

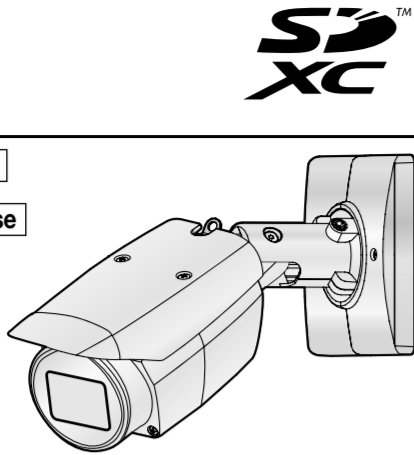
# Panasonic®

## Installation Guide

**Included Installation Instructions**

**Network Camera** For professional use only

**Model No. WV-X1551LN** Outdoor use



**About the user manuals**  
Product documentation is composed of the following documents.

- **Installation Guide (this document):** Provides information about "Precautions", "Precautions for installation" and the installation method.
- **Basic Information (in the following website):** Provides information about "Precautions for use" and "Detail specifications".
- **Operating Instructions (in the following website):** Explains how to perform the settings and how to operate this camera.  
[https://security.panasonic.com/training\\_support/documentation\\_database/](https://security.panasonic.com/training_support/documentation_database/)



"<Control No.: C\*\*\*\*>" used in these documents should be used to search for information on our support website ([https://security.panasonic.com/training\\_support/support/info/](https://security.panasonic.com/training_support/support/info/)) and will guide you to the right information.



- Before attempting to connect or operate this product, please read these instructions carefully and save this manual for future use.
- SDXC/ SDHC/ SD memory card is described as SD memory card.
- The external appearance and other parts shown in this manual may differ from the actual product within the scope that will not interfere with normal use due to improvement of the product.

**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>

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Fukuoka, Japan

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\* PGQX 2 3 6 1 YA \*  
Cs0620-1050  
Printed in China

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**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 authority.

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.

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: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Supplier's Declaration of conformity  
Trade name : Panasonic  
Model No. : WV-X1551LN  
Responsible Party :  
Panasonic Corporation of North America  
Two Riverfront Plaza, Newark, New Jersey  
07102-5490  
Support Contact : 1-800-528-6747



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 Canada

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

Méthode d'installation	Vis de fixation recommandée	La capacité de traction minimale requise
Quand la caméra vidéo est directement installée au plafond ou sur le mur.	M4/ 4 él. ou M5/ 4 él.	724 N {163 lbf}

For U.S.A. and Canada

This device complies with part 15 of FCC Rules and Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions : (1)This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme à la partie 15 des règles de la FCC et aux normes des CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**Caution:**

- The DC power supply connected to the camera must be in the same building.
- The network camera is only intended for a connection to an ethernet or PoE network without routing to the outside plant.
- This product has no power switch. Be sure to install disconnect devices such as a circuit breaker to shut down the main power of power supplying equipment to this product.
- ONLY CONNECT 12 V DC CLASS 2 POWER SUPPLY (UL 1310/CSA 223) or LIMITED POWER SOURCE (IEC/EN/UL/CSA 60950-1 or IEC/EN/UL/CSA 62368-1 Annex Q).
- Before attempting to connect or operate this product, please read these instructions carefully.

**Note:**

- This product is not suitable for use in locations where children are likely to be present.
- Do not install this product in locations where ordinary persons can easily reach.
- This product is a professional equipment.
- For information about screws and brackets required for installation, refer to the corresponding section of this document.

■ ■ ■ : Direct current symbol

## 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 injury or accidents due to a fall of the product may occur.

■ **Do not strike or give a strong shock to this product.**

Failure to observe this may cause injury or fire.

■ **Keep SD memory cards away from infants and children.**

Otherwise, they may swallow the cards by mistake.

In this case, consult a doctor immediately.

■ **Do not hang down from this product or use this product as a pedestal.**

Failure to observe this may cause injury or 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 install this product on a place that is greatly influenced by wind.**

Installation on a place where the wind speed is 60 m/s (approx. 134 mph) or more may cause a fall of the product resulting in injury or accidents.

■ **Do not sprinkle more water, exceeding the performance limit of waterproof with a high pressure cleaning machine, etc.**

Fire or electrical shock may be caused by immersion.

■ **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.

■ **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.**

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.**

Failure to observe this may cause a drop resulting in injury or accidents.

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.

■ **The measures of protection against snowfall shall be taken.**

Weight of snow may cause a fall of the product resulting in injury or accidents. Protect the product against snowfall by installing it under eaves.

