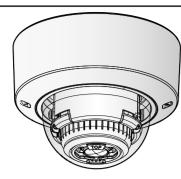


Installation Guide **Included Installation Instructions**



Network Camera For professional use only

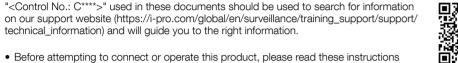
Model No. WV-X2251L Indoor use



About the user manuals

oduct documentation is composed of the following docume

- nstallation 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



- 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:

i-PRO Americas Inc. https://www.i-pro.com/

For Europe and other countries:

i-PRO Co., Ltd. Fukuoka, Japan https://www.i-pro.com/

i-PRO EMEA B.V. UK Branch 1010 Cambourne Business Park, Cambridgeshire CB23 6DP

Authorised Representative in EU: i-PRO EMEA B.V. Laarderhoogtweg 25, 1101 EB

Cs0620-2042 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 FCC CAUTION: Changes or modifications not 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.

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 d traction minima requise
Quand la caméra vidéo est directement installée au plafond ou sur le mur.	M4/ 4 él.	196 N {44 lbf}

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: i-PRO Model No.: WV-X2251L Responsible Party i-PRO Americas Inc.

8550 Fallbrook Drive, Suite 200 Houston, Texas 77064

Support Contact: 1-800-513-5417

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 sui vantes: (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
 This product is not suitable for use in locations where 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.

Notice:

- 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 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.

■ 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.

■ 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.

The metal part of the bottom side may become hot while the product is in use. Direct skin contact with high-

temperature parts of the product may cause burns.

■ 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 product 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

i-PRO Co., Ltd. assumes no responsibility for injuries or property damage resulting from failures arising out of mproper 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. ■ 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 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 directly wet from rain or water splash (including under the eaves, etc.) Locations subject to moisture or dust • Locations subject to sudden changes in temperature such as near air discharge vents of air conditioners or air
- circulation inlet doors Locations near rubber products (packing, rubber feet, etc.)

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

■ 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 dome cover.

■ 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 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

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: 890 mA/Approx. 10.7 W PoE DC 48 V: 230 mA/Approx. 11.0 W (Class 0 device)	
Operating environment Ambient operating temperature: Ambient operating humidity:	-10 °C to +50 °C {14 °F to 122 °F} 10 % to 90 % (no condensation)	
	-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, ø3.5 mm mini 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 IN1 (Alarm input 1/ Black & white input/ Auto time adjustment input) (x1) ALARM IN2 (Alarm input 2/ ALARM OUT) (x1) ALARM IN3 (Alarm input 3/ AUX OUT) (x1)	
Audio input: For microphone input: For line input:	a3.5 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 *2:	ø3.5 mm stereo mini jack (Audio output is monaural.) Output impedance: Approx. 600 Ω (unbalanced) Output level: –20 dBV	
Shock resistance:	IK10 (IEC 62262)	
Dimensions:	ø129.5 mm × 103.5 mm (H) {ø5-3/32 inches × 4-1/16 inches (H)} Dome radius 41.5 mm {1-5/8 inches}	
Mass:	Approx. 830 g {1.83 lbs}	
Finish:	Main body: Aluminum die cast, i-PRO white Dome cover: Polycarbonate resin, Clear	
Others:	Tamper-resistant enclosure *3	
*1 Refer to our support website <control c0106="" no.:=""> for further information about Power source and Power consumption information.</control>		

*2 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. *3 Component that has a structure on which the screws that are accessible after installation cannot be screwed or unscrewed using an ordinary screwdriver.

Optional accessories*1

WV-Q105A Ceiling mount bracket: WV-CR1S Dome Cover (Smoke type): Ceiling mount bracket (Sail white): WV-Q174B Ceiling mount bracket (i-PRO white): WV-QEM100-W Wall mount bracket (i-PRO white): WV-QWL500-W Wall mount bracket (Light gray): WV-QWL500-G

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

Standard accessories

Installation Guide (this document). ...1 pc. Code label*1

..1 pc

..1 pc

instructions of each bracket.

IMPORTANT SAFETY INSTRUCTIONS......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.1 pc. EXT I/O terminal plug *2... Attachment plate 1 sheet MONITOR OUT conversion plug... Template A ..

....1 pc. Bit (Hex wrench, screw size 6.35 mm {1/4 inches} T10)...... *2 The power cord plug and EXT I/O terminal plug are attached to the camera.

