



## i-PRO WV-S3531L Network Camera Installation Guide

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**i-PRO WV-S3531L Network Camera**



## Product Information

The Network Camera is available in various models including WV-S3531L, WV-S3511L, WV-S3131L, WV-S3111L, WV-S3532LM, and WV-S3512LM. It is manufactured by i-PRO Americas Inc. for the US and Canada and by i-PRO Co., Ltd. for Europe and other countries.

The product is equipped with an ethernet or PoE network for easy installation without routing to the outside plant. The device complies with Part15 of the FCC Rules and has a model number and serial number for identification purposes.

## Product Usage Instructions

1. Read and keep the installation guide provided.
2. Refer to the included installation instructions for proper setup.
3. Connect the camera to an ethernet or PoE network.
4. Use only attachments/accessories specified by the manufacturer.
5. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus to avoid injury from tip-over.
6. Unplug the camera during lightning storms or when unused for long periods of time.
7. Refer all servicing to qualified service personnel.
8. Before requesting service, refer to Troubleshooting of Important Information in the CD-ROM and Operating Instructions on our support website. Then, confirm the trouble.

## 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.

### **S3131 S3111**

6. Clean only with dry cloth.

### S3131 S3111

7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Only use attachments/accessories specified by the manufacturer.  
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.



9. Unplug this apparatus during lightning storms or when unused for long periods of time.
10. 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 “Troubleshooting” of Important Information in the CD-ROM and Operating Instructions on our support website. Then, 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 we shall not respond to any inquiries regarding the contents of the source code.

### 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.

### S3131 S3111

- The apparatus should not be exposed to dripping or splashing.

### S3131 S3111

- 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:

- The network camera is only intended for a connection to an ethernet or PoE network without routing to the outside plant.

### For Canada

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

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.

**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.

This device complies with Part 15 of the FCC Rules.

### 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.

## Supplier's Declaration of conformity

### FCC

Trade name : i-PRO

Model No. : WV-S3531L, WV-S3511L WV-S3131L, WV-S3111L WV-S3532LM, WV-S3512LM Responsible Party : i-PRO Americas Inc.

8550 Fallbrook Drive, Suite 200 Houston, Texas 77064


Support Contact : 1-800-513-5417

 : Direct current 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 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.

**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.

- **S3531**: The functions with this notation are available when using the model WV-S3531L.
- **S3511**: The functions with this notation are available when using the model WV-S3511L.
- **S3131**: The functions with this notation are available when using the model WV-S3131L.
- **S3111**: The functions with this notation are available when using the model WV-S3111L.
- **S3532**: The functions with this notation are available when using the model WV-S3532LM.
- **S3512**: The functions with this notation are available when using the model WV-S3512LM.

**XXXXX** : Outdoor model **XXXXX** : Indoor model

**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.
- Important Information (included in the CD-ROM): Provides basic information about this product such as Precautions for installation, Parts and functions, etc..
- Operating Instructions (on our support website): Explains how to perform the settings and how to operate this product.

**Note:**

- 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.
- “<Control No.: C\*\*\*\*>” used in this document should be used to search for information on our support website and will guide you to the right information.

**Standard accessories**

- Installation Guide (this document) ..... 1 pc.
- IMPORTANT SAFETY INSTRUCTIONS ..... 1 pc.
- COROM\*1 ..... 1 pc.
- Code label\*2..... 1 pc.

1. \* The CD-ROM contains the several kind of operating instructions and different kinds of tool soft-ware programs.
2. \*This label may be required for network management. Use caution not to lose this label.

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

- Template ..... 1 pc.  
S3531 S3511 S3532 S3512  
Bit (Hex wrench,
- screw size 6.35 mm {1/4 inches} T10) ..... 1 pc.  
S3531 S3511
- RJ45 waterproof connector cover ..... 1 pc.
- RJ45 waterproof connector cap ..... 1 pc.  
S3532 S3512
- Cable guard ..... 1 pc.
- Lens adjuster ..... 1 pc.  
\* Lens adjuster is used only at the time of servicing.

**Preparations**

Other items that are needed (not included)

- The following are methods for installing a camera to a ceiling or wall Prepare the required parts for each installation method before starting the installation. The following are the requirements for the various installation methods.

