WISENET

NETWORK CAMERA

User Manual

QND-7012R/7022R/7032R/7082R
QNV-6014R/7012R/7022R/7032R/6084R/7082R
QNO-6014R/7012R/7022R/7032R/6084R/7082R

CE

Network Camera
User Manual

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※ **Design and specifications are subject to change without prior notice.**

※ **The initial administrator ID is "admin" and the password should be set when logging in for the first time.**
Please change your password every three months to safely protect personal information and to prevent the damage of the information theft.
Please, take note that it's a user's responsibility for the security and any other problems caused by mismanaging a password.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean the contaminated area on the product surface with a soft, dry cloth or a damp cloth.
   (Do not use a detergent or cosmetic products that contain alcohol, solvents or surfactants or oil constituents as they may deform or cause damage to the product.)
7. Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. 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.

13. Unplug this apparatus during lighting storms or when unused for long periods of time.
14. 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.
15. This product is intended to be a Listed Power Supply Unit marked "Class2" or "LPS" and rated from 12Vdc, 0.8A or PoE(48V), 0.24A. (QNV-7082R, QNO-7082R)
16. This product is intended to be a Listed Power Supply Unit marked "Class2" or "LPS" and rated from 12Vdc, 0.64A or PoE(48V), 0.18A. (QND-7082R)
17. This product is intended to be a Listed Power Supply Unit marked "Class2" or "LPS" and rated from 12Vdc, 0.76A or PoE(48V), 0.23A. (QNV-7012R/7022R/7032R, QNO-7012R/7022R/7032R)
18. This product is intended to be a Listed Power Supply Unit marked "Class2" or "LPS" and rated from 12Vdc, 0.6A or PoE(48V), 0.17A. (QND-7012R/7022R/7032R)
19. This product is intended to be a Listed Power Supply Unit marked "Class2" or "LPS" and rated from 12Vdc, 0.75A or PoE(48V), 0.23A. (QNV-6084R, QNO-6084R)
20. This product is intended to be a Listed Power Supply Unit marked "Class2" or "LPS" and rated from 12Vdc, 0.71A or PoE(48V), 0.21A. (QNV-6014R, QNO-6014R)
21. This product is intended to be supplied by isolation power.
22. If you use excessive force when installing the product, the camera may be damaged and malfunction.
    If you forcibly install the product using non-compliant tools, the product may be damaged.
23. Do not install the product in a place where chemical substances or oil mist exists or may be generated. As edible oils such as soybean oil may damage or warp the product, do not install the product in the kitchen or near the kitchen table.
    This may cause damage to the product.
24. When installing the product, be careful not to allow the surface of the product to be stained with chemical substance.
    Some chemical solvents such as cleaner or adhesives may cause serious damage to the product's surface.
25. If you install/disassemble the product in a manner that has not been recommended, the production functions/ performance may not be guaranteed.
    Install the product by referring to "Installation & connection" in the user manual.
26. Installing or using the product in water can cause serious damage to the product.
27. Although a rapid change in temperature could cause frost inside the dome, there will be no problem with the video.

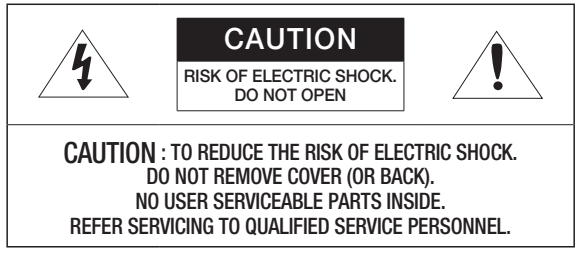
WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENNINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

To prevent injury, this apparatus must be securely attached to the Wall/ceiling in accordance with the installation instructions.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Class I construction

An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Battery

Batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

The battery cannot be replaced.

Disconnection Device

Disconnect the main plug from the apparatus, if it's defected. And please call a repair man in your location.

When used outside of the U.S., it may be used HAR code with fittings of an approved agency is employed.

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

ATTENTION

IL Y A RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE BATTERIE DE TYPE INCORRECT.
METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX INSTRUCTIONS.

These servicing instructions are for use by qualified service personnel only.
To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Please use the input power with just one camera and other devices must not be connected.

The ITE is to be connected only to PoE networks without routing to the outside plant.

The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802-3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1or PS2 as defined in UL62368-1.

Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building.

Please read the following recommended safety precautions carefully.

- Do not place this apparatus on an uneven surface.
- Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not place a glass of water on the product.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.
- Please wear protective gloves when installing/removing the camera.
  The high temperature of the product surface may cause a burn.

User's Manual is a guidance book for how to use the products.

The meaning of the symbols are shown below.

- Reference : In case of providing information for helping of product's usages
- Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction

※ Please read this manual for the safety before using of goods and keep it in the safe place.

We do not guarantee the quality of third-party products (e.g. lenses, accessories) that you separately purchase.

In particular installation environments, there might be interference in radio communications. When interference of electromagnetic waves occurs between the product and radio communication device, it is recommended to keep a certain distance between the two or change the direction of the receiving antenna.

WARNING

To Prevent damage which may caused by IR LED, don't stare at operating lamp.

For below models only.

QND-7012R/7022R/7032R/7082R
QNV-6014R/7012R/7022R/7032R/6084R/7082R
QNO-6014R/7012R/7022R/7032R/6084R/7082R

Risk Group 1
WARNING IR emitted from this product. **Do not stare at operating lamp.**
Product tested against IEC 62471

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RECOMMENDED PC SPECIFICATIONS

- CPU : Intel(R) Core(TM) i7 3.4 GHz or higher
- RAM : 8G or higher
- Recommended browser: Chrome
- Supported browsers: Chrome, Safari, Firefox, MS Edge(chromium based)
- Supported OS : Windows, Mac, Linux, Android, iOS, Chrome
- Verification environment
  - Windows 10: Google Chrome version 80 or later, Firefox version 72 or later, MS Edge version 83 or later
  - Mac 10.13/14: Safari version 11.0.1 or later

※ The video play performance of the web viewer depends on the performance of the user's CPU and GPU.

RECOMMENDED MICRO SD/SDHC/SDXC MEMORY CARD SPECIFICATIONS

- Recommended capacity : 16GB ~ 128GB(MLC type required)
- Recommended Manufacturers : SanDisk, Transcend
- Product Type : High endurance
- The compatibility varies depending on the card manufacturers and types.

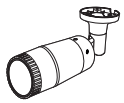
NAS RECOMMENDED SPECS

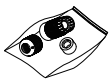
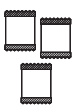
- Recommended capacity : 200GB or higher is recommended.
- For this camera, you are recommended to use a NAS with the following manufacturer's specs.

  Recommended products : QNAP NAS, Synology NAS

WHAT'S INCLUDED

Please check if your camera and accessories are all included in the product package.
(As for each sales country, accessories are not the same.)

Appearance	Item Name	Quantity	Description	Model Name
	Camera	1		QND-7012R/7022R/ 7032R/7082R
		1		QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
		1		QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Quick Guide (Optional)	1		QND-7012R/7022R/ 7032R/7082R, QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R, QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Template	1	Product installation guide	QND-7012R/7022R/ 7032R/7082R, QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R, QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Power Terminal Block	1	Plugged in the power plug	QND-7012R/7022R/ 7032R/7082R, QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R

Appearance	Item Name	Quantity	Description	Model Name
	L Wrench	1	Used to control the direction of the camera	QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Torx L wrench	1	Used to remove and replace the dome cover	QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Alarm cable	1	Used when connecting to an alarm	QND-7012R/7022R/ 7032R/7082R
	RJ45 waterproof accessory	1	Used to install in humid places	QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Sunshield	1	It protects the camera from the direct sunlight.	QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Sunshield Hold	1	It fixes the sunshield with the camera.	QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Card-type moisture absorbent	3	Attached when installed.	QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
		1		QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Power Cable	1	Used to plug into the power port	QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R

Appearance	Item Name	Quantity	Description	Model Name
	Audio/alarm cable	1	Used to connect with the audio and alarm port	QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Cable for the testing monitor	1	Used to test the camera connection to a portable display device	QND-7012R/7022R/ 7032R/7082R, QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R, QNO-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Cable Bushing	1	Used to connect the LAN cable	QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R
	Cap Installer	1	Used when connecting RJ45 cable	QNV-6014R/ 7012R/7022R/ 7032R/6084R/7082R

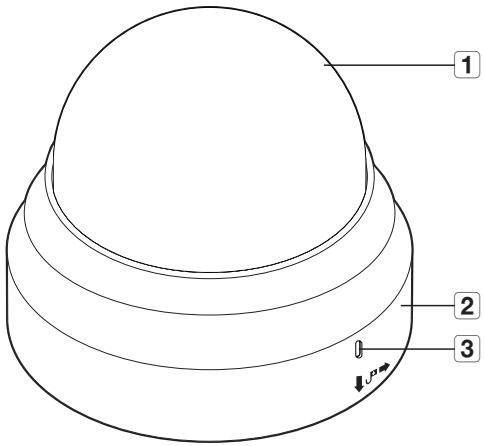
Optional Accessories for Installation

For your easier installation, you can purchase appropriate optional accessories available.