■ **Install the product securely on a wall or a ceiling in accordance with the installation instructions.**

Failure to observe this may cause injury or accidents.

■ **Do not rub the edges of metal parts with your hand.**

Failure to observe this may cause injury.

■ **When adjusting the angle, do not touch the movable parts by hand.**

Doing so may cause fingers to get caught, resulting in an injury.

■ **Turn the power off when cleaning this product.**

Failure to observe this may cause injury.

**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.
- For details concerning licensing and source code of open source software, click "Click here for OSS information" on "Support" page of the setup menu of this produc and read the displayed content.
- Please note that we shall not respond to any inquiries regarding the contents of the source code.

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**Precautions for installation**

**Panasonic i-PRO Sensing Solutions Co., Ltd. assumes no responsibility for injuries or property damage resulting from failures arising out of improper installation or operation inconsistent with this documentation.**

■ **In order to prevent injury, the product must be securely mounted to a ceiling or wall according to Installation Guide.**

■ **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.

■ **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
- Locations subject to vibrations, such as on vehicles, marine vessels, or above product lines (This product is not designed for on-vehicle use.)
- Locations subject to condensation as the result of severe changes in temperature
- Locations near rubber products (packing, rubber feet, etc.)

■ **Screw tightening**

Do not use an impact driver. Use of an impact driver may damage the screws or cause tightening excessively.

■ **Heater unit**

This product is equipped with an internal heater unit for use in cold climates. The heater unit turns on automatically when the temperature inside the product drops below around 0°C [32 °F]. When this product is installed and operated in low temperatures below -20 °C [-4 °F], it may require time to start up since the camera will wait to be warmed up internally by the internal heater right after the power is turned on. Also, the camera may not function properly, if it is installed and operated in an environment where the temperature is below -25 °C [-13 °F]. In such a case, wait approximately 2 hours or more until the camera is warmed up. Then, turn on the power again. As the camera warms up, snow or frost accumulated on the front panel will melt. However, it may not be defrosted from the cover depending on the ambient temperature or weather condition.

■ **About reflection of light from outside or IR light**

A ghost may appear on the screen depending on the incident angle of external light.

In the case of using the IR light, installation of a camera near a wall may cause reflection of infrared rays resulting in a part of the screen or the entire screen turning whitish.

- Refer to our support website <Control No.: C0109> for image examples and measures to take.

■ **Take notice of humidity**

Install this product when the humidity is low. If installation is performed when it is raining or in very humid conditions, the inside may be affected by humidity, causing mist-over inside the front panel.

■ **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 arrester close to the camera, and make the length of the network cable between the camera and lightning arrester as short as possible to prevent the camera from being affected by lightning.

■ **When noise disturbance may happen**

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. Conduct the power distribution work to keep 1 m [3-15/16 inches] away from them or conduct the electric conduit work using metal pipes. (Be sure to make ground connection of the metal pipes.)

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

■ **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.

■ **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.

■ **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.

**Troubleshooting**

Before requesting service, refer to "Troubleshooting" of Basic Information and Operating Instructions. Then, confirm the trouble.

