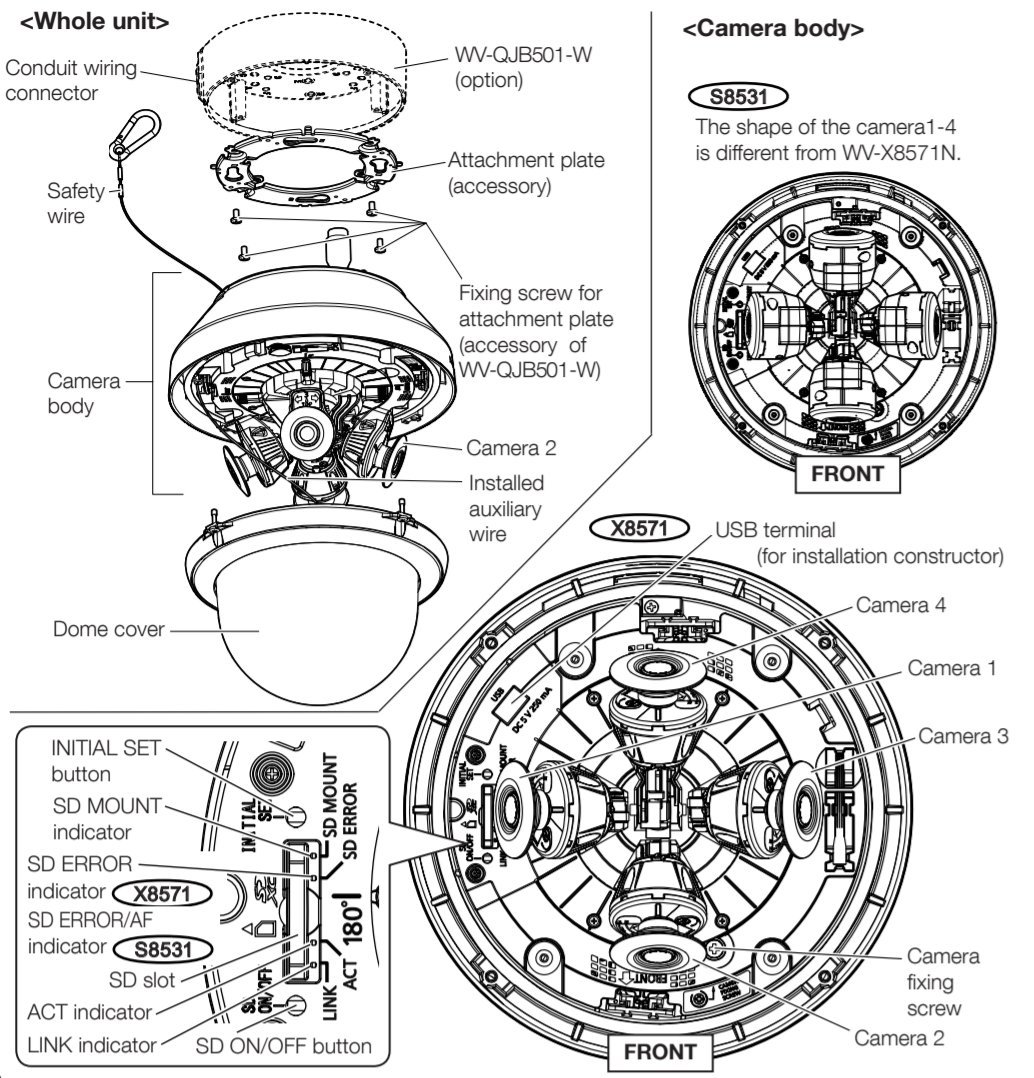


Parts and functions



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.

Indicator	When	Light
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)	(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
SD ERROR indicator (X8571)	When AF (Auto Focus) operation is being executed	Blinks red (Interval of 1 time/ second)
SD ERROR/AF indicator (S8531)	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 memory card after the camera has started	Lights red → Stays red

Buttons

- INITIAL SET button (Initializing)**
Follow the steps below to initialize the network camera. Retry if the camera does not start up normally.
- 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.

Step1 Processing the installation surface (process according to the installation type)

- Common**
- Attach the attachment plate (accessory) so that the marking (part number) faces toward the ceiling or wall to be installed.
- Junction box**
- Install the junction box on the installation surface.
 - Mount the attachment plate to the junction box.
Minimum pull-out strength: 539 N (121 lbf) (per 1 pc.)

Directly mount

- Drill a hole in the installation surface using template A (accessory). (4 screw holes / 2 cable access holes)
Note:
 - Make a hole so as to face the (FRONT) mark of the template to the front side of the camera (in the direction of i-PRO logo).
 - If you want to be able to change the direction of the camera after installation, drill through a 73 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.
- Install the attachment plate on the installation surface.
Minimum pull-out strength: 539 N (121 lbf) (per 1 pc.)