Installation method	Mounting screws / anchor bolts
When directly installing a camera to a ceiling or wall	M4 / 3 pcs.
When installing to a junction box or other part. S3531 S3511 S3532 S3512 * When installing the junction box cover (locally procured), prepare a locally procured metal cover according to the shape of the junction box.	M4 / 2 pcs.

**IMPORTANT:**

- When replacing existing models (WV-SFV130/WV-SFV110/WV-SW155/WV-SW158) and installing to a one-gang junction box, take care because the direction of the camera will change 90° to the side.  
**S3531 S3511 S3532 S3512**  
The minimum required pull-out capacity of a single screw or anchor bolt is 196 N {44 lbf} or more.
- 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.

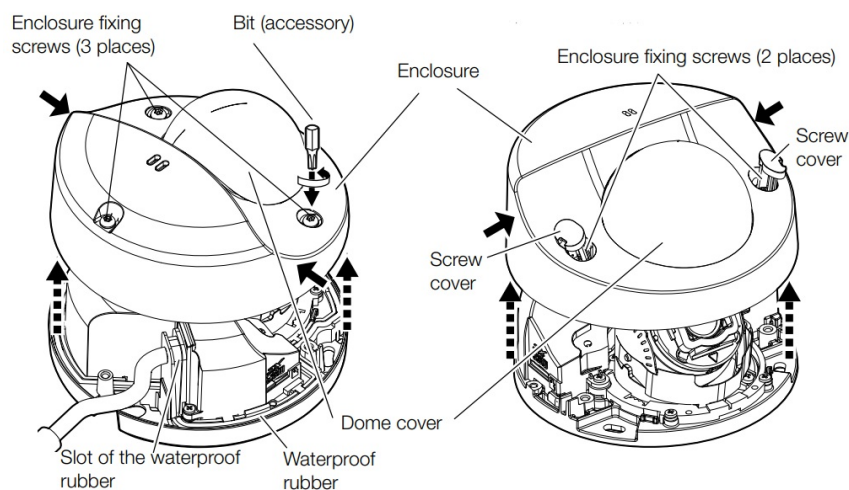
### Removing the enclosure

S3531 S3511 S3532 S3512

1. Using the bit (accessory), loosen the enclosure fixing screws (3 places).
2. Hold the both sides of the enclosure and remove it.
3. Remove the packaging from the inside of the dome cover.

### S3131 S3111

1. Use a flathead screwdriver to open the screw cover (2 places), and then use a Phillips screwdriver to loosen the enclosure fixing screws (2 places).
2. Hold down on both sides of the enclosure and remove it.
3. Remove the packaging from the inside of the dome cover



### Note:

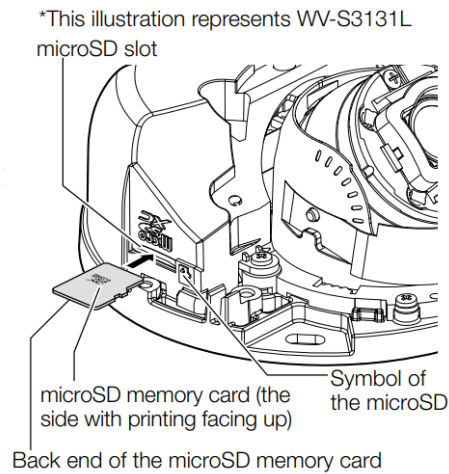
- After the installation is completed, do not remove the cover film from the dome cover until attaching the enclosure.
- Because the cable part and the slot for the waterproof rubber are engaged, it may be difficult to take off the enclosure. S3531 S3511 S3532 S3512

### Inserting a microSD memory card

Follow the steps below to insert the microSD memory card if necessary.

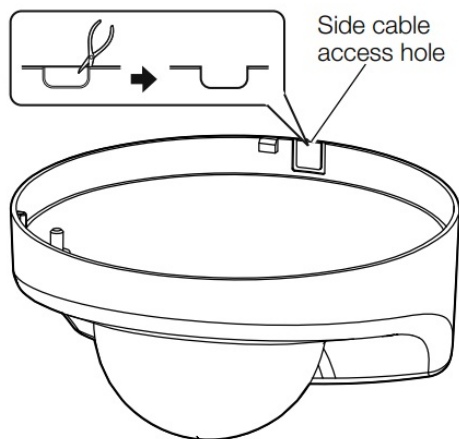
1. Insert the microSD memory card into the microSD slot with the side with printing facing up.
  2. Insert the microSD memory card into the end of the microSD slot and confirm that a clicking sound is made.
  3. After confirming a clicking sound is made take your fingers off the microSD memory card and ensure that its back end does not protrude over the surface of the microSD slot (the same surface as the microSD symbol).
- \* For information about inserting and removing microSD memory cards, refer to the Important Information on

the provided CD-ROM.