**Specifications\*** \*For further information, refer to the Basic Information.

Power source *1:	DC 12 V PoE (IEEE802.3af compliant)
Power consumption *1:	DC 12 V : 930 mA/Approx. 11.2 W PoE DC 48 V : 240 mA/Approx. 11.5 W (Class 0 device)
Operating environment Ambient operating temperature:	-40 °C to +60 °C *2 [-40 °F to +140 °F] (Power On range: -30 °C to +60 °C [-22 °F to +140 °F]) 10 % to 100 % (no condensation)
Ambient operating humidity:	
Storage environment Storage temperature: Storage humidity:	-30 °C to +60 °C [-22 °F to +140 °F] 10 % to 95 % (no condensation)
Monitor output (for adjustment):	VBS: 1.0 V [p-p]/75 Ω, composite, Pin jack An NTSC or PAL signal can be outputted from camera (either press the INITIAL SET switch quickly (within 1 second) or use software to select NTSC or PAL signal).
EXT I/O terminals:	ALARM IN 1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1) ALARM IN 2 (Alarm input 2/ ALARM OUT) (x1) ALARM IN 3 (Alarm input 3/ AUX OUT) (x1)
Audio input: For microphone input:	ø3.5 mm stereo mini jack Recommended applicable microphone: Plug-in power type (Sensitivity of microphone: -48 dB±3 dB [0 dB=1 V/Pa, 1 kHz]) Input impedance: Approx. 2 kΩ (unbalanced) Supply voltage: 2.5 V ±0.5 V Input level: Approx. -10 dBV
Audio output *3:	ø3.5 mm stereo mini jack (Audio output is monaural.) Output impedance: Approx. 600 Ω (unbalanced) Output level: -20 dBV
Waterproof *4:	IP66 (IEC 60529), Type 4X (UL50E) NEMA 4X compliant
Shock resistance:	IK10 (IEC 62262)
Wind resistance:	Up to 40 m/s (approx. 89 mph)
Dimensions:	<b>With adapter box:</b> 133 mm (W) x 133 mm (H) x 377 mm (L) {5-1/4 inches (W) x 5-1/4 inches (H) x 14-27/32 inches (L)} <b>Without adapter box:</b> 130 mm (W) x 130 mm (H) x 337 mm (L) {5-1/8 inches (W) x 5-1/8 inches (H) x 13-9/32 inches (L)}
Mass:	<b>With adapter box:</b> Approx. 2.2 kg {4.86 lbs} <b>Without adapter box :</b> Approx. 1.7 kg {3.75 lbs}
Finish:	<b>Main body:</b> Aluminum die cast and resin, i-PRO white <b>Outer fixing screws:</b> Stainless steel (Corrosion-resistant treatment) <b>Front panel:</b> Polycarbonate resin (with ClearSight coating), Clear

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

\*2 When using with the IR LED light constantly lit, the upper limit of the operating temperature range is +50 °C [+122 °F].

\*3 The audio output can be switched to the monitor output. Refer to the Operating Instructions on the our support web site for descriptions of how to switch the output.

\*4 Only when installation work is properly performed according to the Installation Guide and appropriate waterproof treatment is performed.

**Optional accessories\*1**

	<i-PRO white brackets>	<Light gray brackets>	<Fine silver brackets>
Pole mount bracket:	WV-QPL500-W	WV-Q182	WV-Q188
Corner mount bracket:	WV-QCN500-W	WV-Q183	WV-Q189

\*1 Refer to our support website <Control No.: C0501> for further information about optional accessories.

**Standard accessories**

Installation Guide (this document) .....	1 pc.	Warranty card.....	1 pc.
IMPORTANT SAFETY INSTRUCTIONS.....	1 pc.	Code label*1 .....	1 pc.

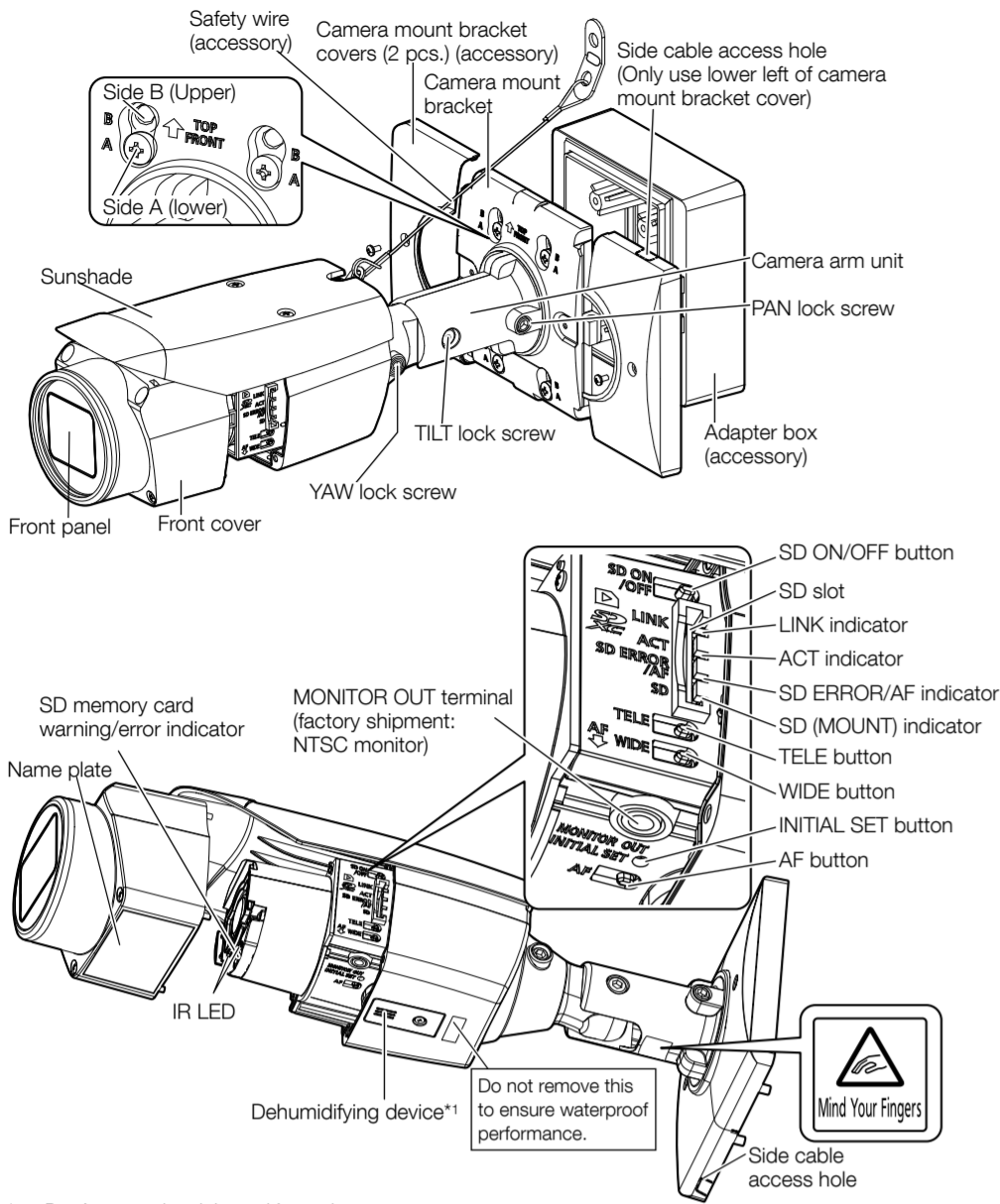
\*1 This label may be required for network management. Use caution not to lose this label.