Model name	Hanging Mount	Back Box	Pole Mount	All
QNV-6014R/ 7012R/7022R/7032R	SBP-122HMW	SBV-120GW		SBP-300LMW (Parapet Mount)
QNV-6084R/7082R	SBP-301HMW2	SBV-136BW		SBP-300CMW (Ceiling Mount)
QND-7012R/7022R/7032R	SBP-300HMW7			SBP-300WMW1 (Wall Mount)
QND-7082R	SBP-122HMW			SBP-300NBW (Instalation Box)
QNO-6014R/7012R/7022R/ 7032R/6084R/7082R		SBO-100B1	SBP-302PM	SBP-300PMW (Pole Mount)
				SBP-300KMW (Corner Mount)

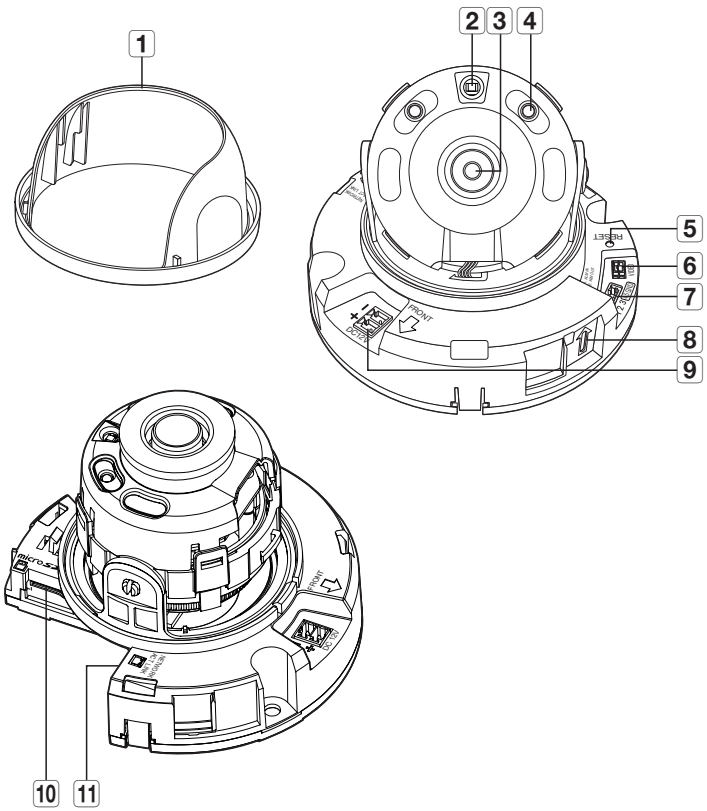
AT A GLANCE (QND-7012R/7022R/7032R)

Appearance



Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera Case	Housing part that covers the camera body.
3 Microphone hole	Microphone is embedded.

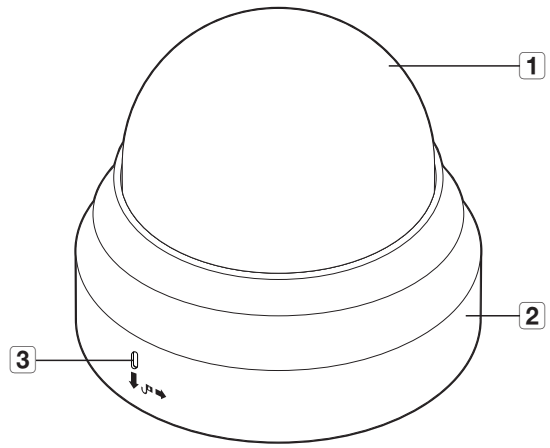
Components



Item		Description	
1	Inside cover	Protective cover for the main body.	
2	Illumination Sensor	Detects incoming light to control the IR LED.	
3	Lens	Lens for the camera.	
4	IR LED	These infrared LED's are controlled by the illumination sensor.	
5	Reset Button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. ! If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the Device Manager program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.	
6	Test monitor out port	Output port for test monitoring the video output. Use the test monitor cable to connect to a mobile display and check the test video.	
7	Alarm I/O Port	ARM-IN	Used to connect the alarm input sensor or external day/night sensor.
		ARM-OUT	Used to connect the alarm output signal.
		GND	These are common ports to connect alarm input/output signals.
8	Microphone hole	Microphone is embedded.	
9	Power Port	Port for power terminal block.	
10	Micro SD Card slot	Compartment for the Micro SD card.	
11	Network Port	Used to connect the PoE or Ethernet cable for network connection.	

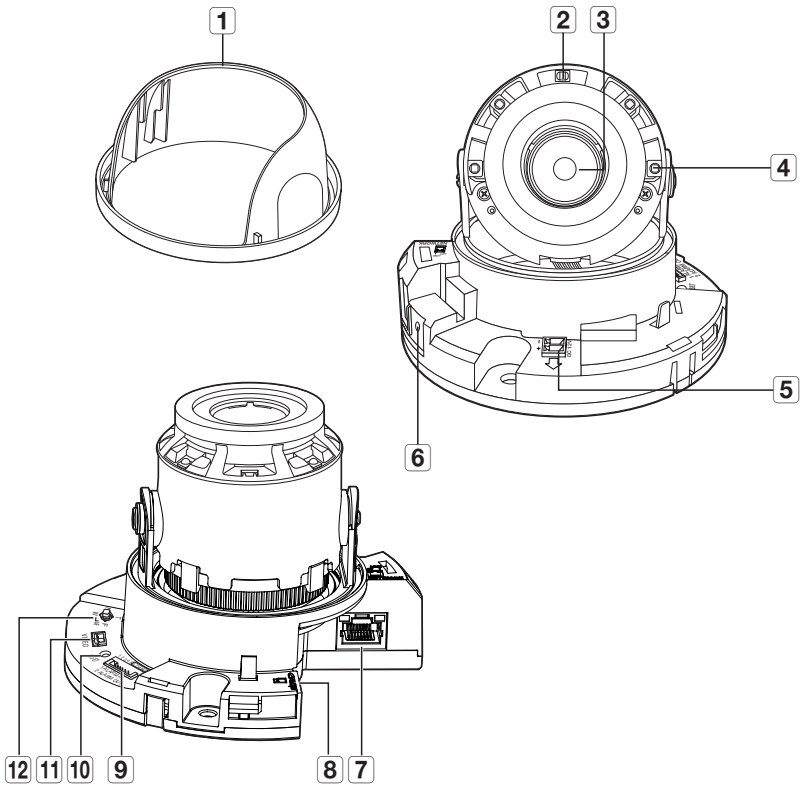
AT A GLANCE (QND-7082R)

Appearance



Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera Case	Housing part that covers the camera body.
3 Microphone hole	Microphone is embedded.

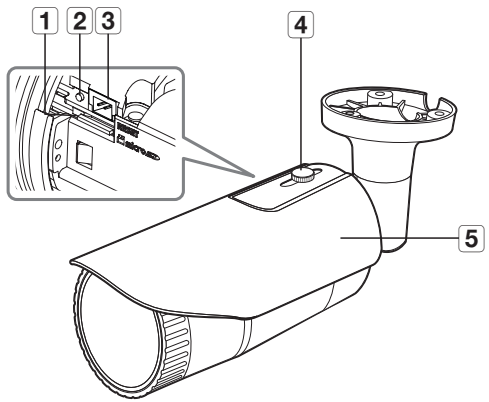
Components

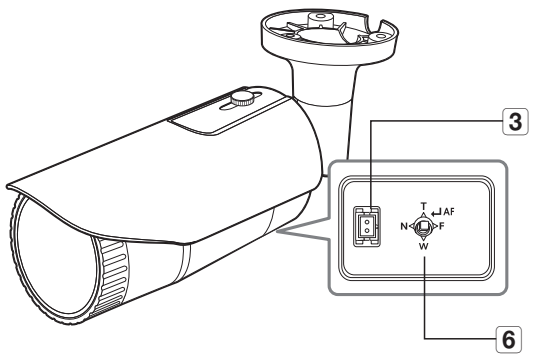


Item		Description	
1	Inside cover	Protective cover for the main body.	
2	Illumination Sensor	Detects incoming light to control the IR LED.	
3	Lens	Lens for the camera.	
4	IR LED	These infrared LED's are controlled by the illumination sensor.	
5	Power Port	Port for power terminal block.	
6	Microphone hole	Microphone is embedded.	
7	Network Port	Used to connect the PoE or Ethernet cable for network connection.	
8	Micro SD Card slot	Compartment for the Micro SD card.	
9	Alarm I/O Port	ARM-IN	Used to connect the alarm input sensor or external day/night sensor.
		ARM-OUT	Used to connect the alarm output signal.
		GND	These are common ports to connect alarm input/output signals.
10	Reset Button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. ! If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the Device Manager program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.	
11	Test monitor out port	Output port for test monitoring the video output. Use the test monitor cable to connect to a mobile display and check the test video.	
12	Zoom/Focus Control Button	T	Zoom in (Tele)
		W	Zoom out (Wide)
		N	Focusing on a near object (Near)
		F	Focusing on a far object (Far)
		Focus Control	Press this button for automatic focus control.

AT A GLANCE (QNO-6014R/7012R/7022R/7032R/6084R/7082R)

Appearance

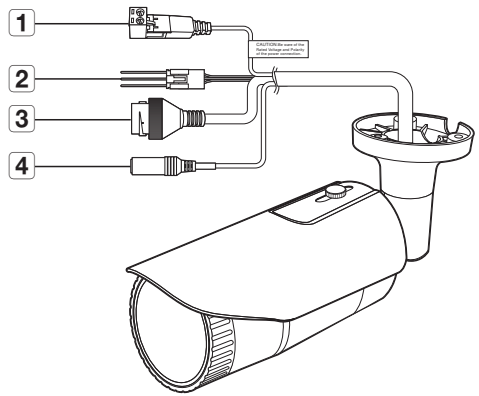




<QNO-6084R/7082R>

Item		Description	
1	Micro SD Card slot	(Internal space of the product) This is a slot in which you can insert a Micro SD card.	
2	Reset Button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the Device Manager program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.	
3	Test monitor out port	Output port for test monitoring the video output. Use the test monitor cable to connect to a mobile display and check the test video.	
4	Sunshield Hold	It fixes the sunshield with the camera.	
5	Sunshield	It protects the camera from the direct sunlight.	
6	Zoom/Focus Control Button (QNO-6084R/7082R)	T	Zoom in (Tele)
		W	Zoom out (Wide)
		N	Focusing on a near object (Near)
		F	Focusing on a far object (Far)
		Focus Control	Press this button for automatic focus control.

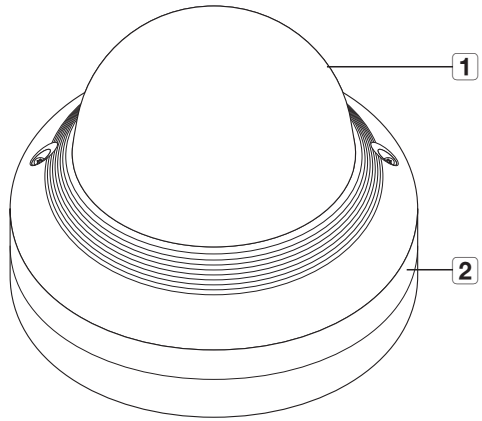
Components



Item		Description
1 Power Port		Used to plug the power cable.
2 Alarm I/O Port	ARM-OUT	Used to connect the alarm output signal.
	GND	These are common ports to connect alarm input/output signals.
	ARM-IN	Used to connect the alarm input sensor or external day/night sensor.
3 Network Port		Used to connect the PoE or Ethernet cable for network connection.
4 Audio In Port		Used to connect to a microphone.