### Processing of side cable access hole S3131 S3111

When installing the camera directly on the ceiling or wall with cables exposed, cut out a portion of the enclosure to open a cable access hole on the side of the enclosure, and then pass the cables through the side of the enclosure.



### IMPORTANT:

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

### Installation

The installation tasks are explained using 6 steps.

#### • Step1

Processing the ceiling or wall

#### • Step2

⇒ Making connections

#### • Step3

⇒ Mount the camera

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

#### • Step4

Configure the network settings

#### • Step5



⇒ Adjustment

- **Step6**

⇒ Attach the enclosure

## Processing the ceiling or wall

### (Connecting the cable through holes opened in the ceiling or wall)

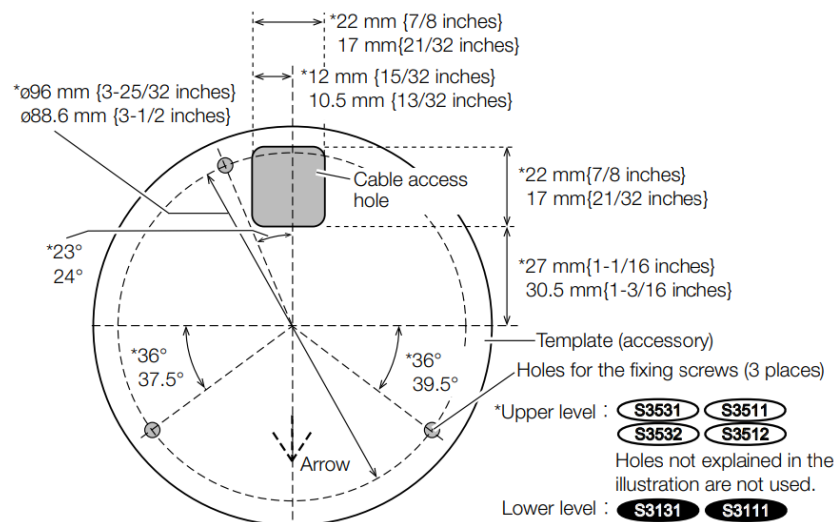
Place the template (accessory) on the ceiling or wall, mark the holes for the cable to be passed through and for the fixing screws (3 places), then open the holes.

### (Connecting the cable through the side cable access hole)

Place the template (accessory) on the ceiling or wall, mark the holes for the fixing screws (3 places), then open the holes.

## IMPORTANT:

- Turn off each system's power supply (PoE hub, etc.) before starting the installation.
- Perform waterproofing so that there is no exposure to water into the architecture through the \*23°holes for the camera fixing screws or hole for wiring. S3531 S3511 S3532 S3512 24°



## Note:

- Use the template (accessory) with the side with the arrow facing you.

### Ceiling installation:

Place the template so that the arrow is pointing to the front of the camera (the lens side). Wall installation:

Place the template so that the arrow is pointing down.

- No processing for the ceiling or wall is required when installing the camera to an existing junction box. S3531 S3511 S3532 S3512