Other items that are needed (not included)

 Fixing screw Recommended | Minimum pull-Installation method screw*1 out strength*2 [Type 1] Mount the camera to a two-gang junction box. M4/4pcs. 196 N {44 lbf} [Type 2] Directly mount the camera onto the ceiling or wall Refer to the operating

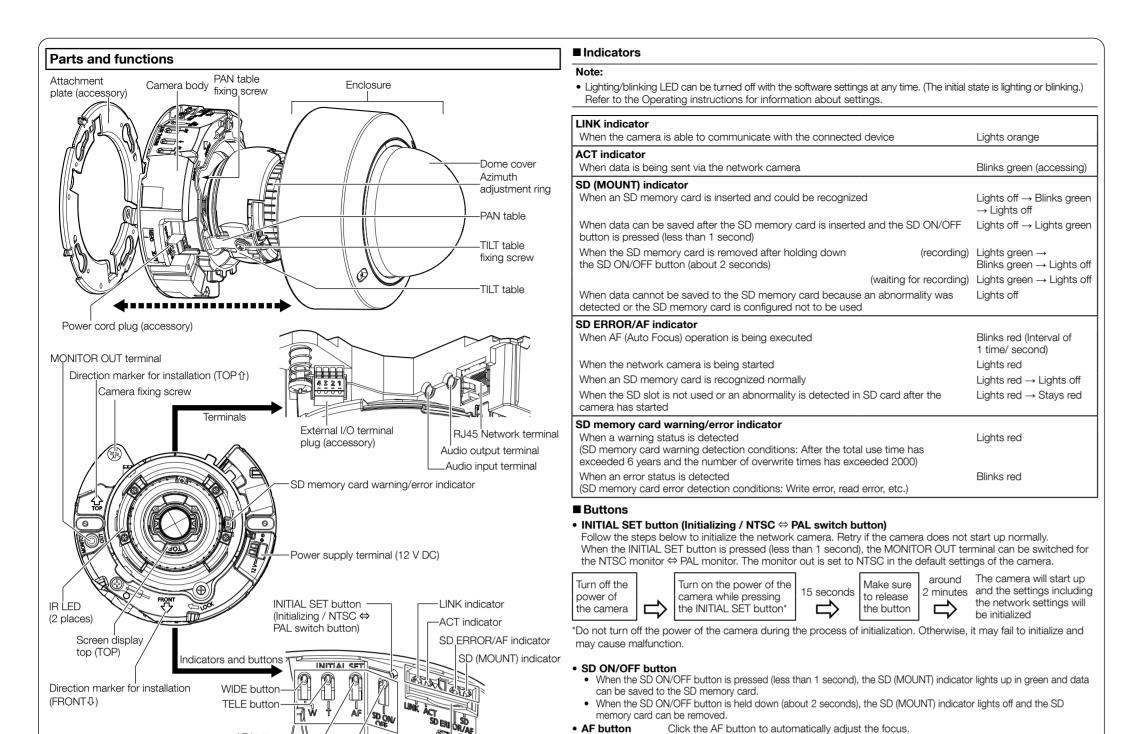
1 Select screws according to the material of the location that the camera will be mounted to. In this case, wood screws and nails should not be used. *2 This value indicates the minimum pull-out strength required value per screw. For information about the

• RJ45plug, Ethernet cable (category 5e or better, straight, 4 pairs (8 pins))

Mount the camera using the exclusively designed mount bracket.

• As necessary, audio input cable, audio output cable, alarm I/O cables, power supply cable

minimum pull-out strength, refer to our support website <Control No.: C0120>.

