window is displayed, enter "User name", "Password" and "Retype password" by following the instructions displayed on the screen, and then click the [Set] button.

Please keep your user name and password in a safe place free from public view to ensure security. After completing the registration, the camera will automatically be re-connected and the authentication window will be displayed. Enter the registered user name and password. The default setting of user authentication is "On". For further information, refer to the "Preface" section in the Operating Instructions.



IMPORTANT:
 When the camera is used over the Internet, setting user authentication to "Off" may lead to unintended access by a third party. Please leave user authentication set to "On".

- When live images from the camera are displayed, the network connection is complete.

Note:
 For more information on the following content, refer to the Operating Instructions.
 Please set [Time & date] on the [Basic] screen of "Setup" before using the camera.
 It is impossible to display H.265 (or H.264) or MJPEG images, receive/transmit audio, display logs, and use full-screen display when the viewer software "Network Camera View 4S" is not