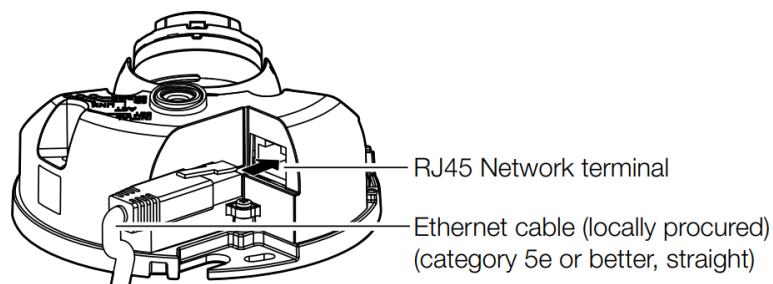
## Making connections

### S3131 S3111

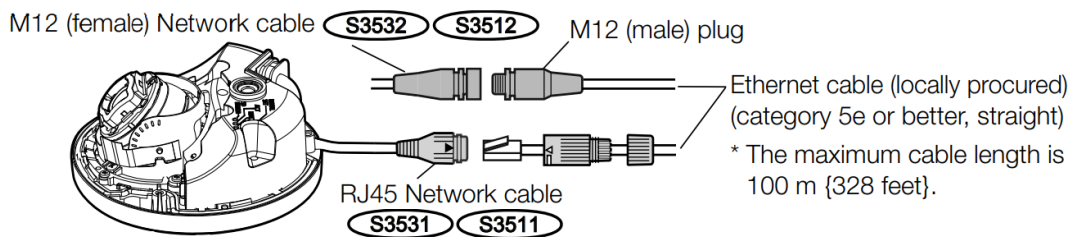
Connect an Ethernet cable to RJ45 network terminal.

## IMPORTANT:

- The maximum cable length is 100 m {328 feet}.



## S3531 S3511 S3532 S3512

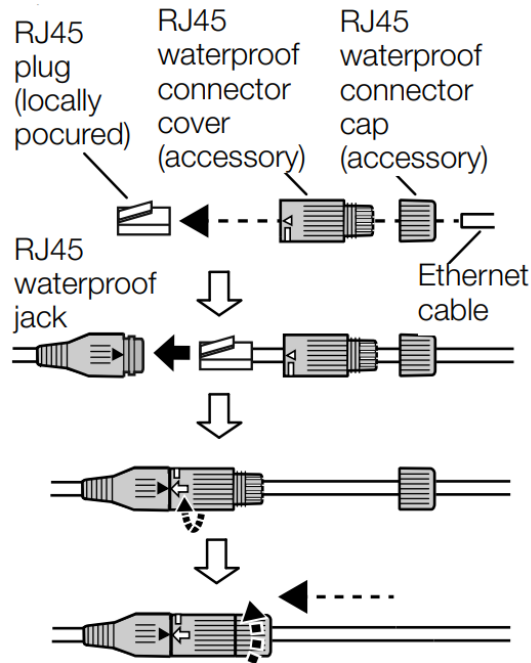


Connect an Ethernet cable (category 5e or better, straight) to RJ45 network cable.

- First pass the Ethernet cable through the RJ45 waterproof connector cap (accessory) and then through the RJ45 waterproof connector cover (accessory). Next, use a specialized tool (locally procured) to crimp the RJ45 plug (locally procured) to the end of the Ethernet cable.
- Take care not to remove the rubber parts from inside the RJ45 waterproof connector cover.
- Insert the RJ45 plug into the RJ45 waterproof jack connected to the camera.
- Connect the RJ45 waterproof connector cover to the RJ45 waterproof jack and then rotate the RJ45 waterproof connector cover until the “⇐” marks align.
- Connect the RJ45 waterproof connector cap to the RJ45 waterproof connector cover and rotate the RJ45 waterproof connector cap until there is no gap between it and the RJ45 waterproof connector cover.

## IMPORTANT:

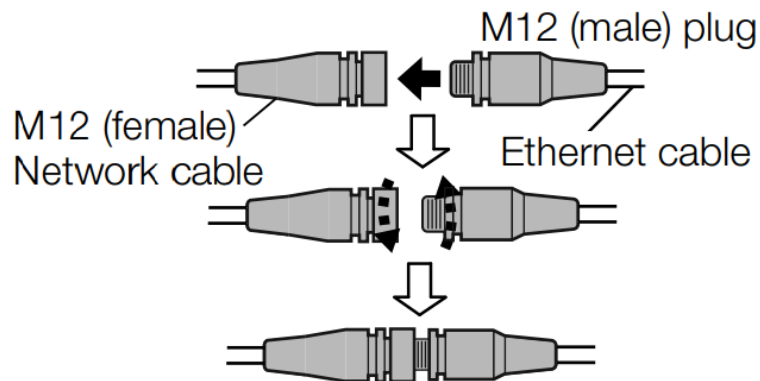
- The external dimensions of the Ethernet cable are from  $\varnothing 5$  mm { $\varnothing 3/16$  inches} to  $\varnothing 6.5$  mm { $\varnothing 1/4$  inches}.
- If the procedure for the RJ45 waterproof connector (accessory) part is not correctly followed, the waterproofing may be compromised. Do not install the camera where the RJ45 waterproof connector is exposed to constant rain or moisture.
- When removing the RJ45 waterproof connector, be sure to loosen the RJ45 waterproof connector cap first, rotate the RJ45 waterproof connector cover in the direction opposite to the attaching direction, and remove it. (If the RJ45 waterproof connector cover is removed when the “⇐” mark of the RJ45 waterproof connector cover is aligned with the “▶” mark of the RJ45 waterproof jack, the RJ45 waterproof jack may be damaged)