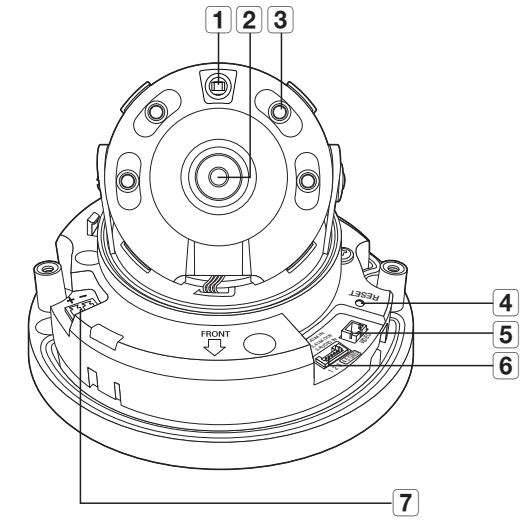
AT A GLANCE (QNV-6014R/7012R/7022R/7032R)

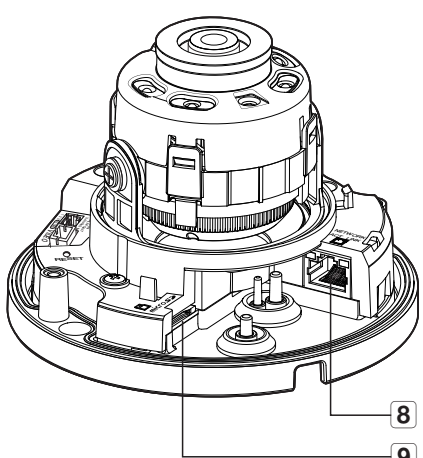
Appearance



Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera Case	Housing part that covers the camera body.

Components

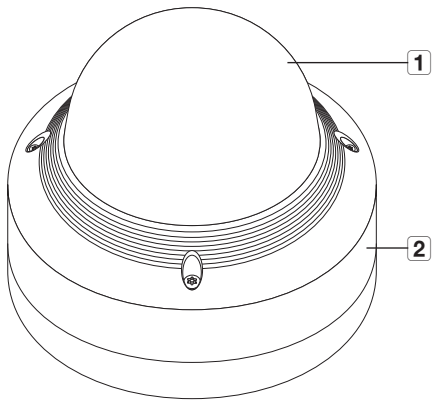




Item		Description	
1	Illumination Sensor	Detects incoming light to control the IR LED.	
2	Lens	Lens for the camera.	
3	IR LED	These infrared LED's are controlled by the illumination sensor.	
4	Reset Button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. ! If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the Device Manager program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.	
5	Test monitor out port	Output port for test monitoring the video output. Use the test monitor cable to connect to a mobile display and check the test video.	
6	Audio/Alarm cable port	ARM-IN	Used to connect the alarm input sensor or external day/night sensor.
		ARM-OUT	Used to connect the alarm output signal.
		GND	These are common ports to connect alarm input/output signals.
		AUDIO IN	Used to connect to a microphone.
7	Power Port	Port for power terminal block.	
8	Network Port	Used to connect the PoE or Ethernet cable for network connection.	
9	Micro SD Card slot	Compartment for the Micro SD card.	

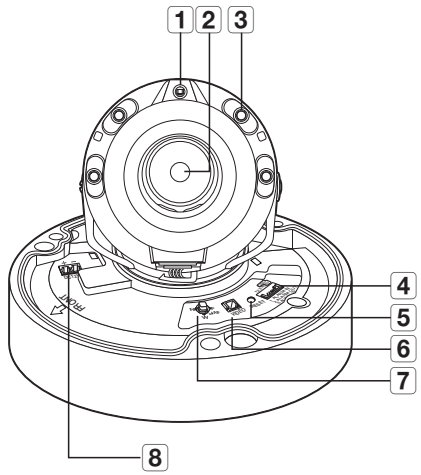
AT A GLANCE (QNV-6084R/7082R)

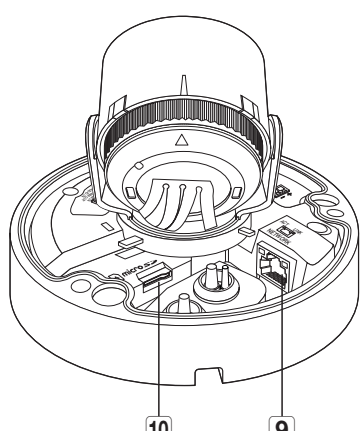
Appearance



Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera Case	Housing part that covers the camera body.

Components





Item		Description	
1	Illumination Sensor	Detects incoming light to control the IR LED.	
2	Lens	Lens for the camera.	
3	IR LED	These infrared LED's are controlled by the illumination sensor.	
4	Audio/Alarm cable port	ARM-IN	Used to connect the alarm input sensor or external day/night sensor.
		ARM-OUT	Used to connect the alarm output signal.
		GND	These are common ports to connect alarm input/output signals.
		AUDIO IN	Used to connect to a microphone.
5	Reset Button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. ! If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the Device Manager program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.	
6	Test monitor out port	Output port for test monitoring the video output. Use the test monitor cable to connect to a mobile display and check the test video.	
7	Zoom/Focus Control Button	T	Zoom in (Tele)
		W	Zoom out (Wide)
		N	Focusing on a near object (Near)
		F	Focusing on a far object (Far)
		Focus Control	Press this button for automatic focus control.
8	Power Port	Port for power terminal block.	
9	Network Port	Used to connect the PoE or Ethernet cable for network connection.	
10	Micro SD Card slot	Compartment for the Micro SD card.	

INSTALLATION (QND-7012R/7022R/7032R/7082R)

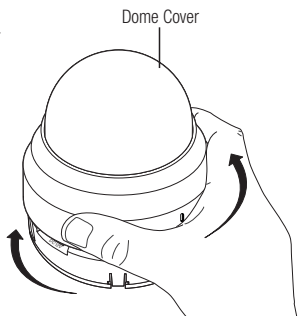
Precautions before installation

Ensure you read out the following instructions before installing the camera:

- It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site.
  And put aside personal belongings from the site, just in case.
- If the product is installed with excessive force, it may cause damage to the camera due to malfunction.
  Forcing assembly using non-compliant tools may damage the product.

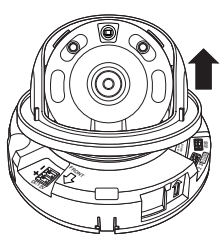
Disassembling

1. Use one hand to hold the camera's bottom part and turn the cover counterclockwise with another hand to separate it.



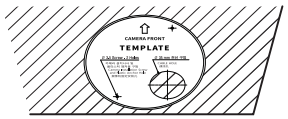
- Do not touch the transparent part of the dome cover once the protective film is removed.

2. Lift up the inner cover to separate it.



Installation

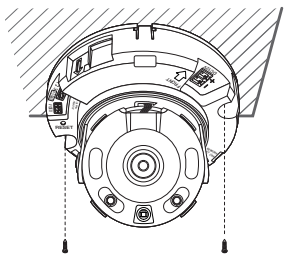
1. Consider the direction to be monitored, attach the template, and drill holes by following the template.



2. Using 2 tapping screws, fix the camera at 2 holes drilled with a template.
- Set the < ⇧ > mark imprinted on the camera to face the direction of camera monitoring.

3. Connect the camera internal terminal with the corresponding cable.

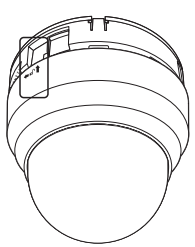
4. Adjust the lens in a desired direction by referring to the "**Adjusting the monitoring direction for the camera**" section. (page 23)



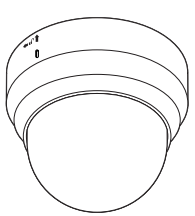
- We recommend you not to touch the lens as the camera lens has been properly focused in the final process of manufacturing. If so, the lens may be out of focus or stained by alien substances.

5. Please connect the inner cover to the main body.

6. While grabbing the bottom side of the camera with your hand, please grab and push its cover with the other hand to align the two arrow signs, as shown in the figure.



- To assemble the dome cover, make the arrows match each other and press the cover firmly.
  If the dome cover is rotated during assembly or is assembled incorrectly, diffused reflection may occur or the lens section may rotate, which will cause the shooting range to be changed.
- Make sure that the dome cover is correctly connected to the bottom part as shown in the figure.
  If the snap-fit is not connected correctly, the dome cover may fall, which may cause injury.



INSTALLATION (QNO-6014R/7012R/7022R/7032R/6084R/7082R)

▪ This camera is waterproof and in compliance with the IP66 spec, but the jack connected to the external cable is not. You are recommended to install this product below the edge of eaves to prevent the cable from being externally exposed.

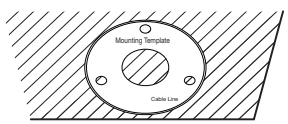
Precautions before installation

Ensure you read out the following instructions before installing the camera:

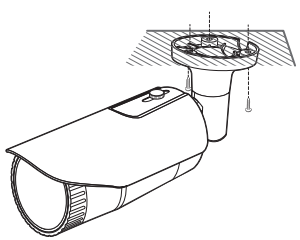
- It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site.
  And put aside personal belongings from the site, just in case.
- Do not use the sunshield hole for any purpose other than for connecting the sunshield.
- If the product is installed with excessive force, it may cause damage to the camera due to malfunction.
  Forcing assembly using non-compliant tools may damage the product.

Installation

1. Consider the direction to be monitored, attach the template, and drill holes by following the template.

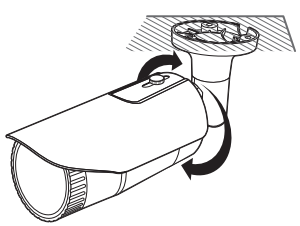


2. Insert and fasten 3 tapping screws into 3 holes to secure the camera.
3. Connect the appropriate cables with camera terminals.



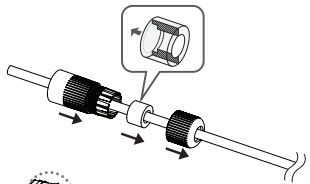
4. Adjust the camera direction using the L wrench provided.