QJB501

- Make a hole on the installation surface using template B (accessory of WV-QJB501-W). (Screw holes (M4:4 places) / Cable access hole (1 place))
Note:
 - The cable access hole is unnecessary when using a conduit.
 - Select either of the two cable access holes of template B to proceed with the installation work.
 - Depending on the condition of the ceiling surface, five patterns of screw positions are available for fixation. Select a pattern from the following table and make holes.

	Vertical	Horizontal
A	85 mm (3-11/32 inches) (85.7 mm (3-3/8 inches))	85 mm (3-11/32 inches) (85.7 mm (3-3/8 inches))
B	138 mm (5-7/16 inches)	138 mm (5-7/16 inches)
C	83.5 mm (3-9/32 inches)	46 mm (1-13/16 inches)
D	63 mm (2-15/32 inches)	63 mm (2-15/32 inches)
E	Do not use Position E.	
F	70 mm (2-3/4 inches)	108.5 mm (4-9/32 inches)

- When using a conduit**
- Remove the cap for the female thread for the conduit using a 5 mm (3/16 inches) hexagon wrench and attach the conduit.
The female thread for conduit is compliant with ANSI NPSM (parallel pipe threads) 3/4 or ISO 228-1 (parallel pipe threads) G3/4.

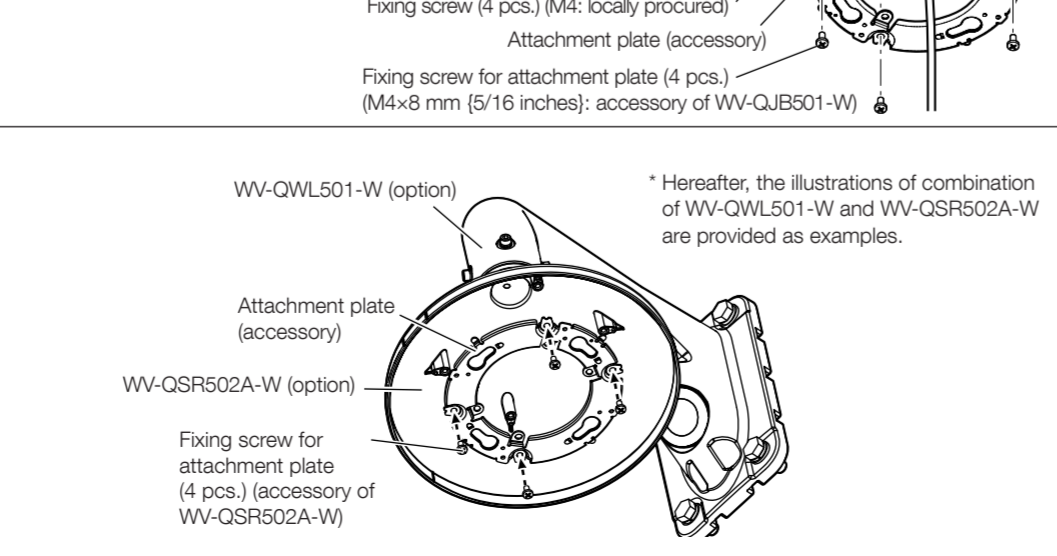
[2] Install WV-QJB501-W on the installation surface.

Minimum pull-out strength: 539 N (121 lbf) (per 1 pc.)

[3] Mount the attachment plate onto the base bracket.

Recommended tightening torque: 0.78 N·m (0.58 lbf·ft)

- IMPORTANT:**
- Installation work shall be such that there is no exposure to water into the architecture through the conduits having been joined.
 - If open wiring is conducted, be sure to use conduits and run the cables inside the tubes to protect the cables from direct sunlight.



QSR502

- Install on a wall or ceiling by combining WV-QSR502A-W (optional mount bracket) with WV-QWL501-W (optional wall mount bracket) or WV-QCL501-W (optional ceiling mount bracket).**
- Install the attachment plate (accessory) onto WV-QSR502A-W using the fixing screws for the attachment plate (4 pcs.) (accessory of WV-QSR502A-W).
Recommended tightening torque: 0.78 N·m (0.58 lbf·ft)
 - Fix at the installation place by combining each bracket.
- * Refer to the manual of each bracket for how to attach the bracket.

Step 2 Preparation for cable connection (X8571)