### S3532 S3512

Connect an Ethernet cable (category 5e or better, straight) to M12 (female) network cable.

- Insert the M12 plug into the M12 Network cable connected to the camera.
- Tightly fasten the connector by rotating both rings in opposite directions



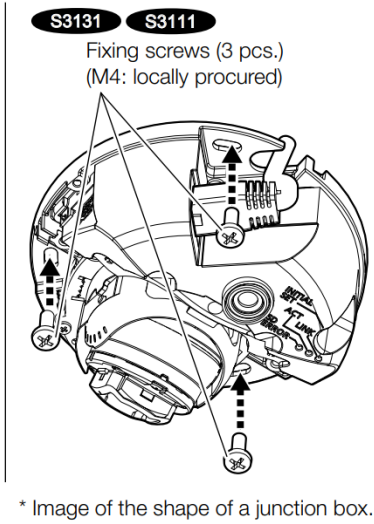
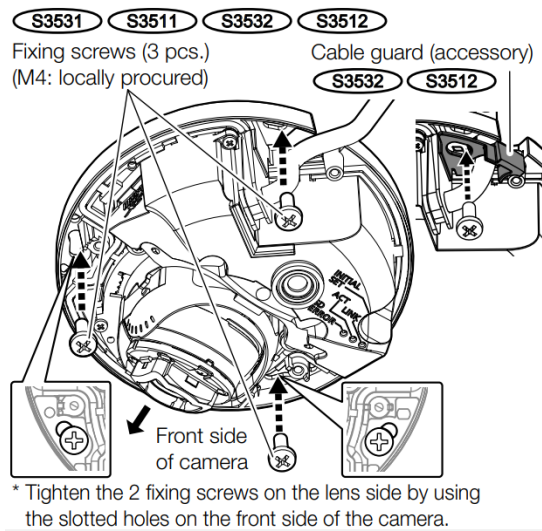
### Mount the camera

- Installing the camera directly on the ceiling or wall
- Secure the camera with fixing screws (3 pcs.) (M4:locally procured).
- The minimum required pull-out capacity:196 N {44 lbf} /single screw
  - \* When the camera is installed on a ceiling or wall and you open a whole to pass cables through the rear of the camera, use a cable guard (accessory) so that the cables are not visible from the outside. When fi xing the camera to the ceiling or wall, also tighten the cable guard.

### S3532 S3512

### IMPORTANT:

- Do not touch the lens.
- When tightening the screws (locally procured), be careful to ensure that the fixing screws does not tangle the cable.



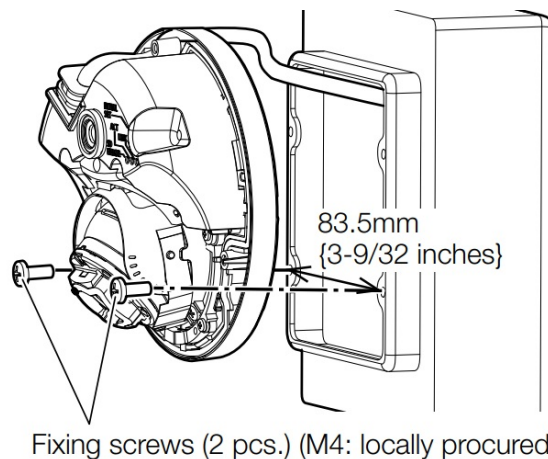
### Using a two-gang junction box

S3531 S3511 S3532 S3512

Install the camera to the two-gang junction box using screws (2 pcs.) (M4: locally procured).