**The following parts are used during installation procedures.**

Camera mount bracket covers .....	2 pc.	Adapter box .....	1 pc.
Camera mount bracket covers fixing screws (M3 x 6 mm [1/4 inches]).....	3 pcs. (of them, 1 for spare)	Mounting screws (M5 x 20 mm [25/32 inches]).....	5 pcs. (of them, 1 for spare)
Waterproof tape.....	1 pc.	Adapter box mounting screw (M4 x 35 mm [1-3/8 inches]).....	1 pc.
RJ45 waterproof connector cover .....	1 pc.	Rain wash coating label .....	1 pc.
RJ45 waterproof connector cap .....	1 pc.		
4P alarm cable .....	1 pc.		
2P power cable .....	1 pc.		
Safety wire.....	1 pc.		

**Other items that are needed (not included)**

## Parts and functions



\*1 Don't cover the dehumidifying device.

## Indicators

### Note:

- Lighting/blinking LED can be turned off with the software settings at any time. (The initial state is lighting or blinking.) Refer to the Operating Instructions for information about settings.

### LINK indicator

When the camera is able to communicate with the connected device Lights orange

### ACT indicator

When data is being sent via the network camera Blinks green (accessing)

### SD (MOUNT) indicator

When an SD memory card is inserted and could be recognized Lights off → Blinks green → Lights off  
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) Lights green → Blinks green → Lights off (recording)  
(waiting for recording) Lights green → Lights off (waiting for recording) 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

### SD ERROR/AF indicator

When AF (Auto Focus) operation is being executed Blinks red (Interval of 1 time/ second)

When the network camera is being started Lights red

When an SD memory card is recognized normally Lights red → Lights off

When the SD slot is not used or an abnormality is detected in SD card after the camera has started Lights red → Stays red

When an error status is detected Blinks red

When an error status is detected (SD memory card error detection conditions: Write error, read error, etc.) Blinks red

### Buttons

#### INITIAL SET button (Initializing / NTSC ↔ PAL switch button)

Follow the steps below to initialize the network camera. Retry if the camera does not start up normally. When the INITIAL SET button is pressed (less than 1 second), the MONITOR OUT terminal can be switched for the NTSC monitor ↔ PAL monitor. The monitor out is set to NTSC in the default settings of the camera.

Turn off the power of the camera → Turn on the power of the camera while pressing the INITIAL SET button\* → 15 seconds → Make sure to release the button → around 2 minutes → The camera will start up and the settings including the network settings will be initialized

\*Do not turn off the power of the camera during the process of initialization. Otherwise, it may fail to initialize and may cause malfunction.

#### SD ON/OFF button

When 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.

When 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.

#### AF button

Click the AF button to automatically adjust the focus.

#### TELE button

Click the TELE button to adjust the zoom ratio to the "Tele" side.