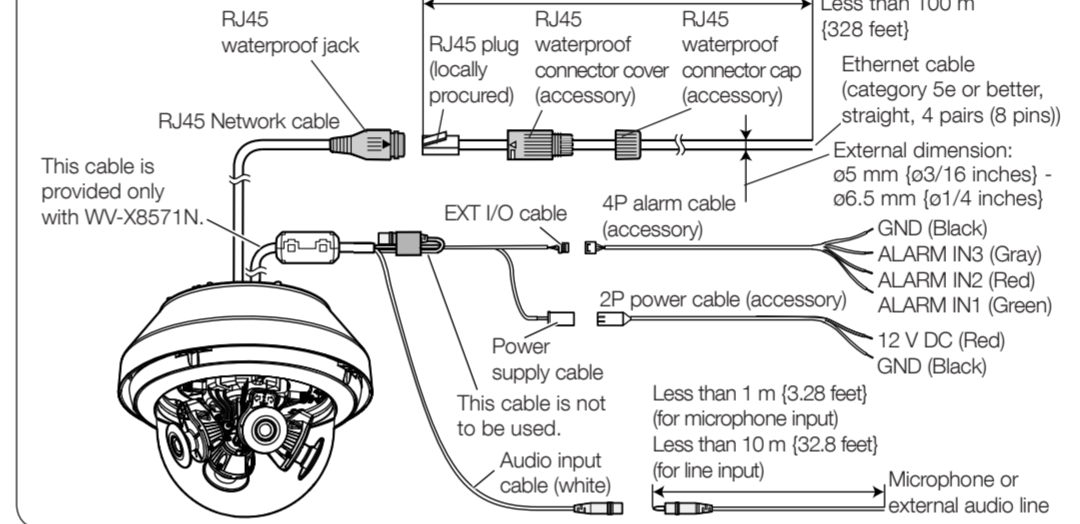
When using the power supply cable, the EXT I/O cable, or the audio input cable, remove the cable case fixed by 4 screws at the upper side of the camera and pull out the power supply cable, the EXT I/O cable, and the audio input cable stored inside.

Step 3 Fixing the brackets (Attach the safety wire)

- When using other than QSR502, attach the wire lug plate (accessory) on the ceiling by following the instructions below.
(When using QSR502, go to [2].)
- ① Bore a hole near the position where the camera is to be installed to fix the wire lug plate.
- * The illustration on the right shows the available range for fixing the wire lug plate for the camera installation.
- ② Fix the wire lug plate with an M6 bolt-nut or anchor (locally procured).
Minimum pull-out strength: 724 N (163 lbf)

Step 4 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 (X8571).
 - Turn off each system's power supply before making a connection.
 - Do not install the camera where the RJ45 waterproof connector is exposed to constant rain or moisture.



IMPORTANT:

- Alarm I/O cable / Audio input cable with the ferrite core (accessory) must be used for EMS (Electromagnetic Susceptibility). (Refer to the right illustration)

[2] Attach the safety wire to the wire lug plate.

- <When using other than QSR502 >**
- Attach the hook for the safety wire of the camera to the wire hook section of WV-QWL501-W (option).
- <When using QSR502 (When using WV-QWL501-W)>**
- Attach the hook for the safety wire of the camera to the wire hook section of WV-QSR502A-W (option).
- Note:**
- When using WV-QCL501-W (option), use the extended safety wire (accessory). Refer to the Operating Instructions of WV-QSR502A-W (option) for further information.
 - WV-QWL501-W is used as an example in the illustration.

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. (X8571)
 - 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 EXT I/O cable, power supply cable, and audio input cable. (X8571)

- IMPORTANT:**
- 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 3 types of cables, even if they are not used, waterproofing treatment must be performed on the connector parts.
- Refer to "Specifications" on the back for further information about each connector.

Step 5 Mount the camera

- Align fixing screws for attachment plate (4 places) at the bottom of the camera with the holes in the attachment plate (accessory), and mount the camera.
Align the center of the i-PRO logo on the camera with the "I" mark on the left side of the WV-QSR502A-W (option) and insert the camera. Then, temporary fix the camera by rotating it around 15° to the "I" mark on the right.
- Loosen 4 dome cover fixing screws using the bit (accessory), and remove the dome cover from the camera.
IMPORTANT:
 - Dome cover is fixed to the camera body by the installed auxiliary wire, so please do not remove it.
 - The dome cover is not fixed temporarily. Take care not to hit the dome cover against periphery
- Remove the protective packagings (2 pcs.) from the camera units.

[4] Shift camera 2 to the arrow direction by 2 scales (30°) shown on the illustration on the right by referring to <How to adjust the horizontal (PAN) angle> on the back of the leaflet "How to adjust the angle of view".

[5] Put camera 2 back to the original position after fixing the camera using the camera fixing screw.

- 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)

[6] If necessary, insert an SD memory card by referring to "Insert / remove an SD memory card".

[7] Adjust the camera by referring to the leaflet "How to adjust the angle of view".

[8] Attach the dome cover and fix it by tighten the dome cover fixing screws (4 places) using the bit (accessory).

- IMPORTANT:**
- Be sure to tighten the dome cover fixing screws in diagonal pattern. Recommended tightening torque: 1.37 N·m (1.01 lbf·ft)
 - Attach the dome cover straight to the camera main unit. When it is attached inclined, the inside of the dome cover may contact the camera unit and cause deviation of the set angle of view.
 - Arrange the installed auxiliary wire so that it is not pinched when installing the dome cover. Otherwise, the waterproofing performance may be compromised.
 - Make sure that dirt or dust is not adhered to the lens of each camera unit and inside the dome cover.

[9] Remove the protection sheet from the dome cover.

[10] Connect to the network by following information described on our support website <Control No.: C0123>.

Insert / remove an SD memory card

- Insert an SD memory card**
 - Remove the dome 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 rear end of SD memory card does not protrude over the upper part of the SD guide rib.
 - 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.)
 - Attach the dome 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.
- 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.