### IMPORTANT:

- Prepare the fixing screws (2 pcs.) (M4: locally procured) according to the specifications of screw holes of the two-gang junction box to be used.



After the camera is secured, connect power to the system. (power from a PoE hub, etc.)

### Configure the network settings

Download and start [IP Setting Software] <Control No.: C0123> or [i-PRO Configuration Tool (iCT)] <Control No.: C0133> on our technical information support site

([https://i-pro.com/global/en/surveillance/training\\_support/support/technical\\_information](https://i-pro.com/global/en/surveillance/training_support/support/technical_information)), and connect to the network.

### Adjustment

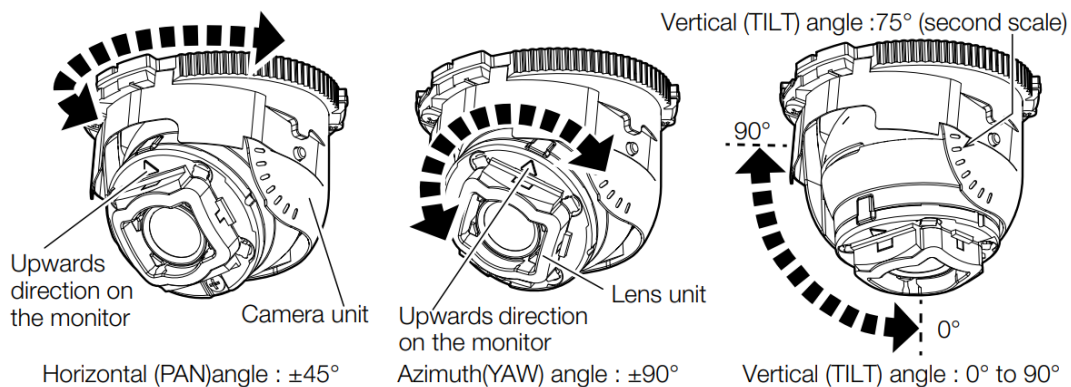
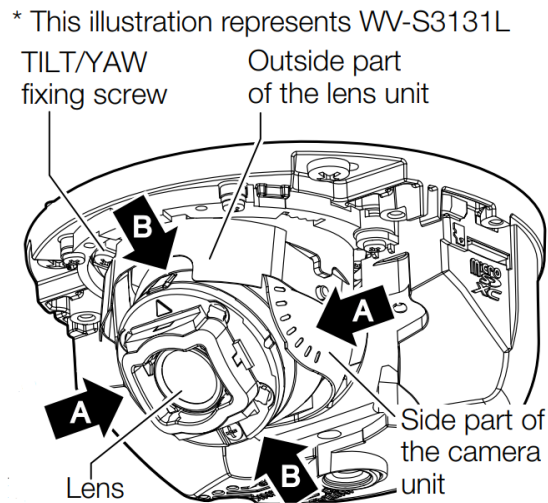
Adjust the camera's angle of view

- Adjust the horizontal (PAN) angle by pinching the side parts of the camera unit (A).
- Adjust the azimuth (YAW) angle and vertical (TILT) angle.  
A Loosen the TILT/YAW fixing screw.

### IMPORTANT:

TILT/YAW fixing screw can be effective by loosening it about 1 turn. Do not unscrew it more than necessary.

- Adjust the azimuth (YAW) angle and vertical (TILT) angle by pinching the outside parts of the lens unit (B).
- Fix each part by tightening the TILT/YAW fixing screw. Recommended tightening torque: 0.2 N·m {0.15 lbf·ft}



### IMPORTANT:

- When adjusting the camera angle, do not touch the lens.

### Note:

- When the camera is installed on a wall, the gradient viewed from the camera is backwards. Images displayed from the camera can be reversed by setting "Image rotation" to "180° (Upside-down)" in the setup menu. For information about configuring "Image rotation" in the setup menu, refer to the Operating Instructions on our support website.  
Depending on the horizontal / vertical angle, the top, bottom, left, or right ends of the camera may be visible.
- Use Extra zoom when you want to adjust the angular field of view on the "Tele" side. For information about configuring "Extra zoom", refer to the Operating Instructions on our support website.
  - When VGA (640×480) or a lower resolution is selected, the angular field of view can be adjusted without deterioration in the image quality.
  - When a resolution higher than VGA is used, image quality may deteriorate depending on the zoom rate

of the Extra zoom.