▪ When you adjust the camera position using a bracket, please loosen the bracket screw, adjust the camera, and tighten it. If you attempt to adjust it forcibly while the screw is tight, it may result in a scratch or other problems.

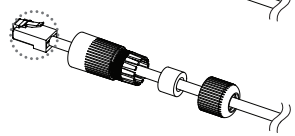


How to connect the RJ45 waterproof cable to a LAN cable

1. Insert it through the arrow direction.

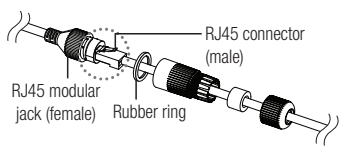


2. Connect the LAN connector (male) to the cable.

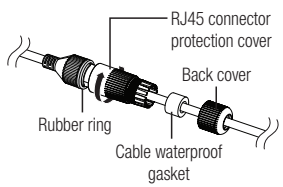


3. Connect the RJ45 modular jack (female) to the RJ45 connector (male).

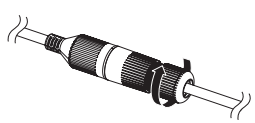
▪ Please, keep each of the parts separated.



4. Assemble by rotating the RJ45 modular jack (female) and the RJ45 protection cover clockwise (Follow the arrow).



5. Assemble by rotating RJ45 protection cover and back cover clockwise (Follow the arrow).
   When the back cover is assembled, the cable waterproof gasket is tightly attached to the cable to make it waterproof.

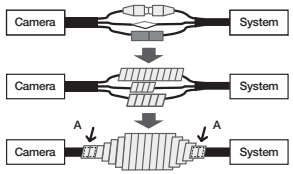


▪ You must fully assemble it to rotate the back cover up to the end of the screw thread of the RJ45 connector.

Outdoor installation

When you install it outside of the building, please waterproof it with waterproof butyl rubber tape (can be purchased in stores) so that water does not leak from the gap of the cable connected to the outside.

1. Connect the power, I/O, AUDIO, and LAN cables.
2. Wrap the black cable jacket (Area A) and the cable connection area with waterproof (butyl rubber) tape so that more than half of the butyl rubber tape is overlapped.



- If the cable jacket is not waterproofed properly, then it can directly cause leakage. Make sure to protect the cable with a dense layer of taping.
- Waterproof butyl tape is made of butyl rubber that can be stretched to twice its normal length.

INSTALLATION (QNV-6014R/7012R/7022R/7032R)

- This camera is waterproof and in compliance with the IP66 spec, but the jack connected to the external cable is not. You are recommended to install this product below the edge of eaves to prevent the cable from being externally exposed.

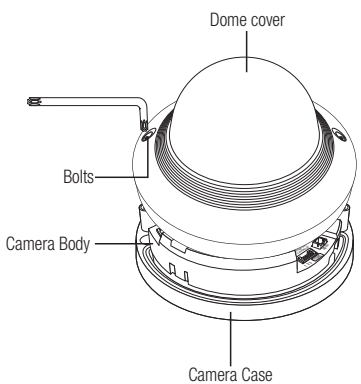
Precautions before installation

Ensure you read out the following instructions before installing the camera:

- It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site. And put aside personal belongings from the site, just in case.
- If the product is installed with excessive force, it may cause damage to the camera due to malfunction. Forcing assembly using non-compliant tools may damage the product.

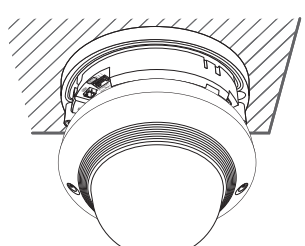
Disassembling

1. Using the Torx L wrench provided, turn the 2 fastening bolts on the dome cover counter clockwise to remove the cover.



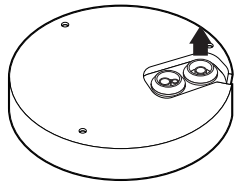
Installation

1. Using the template provided as an accessory, drill the screw installation hole(diameter of 6mm, minimal depth of 55mm) and firmly insert the plastic anchor provided as an accessory to the end.
2. Fit the bottom hole to the anchor hole and insert and fix the taping screw (M4.5xL50).
3. Connect and arrange the necessary cables lest that they should be damaged or twisted while installing the camera.
4. Adjust the lens in a desired direction by referring to the "**Adjusting the monitoring direction for the camera**" section. (page 23)
5. Close the dome cover.
   - Securely fasten the fastening bolt using an Torx L wrench to prevent water from leaking.



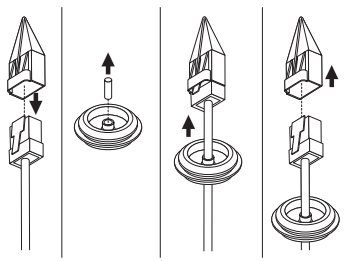
Connecting the LAN cable

1. Remove the dome cover and the case.
2. Pull off the cable bush at the bottom as shown in the figure.

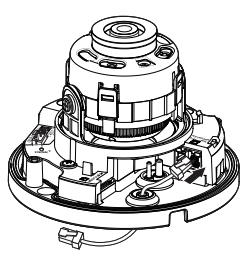


- Use an appropriate cable bush for the LAN cable to be connected.
  - Basic camera : Use the cable with a diameter of Ø5~6.5.

3. Pull off the extruded part of the 1-hole cable bush provided.
4. Use the cap installer to route the LAN cable through the cable bush.

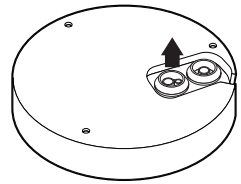


5. Route the LAN cable through the hole created after removing the cable bush in Step 2, and then connect it to the ethernet terminal.
6. Insert the bush of the LAN cable into the hole.

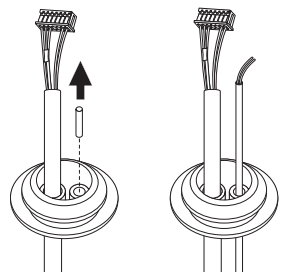


Connecting the audio/alarm cable and power cable

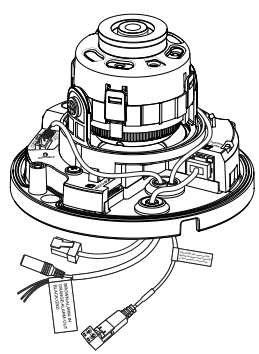
1. Remove the dome cover and the case.
2. Pull off the cable bush at the bottom as shown in the figure.



3. Pull off the small extruded part on the bush of the alarm/audio cable, and route the power cable through the bush.



4. Route the alarm/audio cable through the hole left after removing the cable bush in Step 2. Connect each to the alarm/audio terminal and power terminal block of the PCB, respectively.
5. When mounting the camera, hang the cables on the fixed hook to avoid cables from being damaged or pinched.
6. Insert the bush of the alarm/audio cables into the hole.
7. Adjust the lens in a desired direction by referring to the "**Adjusting the monitoring direction for the camera**" section. (page 23)
8. Attach the dome cover.



INSTALLATION (QNV-6084R/7082R)

▪ This camera is waterproof and in compliance with the IP66 spec, but the jack connected to the external cable is not. You are recommended to install this product below the edge of eaves to prevent the cable from being externally exposed.

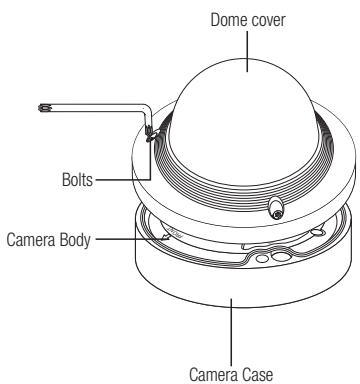
Precautions before installation

Ensure you read out the following instructions before installing the camera:

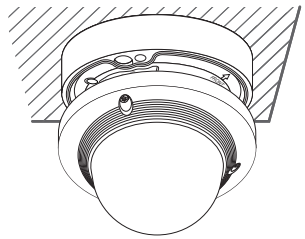
- It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site.
  And put aside personal belongings from the site, just in case.
- If the product is installed with excessive force, it may cause damage to the camera due to malfunction.
  Forcing assembly using non-compliant tools may damage the product.

Disassembling

1. Using the Torx L wrench provided, turn the 3 fastening bolts on the dome cover counter clockwise to remove the cover.



Installation



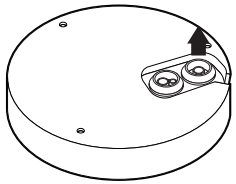
1. Using the template provided as an accessory, drill the screw installation hole(diameter of 6mm, minimal depth of 55mm) and firmly insert the plastic anchor provided as an accessory to the end.
2. Fit the bottom hole to the anchor hole and insert and fix the taping screw (M4.5xL50).
3. Connect and arrange the necessary cables lest that they should be damaged or twisted while installing the camera.
4. Adjust the lens in a desired direction by referring to the "**Adjusting the monitoring direction for the camera**" section. (page 23)

▪ For the manual variable focal lens camera, features such as focus and zoom should be adjusted before installation.
When adjusting these, be sure to prevent foreign substances from becoming attached.

5. Close the dome cover.
   ▪ Securely fasten the fastening bolt using an Torx L wrench to prevent water from leaking.

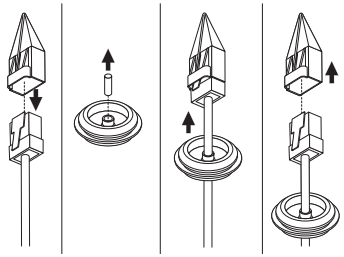
Connecting the LAN cable

1. Remove the dome cover and the case.
2. Pull off the cable bush at the bottom as shown in the figure.

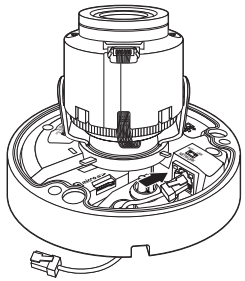


- Use an appropriate cable bush for the LAN cable to be connected.
  - Basic camera : Use the cable with a diameter of Ø5~6.5.

3. Pull off the extruded part of the 1-hole cable bush provided.
4. Use the Cap installer to pass through the LAN cable.

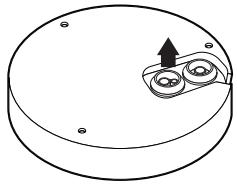


5. Route the LAN cable through the hole created after removing the cable bush in Step 2, and then connect it to the ethernet terminal.
6. Insert the bush of the LAN cable into the hole.