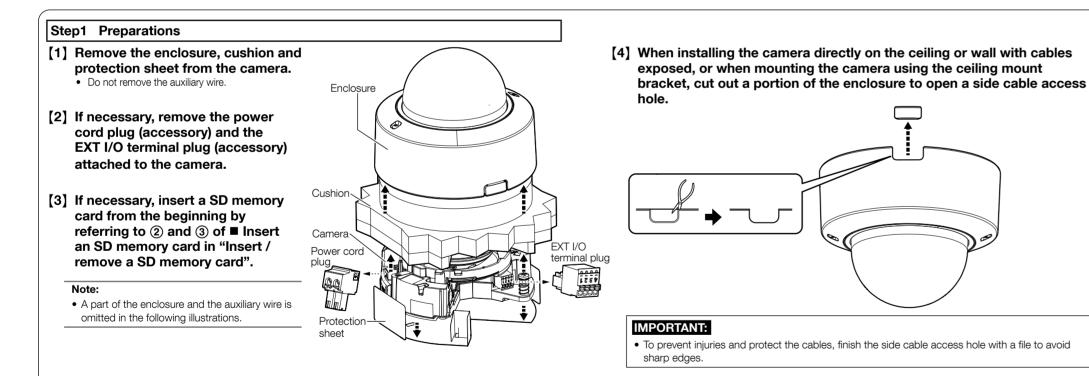


TELE button

WIDE button

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

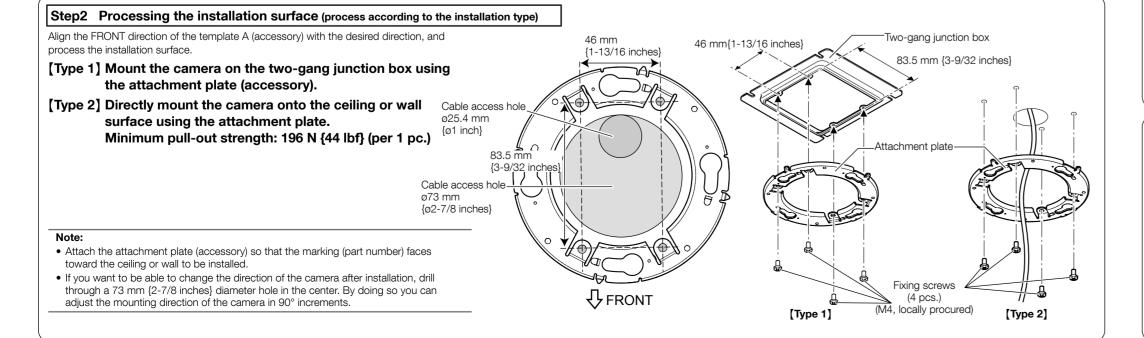
Click the WIDE button to adjust the zoom ratio to the "Wide" side.



SD slot

AF buttor

SD ON/OFF button



[3] If needed, connect a microphone or the line out of an external device to the audio input terminal. Devices to which power can be supplied to this product are PoE hub. PoE power supplying equipment. and external 12 V DC power supply [4] If needed, connect a powered speaker to the audio output terminal. • Turn off each system's power supply before making a connection [2] Example of audio [3] [4] [1] 30 mm • This camera can change the audio output to the monitor output. Refer to the Operating Instructions for 1-3/16 inches} information about changing the audio output. [5] If needed, connect the alarm I/O cables to the EXT I/O terminal plug (accessory). Straight section 17 mm {21/32 inches ① Remove 8 mm - 9 mm {5/16 inches - 11/32 inches} of the outer jacket of the cable and twist the cable 9 mm {11/32 inches} core to prevent the short circuit first

- [1] Connect an Ethernet cable to the RJ45 network terminal
- [2] When connecting an AC adaptor or an external power supply, use the power cord plug (accessory) to connect it to the camera.

Example of Ethernet

{1-9/16 inches}

- ① Strip 3 mm to 7 mm {1/8 inches to 9/32 inches} from the end of the output able of the AC adaptor wist the stripped part of the wire sufficiently to avoid short circuit. When connecting an external power supply to the camera, use the 16 AWG to 24 AWG singlewired or
- 2 Loosen the screw of the power cord plug and then insert the output cable of the AC adaptor into the
- (3) Tighten the screw of the power cord plug. (Recommended tightening torque: 0.34 N·m {0.25 lbf·ft}) 4 Attach the power cord plug to the Power supply terminal (12 V DC) of the camera.
- power cord plug
- Check whether the stripped part of the wire is not exposed and is securely connected.

Straight section

0 mm {1-3/16 inches}

13 mm {1/2 inches}

• The default of EXT I/O terminals is "Off"

• Do not connect 2 wires or more directly to a terminal.

When it is necessary to connect 2 or more wires, use a splitter

Refer to the Operating Instructions for further information about the EXT I/O terminal settings.

Specification of cable (wire): 20 AWG - 26 AWG. Single core, twisted

3 Connect the EXT I/O terminal plug to the EXT I/O terminal of the camera.

2) Push down the button of the desired terminal on the EXT I/O terminal plug with a ballpoint pen, and

ALARM IN3 (Alarm input3 / AUX output)

ALARM IN2 (Alarm input2 / Alarm output)

release the button when the cable of the external device is fully inserted into the terminal hole.