#### WIDE button

Click the WIDE button to adjust the zoom ratio to the "Wide" side.

## Step1 Preparations

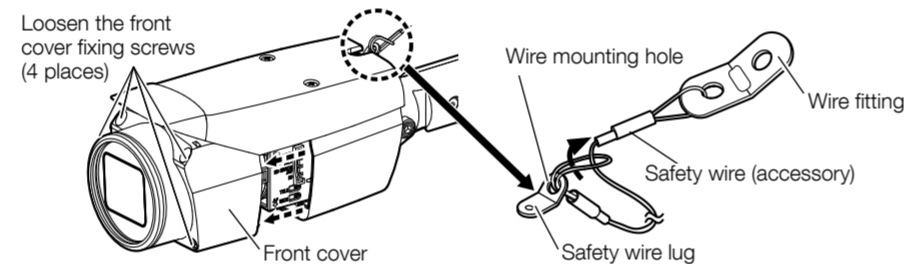
### [1] Attaching the safety wire.

### [2] Remove the front cover.

Do not remove the protection film.

### [3] Insert an SD memory card into the SD slot, if necessary.

Refer to "Insert / remove an SD memory card" on the bottom right for information on how to insert/remove the SD memory card.

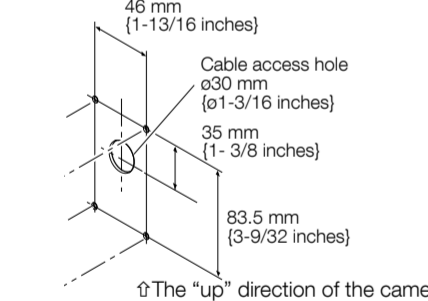


## Step2 Processing the installation surface (process according to the installation type)

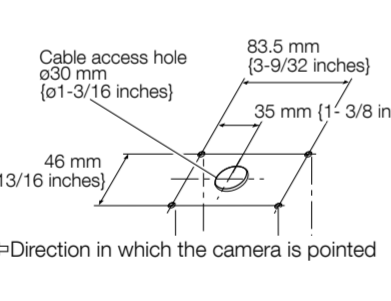
### Directly mount

When running the cable using the side cable access hole of the camera, the "cable access holes" indicated in the figures below and to the right are not required.

#### <When mounting to a wall>



#### <When mounting to a ceiling>



Direction in which the camera is pointed

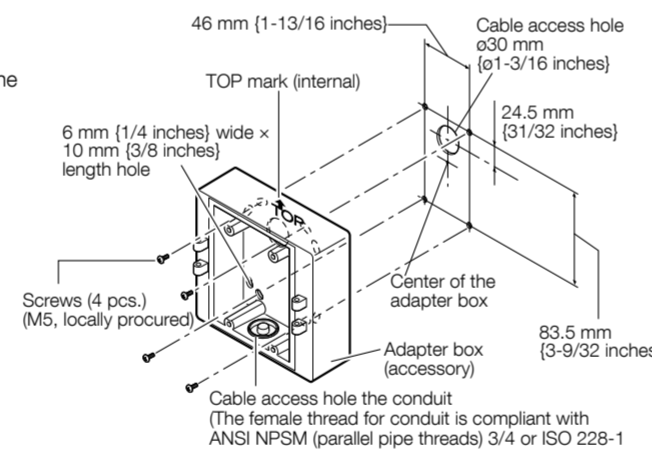
### Junction box

No operation is required in processing the ceiling or wall.

### Adapter box

Minimum pull-out strength: 724 N (163 lbf) (per 1 pc.)