- When a strong light shines on the front of the camera, part of the lens may be reflected on the inside of the dome cover and be visible in images. Adjust the camera angle so that there are no reflections.

When viewing images at night using IR LED, parts of the screen may be dark if the TILT is 75° or more (Azimuth (YAW) angle : 0°, factory setting position).

For image example and detail information, refer to our website

([https://i-pro.com/global/en/surveillance/training\\_support/support/technical\\_information](https://i-pro.com/global/en/surveillance/training_support/support/technical_information) < Control No.:C0118>).

- For information about displaying vertically long images, refer to our website

([https://i-pro.com/global/en/surveillance/training\\_support/support/technical\\_information](https://i-pro.com/global/en/surveillance/training_support/support/technical_information) < Control No.:C0119>).

## **Attach the enclosure**

S3531 S3511 S3532 S3512

### **Attach the enclosure**

1. Attach the enclosure matching the dome cover side of the enclosure and the camera front (★-mark in the illustration below) so that the camera unit is covered by the dome cover.
2. Attach the enclosure to the camera by using the bit (accessory) to tighten the enclosure fixing screws (3 places).

### **IMPORTANT:**

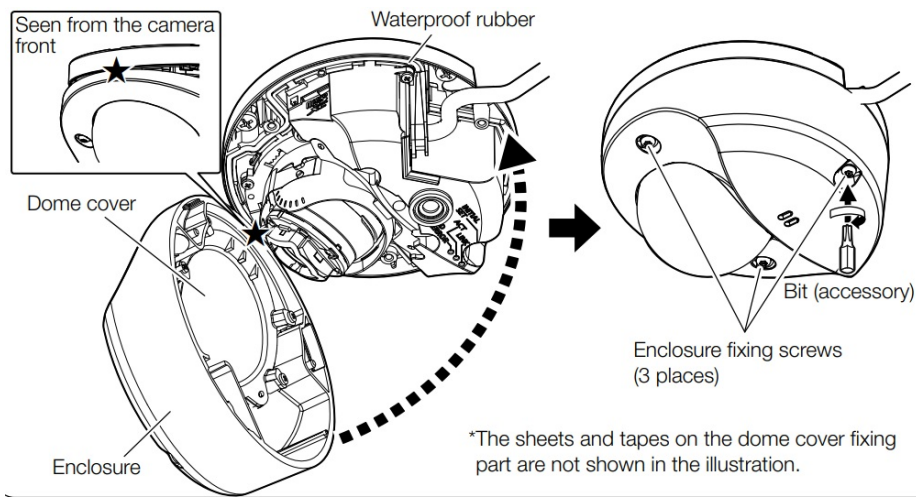
- Check that the waterproof rubber installed in the slot around the camera does not slide out of the slot, and then mount the enclosure.
- If the enclosure is attached keeping it parallel to the camera body, the inside of the dome cover may collide with the camera unit and cause deviation of the set angle of view.
- Securely tighten fixing screws (3 places) of enclosure. Otherwise, water exposure may cause damage or malfunction of camera, or enclosure dropping may result in injury.

Recommended tightening torque: 0.8 N·m {0.59 lbf·ft}

### **Remove the cover film from outside of the dome cover.**

### **IMPORTANT:**

- After removing the cover film, do not touch the dome cover with your hands.



### S3131 S3111

#### Attach the enclosure

1. Attach the enclosure matching the dome cover side of the enclosure and the camera front (★-mark in the illustration below) so that the camera unit is covered by the dome cover.
2. Tighten the fixing screws of the enclosure (2 places) with a Phillips screwdriver.
3. Close the screw cover.