Step4 Mount the camera

stranded wired cables

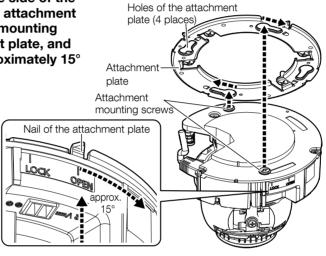
Step3 Making connections

IMPORTANT:

[1] Align the OPEN mark of the side of the camera with the nail of the attachment plate, insert 2 attachment mounting screws into the attachment plate, and rotate the camera by approximately 15° and temporarily fix it.

IMPORTANT:

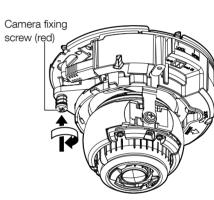
• When mounting to a wall, mount so that 介TOP mark of the camera faces up



the camera fixing screw (red). Recommended tightening torque: 0.78 N·m

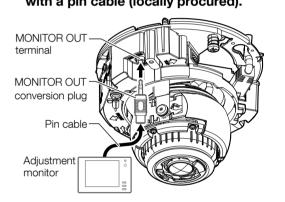
{0.58 lbf·ft}

EXT I/O terminal plug



[2] Secure the camera by tightening [3] Connect the MONITOR OUT conversion plug (accessory) to the MONITOR OUT terminal of the camera, and then connect the monitor for adjustment with a pin cable (locally procured).

ALARM IN1 (Alarm input1 / Black & white input / Auto time adjustment input)



Step5 Adjustment

[1] Turn on the power for the camera and remove the protection file from the lens.

[2] Adjust the camera direction.

- 1 Loosen the PAN table fixing screw and the cross-head side of TILT table fixing screw (on one side)
- 2 Adjust the angle of the camera while watching the adjustment Horizontal (PAN) angle: ±180°

Vertical (TILT) angle: Azimuth (YAW) angle: ±100°

- When mounting the camera on a wall, adjust after rotating the PAN table by 180° to the left.
- When using the camera at a vertical position where the camera lens is nearly horizontal, part of the image may appear to be overlapped, part of the camera may be visible, and reflection from IR rays may appear on the screen when viewing images at night. To prevent this, decrease the vertical position angle or adjust the zoom ratio.
- 3) Fix the camera unit by tightening the cross-head side of TILT table fixing screw (on one side) and the PAN table fixing screw Recommended tightening torque: 0.59 N·m {0.44 lbf·ft}

[3] Adjust the zoom and focus.

- · Adjust the zoom ratio using the TELE button or the WIDE button, and adjust the focus by pressing the AF (auto focus) button while watching the screen.
- Readjust the angle of the camera with the PAN table, TILT table, and azimuth adjustment ring if necessary.

• When the resolution is set to higher than 640×360, image quality may deteriorate depending on the zoom ratio. Refer to our support website < Control No.: C0124> for further information.

PAN table TILT table fixing screw

fixing screw Horizontal (PAN) angle

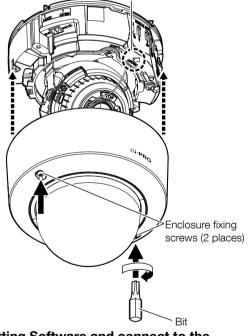
-WIDE button TELE button -AF button

angle

[4] Disconnect the MONITOR **OUT** conversion plug (accessory). Attach the enclosure and secure it by using a bit (accessory) to tighten the enclosure fixing screws (2 places).

Attach the enclosure by aligning the i-PRO logo to the direction marker (FRONT♣) on the camera. Recommended tightening torque: 0.59 N·m {0.44 lbf·ft}

[5] After complete installation, remove the protection film from the dome cover.



"FRONT ₽

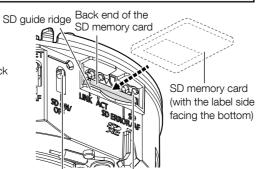
- [6] Download and launch the IP Setting Software and connect to the network by following information described on our support website <Control No.: 0123>.
- [7] Refer to the Operating Instructions and perform the auto focus function from the setup menu.

Insert / remove an SD memory card

■ Insert an SD memory card

- (1) Remove the enclosure from the camera 2 Insert the SD memory card into the end of the SD
- slot and confirm that a clicking sound is made. 3 Take your fingers off the SD memory card and check that its back end of SD memory card does not
- protrude over the upper part of the SD guide rib. (4) 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.) **(5)** Attach the enclosure to its original position.



SD (MOUNT) indicator

SD ON/OFF button

■ 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.

· Before turning off the camera power switch, make sure that the SD (MOUNT) indicator is turned off.

- 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.