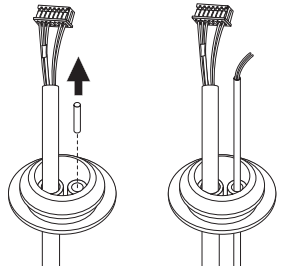


Connecting the audio/alarm cable and power cable

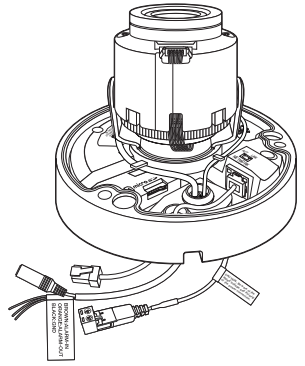
1. Remove the dome cover and the case.
2. Pull off the cable bush at the bottom as shown in the figure.



3. Pull off the small extruded part on the bush of the alarm/audio cable, and route the power cable through the bush.



4. Route the alarm/audio cable through the hole left after removing the cable bush in Step 2. Connect each to the alarm/audio terminal and power terminal block of the PCB, respectively.
5. When mounting the camera, hang the cables on the fixed hook to avoid cables from being damaged or pinched.
6. Insert the bush of the alarm/audio cables into the hole.
7. Adjust the lens in a desired direction by referring to the "**Adjusting the monitoring direction for the camera**" section. (page 23)
8. Attach the dome cover.



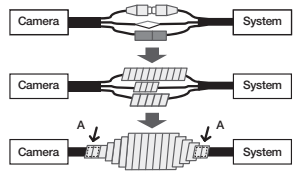
Attaching to the unbundled adapter

Choose and purchase a necessary one of the following options (unbundled) that is suitable to the installation site or for your convenience.

1. Remove the dome cover from the case by referring to the "**Disassembling**" section. (page 18)
2. Use the machine screw to fix the camera case to the unbundled adapter.
3. Connect and arrange the necessary cables lest that they should be damaged or twisted while installing the camera.
4. Install the camera body in the reverse order of "**Disassembling**".
5. Adjust the lens in a desired direction by referring to the "**Adjusting the monitoring direction for the camera**" section. (page 23)
6. Close the dome cover.
   - Securely fasten the fastening bolt using an Torx L wrench to prevent water from leaking.

Outdoor installation

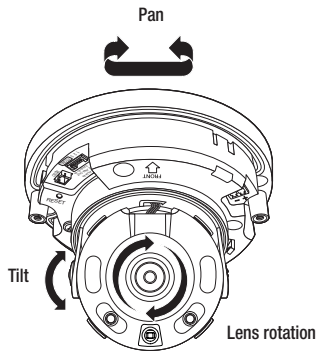
When you install it outside of the building, please waterproof it with waterproof butyl rubber tape (can be purchased in stores) so that water does not leak from the gap of the cable connected to the outside.



1. Connect the power, I/O, AUDIO, and LAN cables.
2. Wrap the black cable jacket (Area A) and the cable connection area with waterproof (butyl rubber) tape so that more than half of the butyl rubber tape is overlapped.

- If the cable jacket is not waterproofed properly, then it can directly cause leakage. Make sure to protect the cable with a dense layer of taping.
- Waterproof butyl tape is made of butyl rubber that can be stretched to twice its normal length.

Adjusting the monitoring direction for the camera (QND-7012R/7022R/7032R/7082R, QNV-6014R/7012R/7022R/7032R/6084R/7082R)



▪ **Adjusting the monitoring direction**

You can adjust the camera direction only when the camera is fixed on the ceiling.
Where, rotating the camera unit to the left or right is called Pan, adjusting the tilt is called Tilt, and turning the lens on its axis is called Rotation.

- The effective range of pan is a total of 350 degrees.
- The effective range of rotation is a total of 355 degrees.
- The effective range of tilt is a total of 67 degrees.

- The image can be covered up by the camera case depending on the angle.
- Do not forcefully turn the focus/zoom lens after the dome case is disassembled. Otherwise, it may cause an incorrect focus due to a motor failure.

▪ **Methods of adjustment**

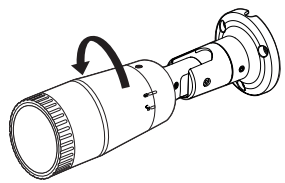
1. After installing the camera, adjust the panning angle in consideration of the monitoring direction.
2. Set the horizontal angle so that the image is not reversed.
3. Adjust the tilt angle so that the camera faces toward the monitoring object.

INSERTING/REMOVING A MICRO SD CARD

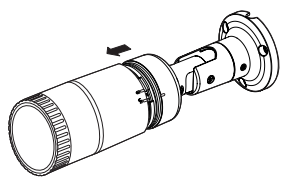
- Before installing the camera, the Micro SD card should be inserted while the power source and the body are separated.
- Do not forcefully insert it in the reverse direction. It might damage your Micro SD card and your product.
- When it rains or the humidity is high, insertion or ejection of a Micro SD card is not recommended.
- Disassembly of the product cover should be finished within 5 minutes, or there will be the risk of internal dew condensation.

Inserting a Micro SD card (QNO-6014R/7012R/7022R/7032R/6084R/7082R)

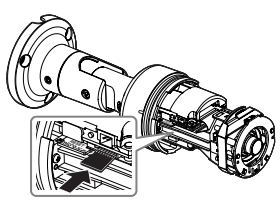
1. Turn the front cover to the UNLOCK [ ] direction.



2. Pull and separate the front cover.



3. Insert a Micro SD card in the arrow direction shown in the figure.



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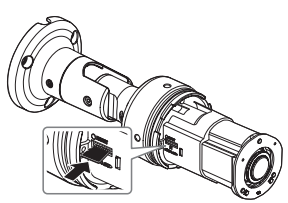
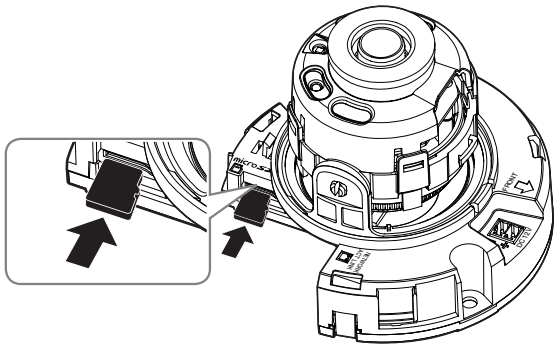


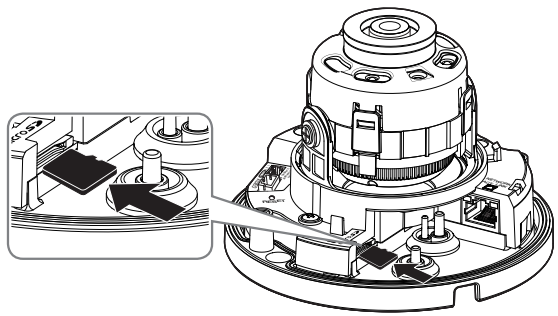
<QNO-6084R/7082R>

Inserting a Micro SD card (QND-7012R/7022R/7032R/7082R, QNV-6014R/7012R/7022R/7032R/6084R/7082R)

1. Separate the Dome cover of the camera.
2. Insert a Micro SD card in the arrow direction shown in the figure.



<QND-7012R/7022R/7032R>



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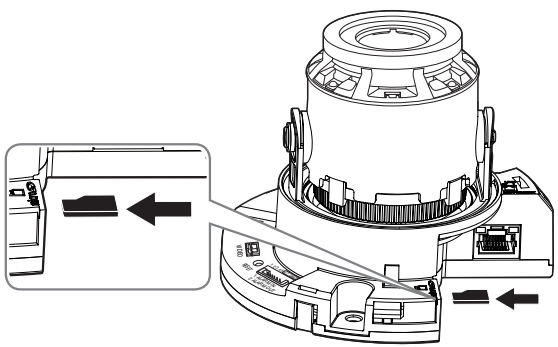

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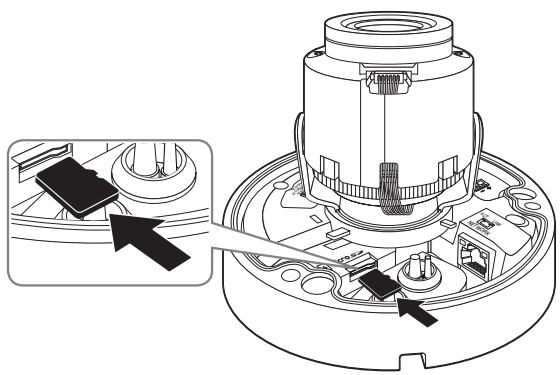
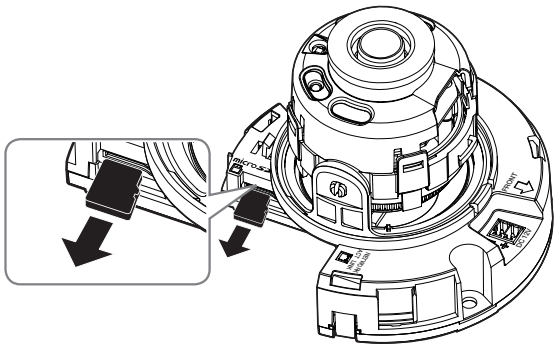


<QNV-6084R/7082R>

Removing a Micro SD card

Gently press down on the exposed end of the memory card as shown in the diagram to eject the memory card from the slot.