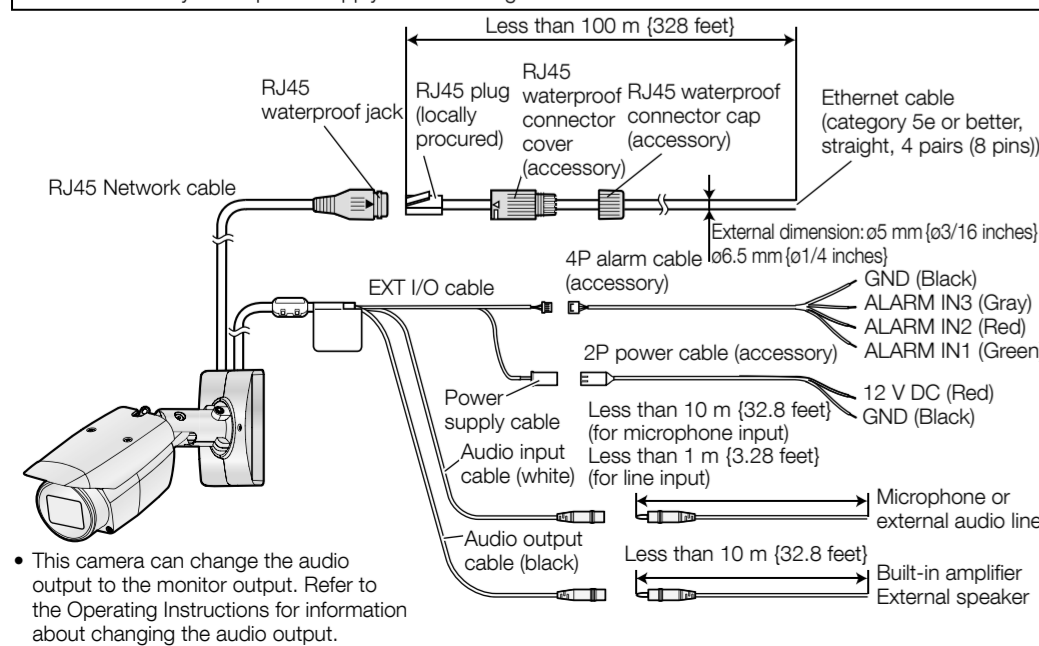
To install this product outdoors, be sure to waterproof the screw holes and cable access hole of the installation surface.



## Step3 Making connections

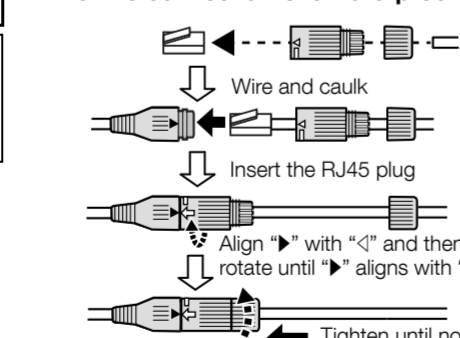
### IMPORTANT:

- Devices to which power can be supplied to this product are PoE hub, PoE power supplying equipment, and external 12 V DC power supply.
- Turn off each system's power supply before making a connection.



This camera can change the audio output to the monitor output. Refer to the Operating Instructions for information about changing the audio output.

### How to connect a RJ45 waterproof connector



### IMPORTANT:

- When removing the RJ45 waterproof connector, be sure to remove it with the reverse procedure of connection.
- 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.

### Waterproof treatment for external I/O cables, power supply cables, audio input cables, and audio output cables

- Stretch the waterproof tape (accessory) by approx. twice its length and wind it tightly around the cable.
- At the start and end winding points, make the tape overlaps the external covering parts by approx. 20 mm (25/32 inches).
- For the above 4 types of cables, even if they are not used, waterproofing treatment must be performed on the connector parts.

Install the connector and cable connection parts in locations where they aren't regularly exposed to rain or water.

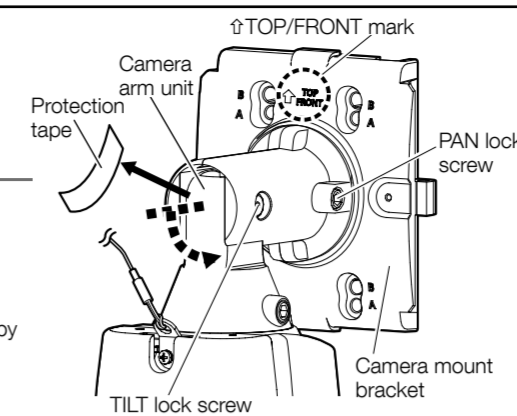
## Step4 Mount the camera

### Common

Using a 5 mm (3/16 inches) hex wrench (locally procured), loosen the TILT lock screw until the camera faces downward, remove the protection tape, and then temporarily tighten the TILT lock screw.