#### IMPORTANT:

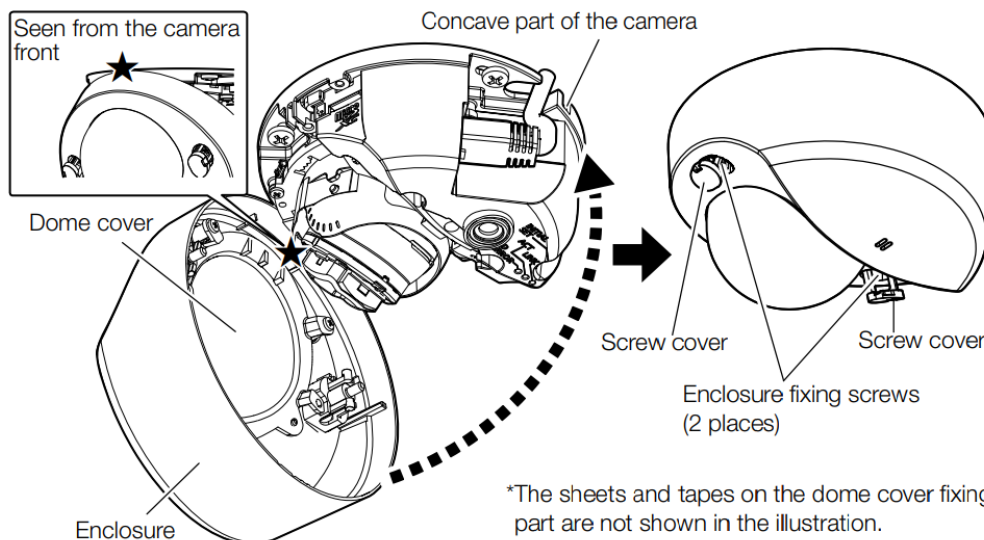
- If the enclosure is attached keeping it parallel to the camera body, the inside of the dome cover may collide with the camera unit and cause deviation of the set angle of view.
- Securely tighten fixing screws (2 places) of enclosure.  
Otherwise, the enclosure of the camera dropping may result in injury.  
Recommended tightening torque: 0.4 N·m {0.3 lbf·ft}

Remove the cover film from outside of the dome cover.

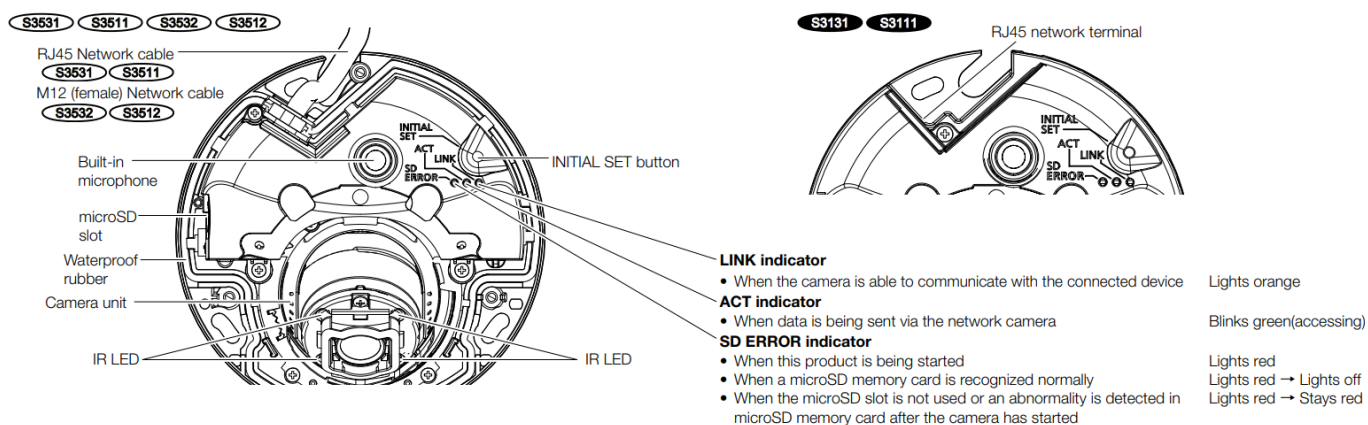
#### IMPORTANT:

- After removing the cover film, do not touch the dome cover with your hands.





## Parts and functions



## Documents / Resources

	<p><b><a href="#">i-PRO WV-S3531L Network Camera</a> [pdf] Installation Guide</b></p> <p>WV-S3531L, WV-S3511L, WV-S3131L, WV-S3111L, WV-S3532LM, WV-S3512LM, WV-S3531 L Network Camera, WV-S3531L, Network Camera, Camera</p>
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## References

- [i-PRO](#)
- [Surveillance | i-PRO Products](#)
- [Documentation Database](#)
- [i-PRO](#)