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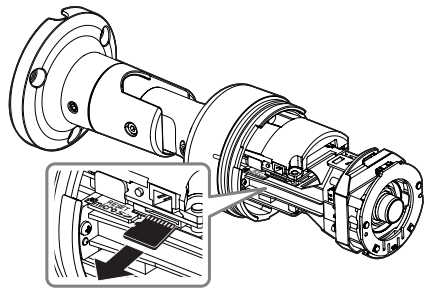

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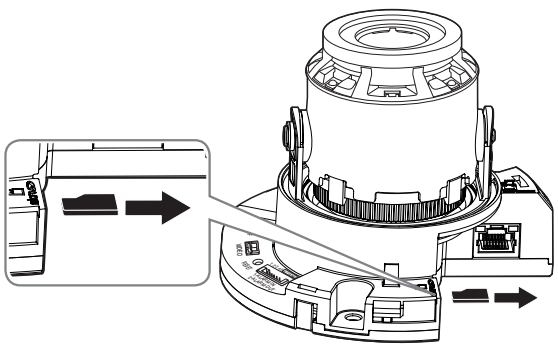

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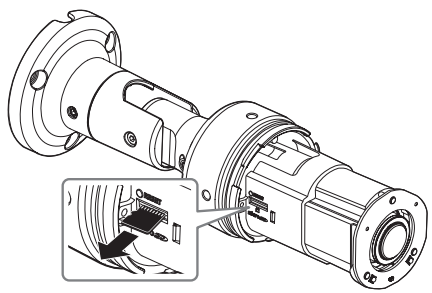

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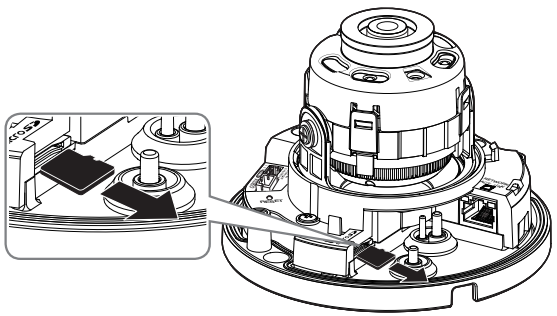

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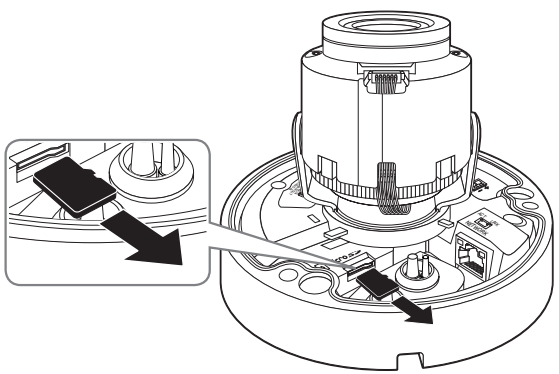
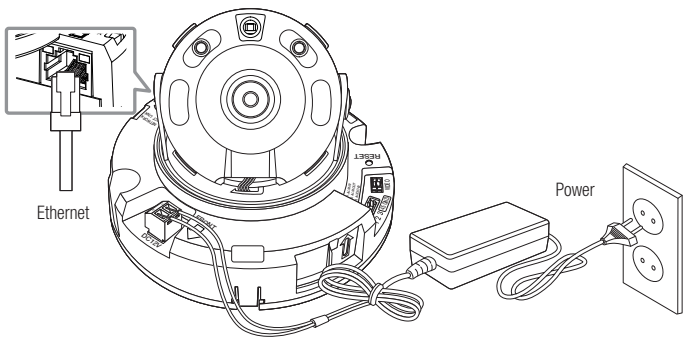


<QNV-6084R/7082R>

- Before removing the Micro SD card, in <**Storage**>, set the device to <**Off**> and press the [**Apply**] button and turn the camera off.
- If you turn off the camera or remove the Micro SD card that contains data from the product, the data may be lost or damaged.

POWERING AND NETWORKING

- Before plugging the DC 12 V power plug into the outlet, please assemble the terminal block first.



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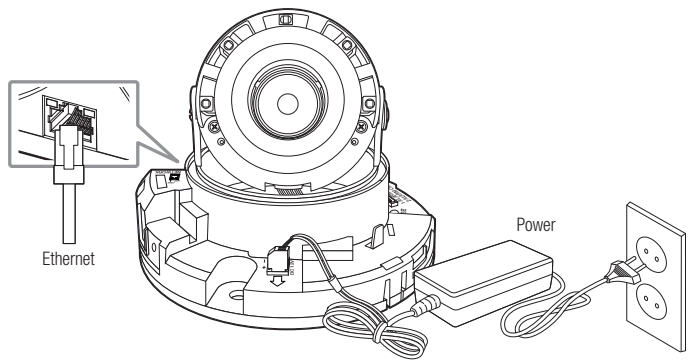

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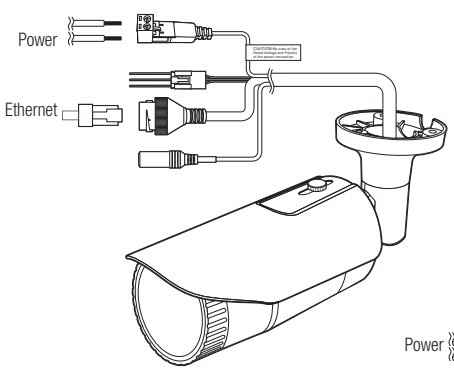

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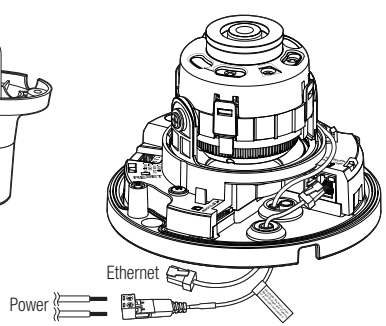

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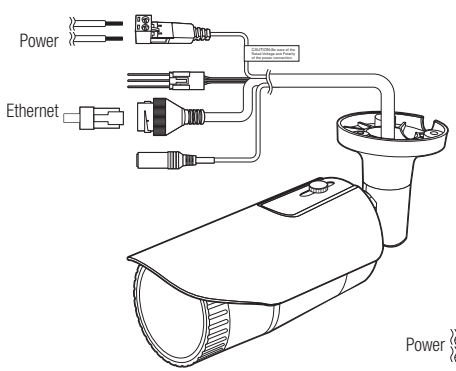

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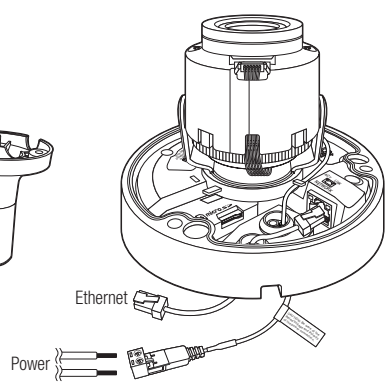


<QNV-6084R/7082R>

Ethernet Connection

Connect the Ethernet cable to the local network or to the Internet.

Power Supply

Use the screwdriver to connect each line (+, –) of the power cable to the corresponding power port of the camera.

- If both PoE and DC 12V are applied simultaneously, the product will be supplied with power from DC 12V.
  - You can also use a router featuring PoE to supply power to the camera.
  - Use PoE that is compliant with the IEEE 802.3af protocols.
  - It is advisable to use only one power source from PoE and DC 12V.
- Be careful not to reverse the polarity when you connect the power cable.
- If you want to connect an external device, you must turn off the external device before proceeding.

Power Cable Specification for Each Model

In case of DC 12V Input:

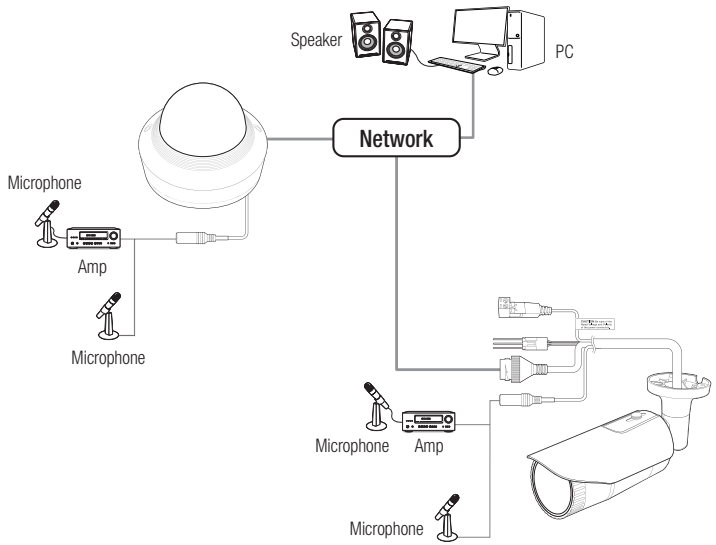
Wire Type (AWG)	#22	#20	#18
Cable Length (Max.)	10m	16m	26m

Network Cable Specification

Item	Contents	Remark
Connector	RJ45	
Ethernet	10/100BASE-T	10/100 Mbps
Cable	Category 5e	
Max Distance	100M	DC Resistance ≤ 0.125 Ω/m
PoE Support	IEEE 802.3af	

- If you use a cable other than Category 5e standards, 100m of transmission distance is not guaranteed.

Connecting to Audio Input



1. Connect the AUDIO IN port of the camera with the microphone or LINE OUT port.

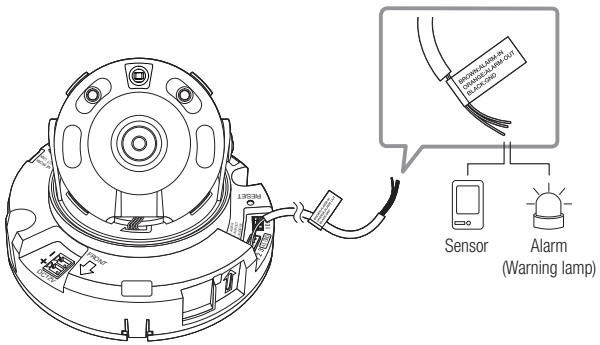
- The QND model supports the built-in microphone only.

2. Check the specifications for audio input.

- **Audio Codec**
  - Audio In : G.711 PCM (Bit Rate: 64kbps / Sampling Frequency: 8kHz), G.726 ADPCM (Bit Rate: 16Kbps, 24Kbps, 32Kbps, 40Kbps / Sampling Frequency: 8kHz)
- **Full duplex Audio**
- **Audio in (QND-7012R/7022R/7032R/7082R)** : Built-in microphone
- **Audio in (QNO-6014R/7012R/7022R/7032R/6084R/7082R, QNV-6014R/7012R/7022R/7032R/6084R/7082R)** : Selectable (microphone/Line-in), Supported voltage: 2.5VDC (4mA), Input impedance: 2K Ohm

Connecting to the I/O port box

Connect the Alarm I/O cable to the corresponding port of the port box.