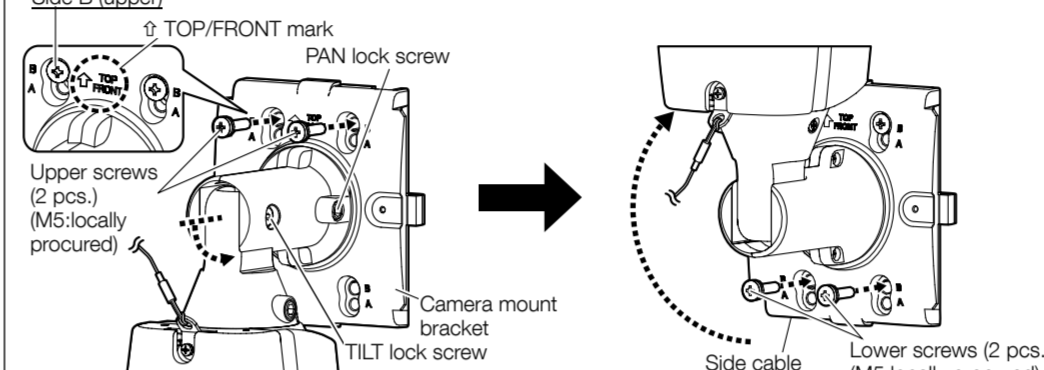
### Note:

- In the following 3 installation methods 4 screws are tightened in the next step.
  - With the camera facing down, tighten the 2 screws on the upper side.
  - Loosen the PAN lock screw, rotate the camera by 180° and face it upwards, and then temporarily tighten the PAN lock screw.
  - Tighten the 2 screws on the lower side.



### Directly mount

Minimum pull-out strength: 724 N (163 lbf) (per 1 pc.)

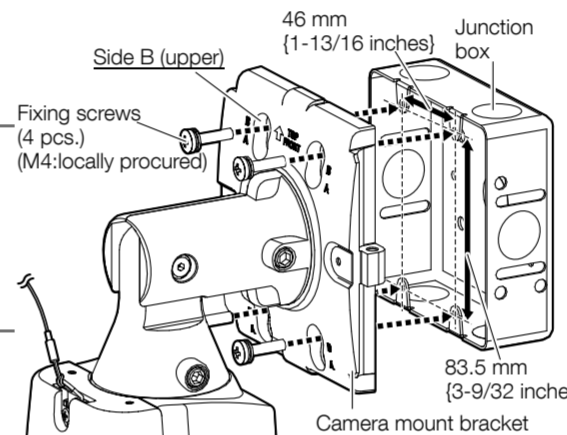


### Junction box

The minimum required pull-out capacity: 724 N (163 lbf) (per 1 pc.)

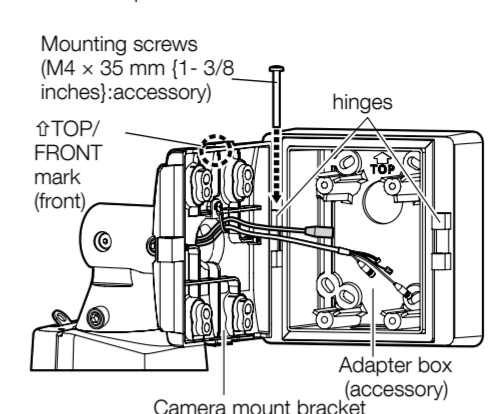
### Note:

- Only use metal junction boxes.
- Prepare a M4 screw with a washer with a diameter of 7.5 mm (9/32 inches) to 10 mm (13/32 inches) and a spring washer.
- Tighten the screws in the order described in the Common note.



### Adapter box

Temporarily install the camera mount bracket to the left or right hinge of the adapter box so that it can be opened and closed.

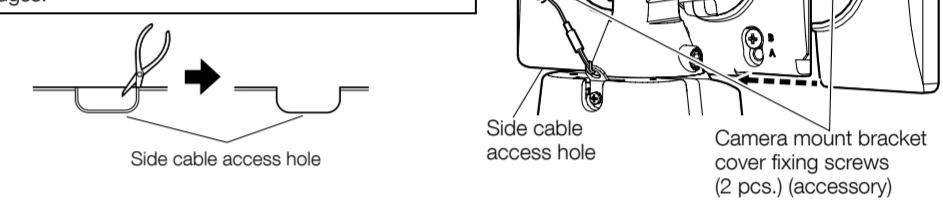


### Common

When wiring cables on the side, use a nipper to cut open a side cable access hole of the camera mount bracket cover, and then pass the cable through.

### IMPORTANT:

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



Recommended tightening torque: 1.86 N·m (1.37 lbf·ft)

Tighten the screws in the order described in the Common note.

## Step5 Adjustment

### [1] Change the direction the camera is facing from directly down to facing up and temporarily fix the camera in place.

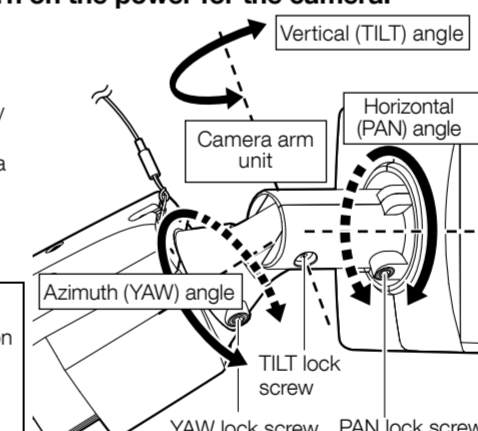
### [2] Fit a pin cable (locally procured) to the MONITOR OUT terminal on the camera and connect an adjustment monitor. Turn on the power for the camera.

### [3] Adjust the angle of the camera.

- Using a 5 mm (3/16 inches) hex wrench (locally procured), loosen the PAN lock screw/TILT lock screw, match the camera direction and temporarily tighten the screws.
- Loosen the YAW lock screw and rotate the camera to adjust the azimuth of the camera.
  - Horizontal (PAN) angle: ±180°
  - Vertical (TILT) angle: 0° to 100°
  - Azimuth (YAW) angle: -190° to +100°

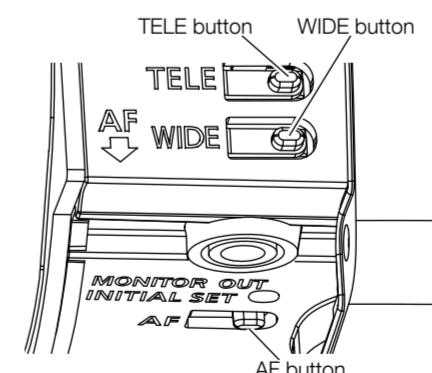
### IMPORTANT:

- Do not touch the TILT rotation unit around the caution label when you change the vertical (TILT) angle to prevent your fingers from being caught.
- Do not adjust the Horizontal (PAN) angle more than ±180°. This may cause cables to be wrenched.
- Any of the PAN, TILT and YAW lock screws can be adjusted by loosening them about 1 turn. Do not unscrew them more than necessary.



### [4] Adjust the zoom and focus.

- As shown in the right figure, adjust the viewing angle by pressing the WIDE or TELE buttons, and then adjust the focus by pressing the AF button.
- If needed, readjust the angle of the camera, such as Horizontal (PAN) angle, Vertical (TILT) angle, and Azimuth (YAW) angle.



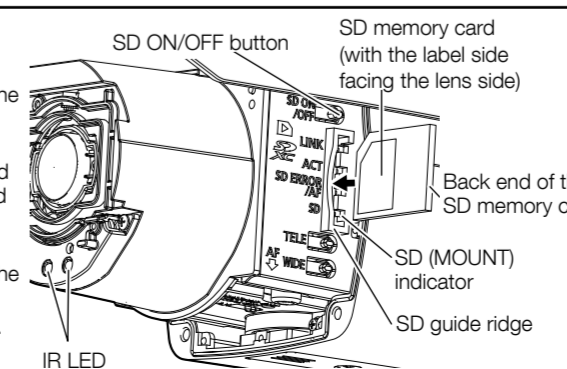
### [5] Fix each part by tightening the corresponding lock screw.

PAN lock screw: 2.7 N·m (2.0 lbf·ft)  
TILT lock screw: 9.0 N·m (6.6 lbf·ft)  
YAW lock screw: 2.7 N·m (2.0 lbf·ft)

## Insert / remove an SD memory card

### Insert an SD memory card

- Remove the front cover from the camera.
- Insert the SD memory card into the end of the SD slot and confirm that a clicking sound is made.
- Take your finger off the SD memory card and check that the back end of SD memory card is not sticking out of the top part of the SD guide ridge.
- Press the SD ON/OFF button and check if the SD (MOUNT) indicator is lit.
- Attach the front cover to its original position.



### Remove an SD memory card

When removing an SD memory card, reverse the procedure for inserting an SD memory card. Press and hold the SD ON/OFF button for approx. 2 seconds, and then remove the SD memory card after checking that the SD (MOUNT) indicator has changed from blinking to off.

### IMPORTANT:

- Before turning off the camera power switch, make sure that the SD (MOUNT) indicator is turned off.
- When removing the SD memory card from the camera after turning off the camera and removing the front cover part, take care because the area around the IR LED shown in the illustration to the left may be hot.

### Note:

- When using an SD memory card, format it using this product. Refer to the Operating Instructions for how to format an SD memory card.
- Use compatible SD memory cards. Refer to our support website <Control No.: C0107> for latest information about the compatible SD memory cards.