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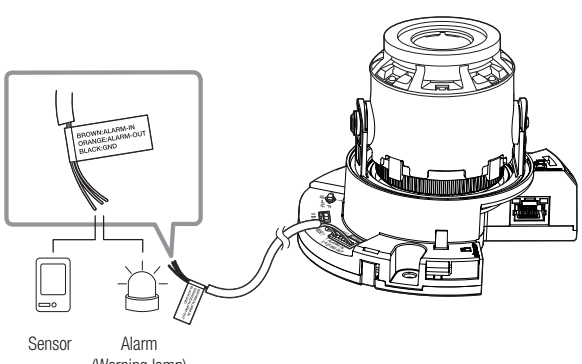

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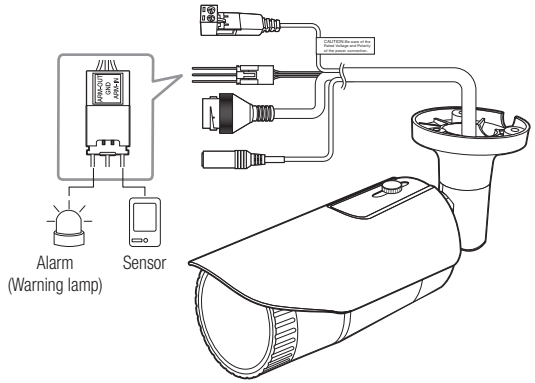

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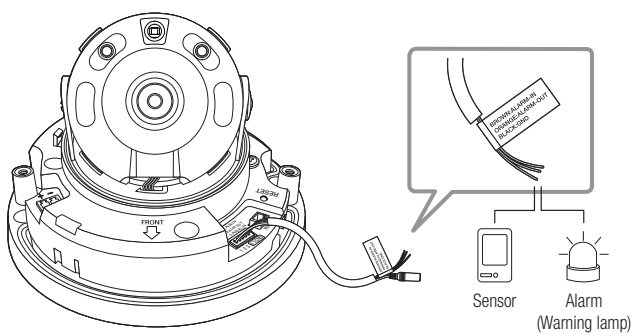

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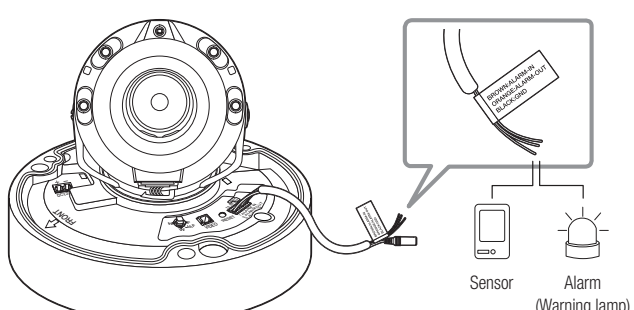


<QNV-6084R/7082R>

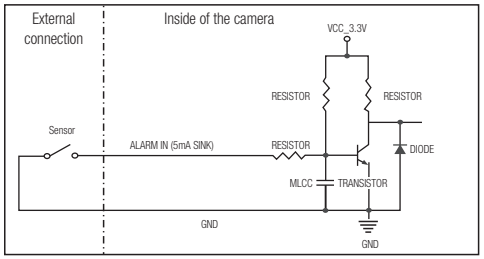
- ALARM-IN : Used to connect the alarm input sensor or external day/night sensor.
- ALARM-OUT : Used to connect the alarm output signal.
- GND : Common port for alarm in/output signal.

▪ If devices (e.g., flashing light and siren) that exceed the voltage and current specifications are connected by using the open collector method, it may cause malfunction.
Refer to the "**Alarm Out Wiring Diagram**" when connecting devices that exceed the voltage and current specifications.

To connect the external sensor

Connect one strand of each signal line (2-strand) of the sensors to the [**ALARM IN**] port, and connect the other strand to the [**GND**] port.

Alarm In Wiring Diagram

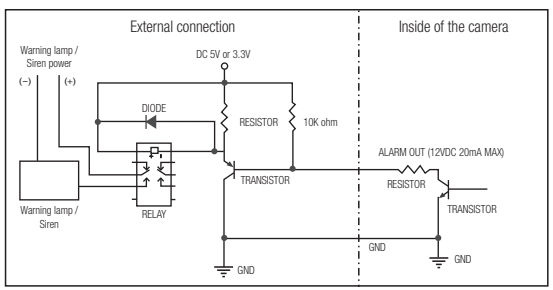


To connect the alarm out

If devices (e.g., flashing light and siren) that exceed the voltage and current specifications are connected by using the open collector method, it may cause malfunction.

Refer to the alarm out connection diagram below when connecting devices that exceed the voltage and current specifications.

Alarm Out Wiring Diagram

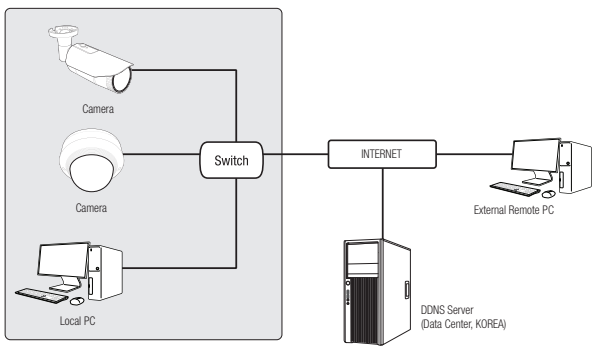


You can set up the network settings according to your network configurations.

CONNECTING THE CAMERA DIRECTLY TO LOCAL AREA NETWORKING

Connecting to the camera from a local PC in the LAN

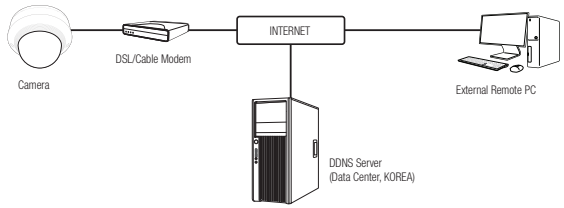
1. Launch an Internet browser on the local PC.
2. Enter the IP address of the camera in the address bar of the browser.



<Local Network>

- A remote PC in an external Internet out of the LAN network may not be able to connect to the camera installed in the intranet if the port-forwarding is not properly set or a firewall is set.
  In this case, to resolve the problem, contact your network administrator.
- By factory default, the IP address will be assigned from the DHCP server automatically.
  If there is no DHCP server available, the IP address will be set to 192.168.1.100.
  To change the IP address, use the Device Manager.
  For further details on Device Manager use, refer to "**Using Device Manager**". (Page 32)

CONNECTING THE CAMERA DIRECTLY TO A DHCP BASED DSL/CABLE MODEM



1. Connect the user PC directly with the network camera.
2. Run the Device Manager and change the IP address of the camera so that you can use the web browser on your desktop to connect to the camera.
3. Use the Internet browser to connect to the web viewer.
4. Move to [**Setup**] page.
5. Move to [**Network**] – [**DDNS**] and configure the DDNS settings.
6. Move to [**Basic**] – [**IP & Port**], and set the IP type to [**DHCP**].
7. Connect the camera, which was removed from your PC, directly to the modem.
8. Restart the camera.

- For information on how to set DDNS, refer to the online help of Web Viewer.
- For information on how to set the IP format, refer to the online help of Web Viewer.

USING DEVICE MANAGER

- Device manager program can be downloaded from <**Technical Support**>-<**Online Tool**> menu at Hanwha Techwin website (http://www.hanwha-security.com).
- More instructions of Device Manager can be found at <**Help**> menu of the main page.

AUTOMATICALLY SEARCHING CAMERA

If a camera is connected to the same network of the PC where device manager is installed, you can find network camera by using search function.

1. Click <**Search**> at the main page of device manager.
2. Check the camera from the list.
   - Check MAC address at the sticker attached to the camera.

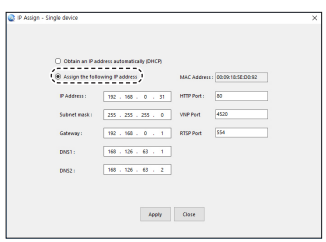
CONFIGURING IP ADDRESS

If you want to change camera network setting, <**Login OK**> sign must be displayed at <**Status**>. Click <**Authentication**> at the main page to log in.

Configuring Static IP

Manually insert and configure IP address & port information.

1. Click the camera from the list that you want the change the IP setting.
2. Click <**IP Assign**> at the main page of device manager.
3. Select <**Assign the following IP address**>.
   - IP information of the camera will be displayed as previously set.
4. Fill in IP & Port related categories.



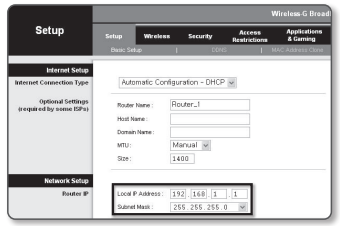
If not using a Broadband Router

For setting <**IP Address**>, <**Subnet Mask**>, and <**Gateway**>, contact your network administrator.

- HTTP Port : Used to access the camera using the Internet browser, defaulted to 80.
- RTSP Port: A port that controls real-time streaming. The initial value is 554.

If using a Broadband Router

- IP Address : Enter an address falling in the IP range provided by the Broadband Router.
  ex) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254
- Subnet Mask : The <**Subnet Mask**> of the Broadband Router will be the <**Subnet Mask**> of the camera.
- Gateway : The <**Local IP Address**> of the Broadband Router will be the <**Gateway**> of the camera.



- The settings may differ depending on the connected Broadband Router model. For more information, refer to the user manual of the applicable router.
- For more information about port forwarding of the broadband router, refer to "**Port Range Forward (Port Mapping) Setup**". (Page 34)

If the Broadband Router has more than one camera connected

Configure the IP related settings and the Port related settings distinctly with each other.

ex)

Category		Camera #1	Camera #2
IP related settings	IP Address Subnet Mask Gateway	192.168.1.100 255.255.255.0 192.168.1.1	192.168.1.101 255.255.255.0 192.168.1.1
Port related settings	HTTP Port RTSP Port	8080 554	8081 555

- If the <**HTTP Port**> is set other than 80, you must provide the <**Port**> number in the address bar of the Internet browser before you can access the camera.
  ex) http://IP address : HTTP Port
  http://192.168.1.100:8080

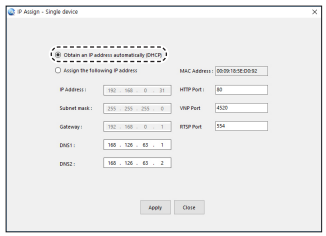
5. Click [**Apply**] Button.
6. If the success message is displayed, click [**OK**].

Configuring Dynamic IP

Receive IP address from DHCP

- Example of the Dynamic IP environment
  - If a Broadband Router, with cameras connected, is assigned an IP address by the DHCP server
  - If connecting the camera directly to modem using the DHCP protocols
  - If IPs are assigned by the internal DHCP server via the LAN

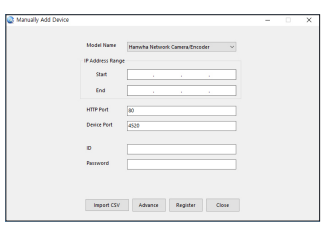
1. Click the camera from the list that you want to change the IP setting.
2. Click <**IP Assign**> at the main page of device manager.
3. Select <**Obtain an IP address automatically (DHCP)**>.
4. Click [**Apply**] button.
5. If the success message is displayed, click [**OK**].



MANUALLY REGISTERING CAMERA

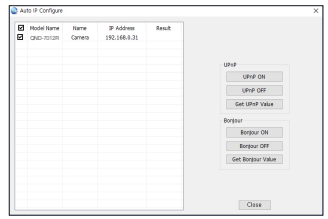
If the camera cannot be found using search function, the camera can be registered remotely by manually inserting IP information, if the camera is connected to external network.

1. Click <**Add Devices**> - <**Manually Add Device**> at the main page of device manager.
2. Insert the range of IP address that you search
3. Select the <**Model Name**> of the camera that you register, and insert HTTP port, ID, and password.
4. Click [**Register**] button.
5. Check if camera is registered.
   - Check MAC address at the sticker attached to the camera.



AUTOMATICALLY CONFIGURING IP

1. Click the camera from the list that you want to automatically configure the IP.
2. Click < **+** > at the main page of device manager.
   - Equipment Setting menu appears.
3. At the menu, click <**Auto IP Configure**>.
4. Click [**Close**] button.

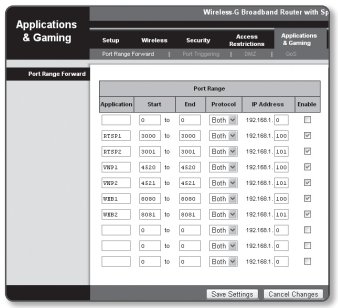


PORT RANGE FORWARD (PORT MAPPING) SETUP

If you have installed a Broadband Router with a camera connected, you must set the port range forwarding on the Broadband Router so that a remote PC can access the camera in it.

Manual Port Range Forwarding

1. From the Setup menu of the Broadband Router, select <**Applications & Gaming**> - <**Port Range Forward**>.
   For setting the port range forward for a third-party Broadband Router, refer to the user guide of that Broadband Router.
2. Select <**TCP**> and <**UDP Port**> for each connected camera to the Broadband Router.
   The number of each port to be configured to the IP router should be set according to the port number designated in <**Setup**> - <**Basic**> - <**IP & Port**> on the camera web viewer.
3. When done, click [**Save Settings**].
   Your settings will be saved.

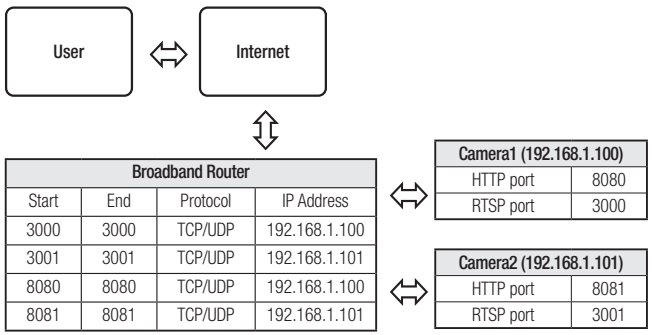


- Port forwarding setting is an example of setting CISCO IP router.
- The settings may differ depending on the connected Broadband Router model.
  For more information, refer to the user manual of the applicable router.

Setting up Port Range Forward for several network cameras

- You can set a rule of Port Forwarding on the Broadband Router device through its configuration web page.
- A user can change each port using the camera setting screen.

When Camera1 and Camera2 are connected to a router :



Broadband Router			
Start	End	Protocol	IP Address
3000	3000	TCP/UDP	192.168.1.100
3001	3001	TCP/UDP	192.168.1.101
8080	8080	TCP/UDP	192.168.1.100
8081	8081	TCP/UDP	192.168.1.101

Camera1 (192.168.1.100)	
HTTP port	8080
RTSP port	3000

Camera2 (192.168.1.101)	
HTTP port	8081
RTSP port	3001

- Port forwarding can be done without additional router setup if the router supports the UPnP (Universal Plug and Play) function. After connecting the network camera, select the checkbox from the menu <**Quick connect**> in <**Wisenet DDNS**> in "**Settings** -> **Network** -> **DDNS**".

CONNECTING TO THE CAMERA FROM A SHARED LOCAL PC

1. Run device manager.
   It will scan for connected cameras and display them as a list.
2. Double-click a camera to access.
   The Internet browser starts and connects to the camera.

▪ Access to the camera can also be gained by typing the camera's IP address in the address bar of the Internet browser.

CONNECTING TO THE CAMERA FROM A REMOTE PC VIA THE INTERNET

On a remote computer that is not in the Broadband Router's network cluster is not allowed, users can access cameras within a Broadband Router's network by using the camera's DDNS URL.

1. Before you can access a camera in the Broadband Router network, you should have set the port range forward for the Broadband Router.
2. From the remote PC, launch the Internet browser and type the DDNS URL address of the camera, or the IP address of the Broadband Router in the address bar.
   ex) http://ddns.hanwha-security.com/ID

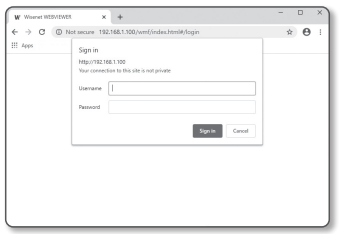
▪ To use Wisenet DDNS, sign up at the Wisenet DDNS homepage (http://ddns.hanwha-security.com) and register the product at [**My DDNS**]>[**Register Product**].

CONNECTING TO THE CAMERA

Normally, you would

1. Launch the Internet browser.

   Type the IP address of the camera in the address bar.
   ex) • IP address (IPv4) : 192.168.1.100 ➞ http://192.168.1.100
   - the Login dialog should appear.
   • IP address (IPv6) : 2001:230:abcd: ffff:0000:0000:ffff:1111 ➞ http://[2001:230:abcd:ffff:0000:0000:ffff:1111] - the Login dialog should appear.



If the HTTP port is other than 80

1. Launch the Internet browser.

Type the IP address and HTTP port number of the camera in the address bar.
ex) IP address : 192.168.1.100:HTTP Port number(8080)
➞ http://192.168.1.100:8080 - the Login dialog should appear.

Using URL

1. Launch the Internet browser.
2. Type the DDNS URL of the camera in the address bar.
   ex) URL address : http://ddns.hanwha-security.com/ID
   - the Login dialog should appear.

▪ Network connection is disabled in the LAN only environment.

Connecting via UPnP

1. Run the client or operating system in support of the UPnP protocol.
2. Click the camera name for search.
   In the Windows operating system, click the camera name searched from the network menu.
   - The login window is displayed.

Connecting via Bonjour

1. Run the client or operating system in support of the Bonjour protocol.
2. Click the camera name for search.
   In the Mac operating system, click the camera name searched from the Bonjour tab of Safari.
   - The login window is displayed.

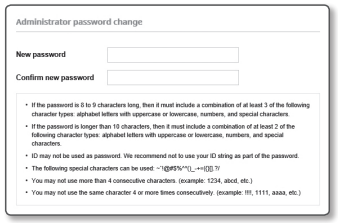
To check the DDNS address

If the camera is connected directly to the DHCP cable modem, DSL modem, the IP address of your network will be changed each time you try to connect to the ISP (Internet Service Provider) server.
If this is the case, you will not be informed of the IP address changed by DDNS.

Once you register a dynamic IP-based device with the DDNS server, you can easily check the changed IP when you try to access the device.
To register your device to the <**DDNS**> server, visit http://ddns.hanwha-security.com and register your device first, and then set the Web Viewer's <**Network**> - <**DDNS**> to <**Wisenet DDNS**>, as well as providing <**Product ID**> that had been used for DDNS registration.

PASSWORD SETTING

When you access the product for the first time, you must register the login password.



- For a new password with 8 to 9 digits, you must use at least 3 of the following: uppercase/lowercase letters, numbers and special characters. For a password with 10 to 15 digits, you must use at least 2 types of those mentioned.
  - Special characters that are allowed. : ~`!@#$%^*()_-+={}[].?/
- For higher security, you are not recommended to repeat the same characters or consecutive keyboard inputs for your passwords.
- If you lost your password, you can press the [**RESET**] button to initialize the product. So, don't lose your password by using a memo pad or memorizing it.

LOGIN

Whenever you access the camera, the login window appears.
Enter the User ID and password to access the camera.

1. Enter "**admin**" in the <**User name**> input box.
   The administrator ID, "**admin**", is fixed and can not be changed.
2. Enter the password in the <**Password**> input field.
3. Click [**Sign in**].
   If you have logged in successfully, you will the Live Viewer screen.

- When you access the camera web viewer, pay special attention to the security by checking whether the image data is encrypted.

- You will experience the best video quality if the screen size is 100%. Reducing the ratio may cut the image on the borders.

CAMERA WEB VIEWER SETUP

1. Click the [**Setup** ( )] icon.
2. The Settings window appears.
3. You can configure settings for the camera's basic information, video, audio, network, event, analysis, and system over the network.
4. Click <**Help** ( )> to view detailed descriptions of each function.

TROUBLESHOOTING

PROBLEM	SOLUTION
When an Windows 10 user accesses the web viewer through Chrome or Firefox, the sound volume of microphone changes periodically.	• This is what happens when microphone driver has been set to Realtek driver. Install the High Definition Audio device (Windows Default Driver) or the third party driver as the microphone driver.
No video is displayed when accessing the plug-in free webviewer on Safari via HTTPS.	• On the authentication popup window prompted when initially accessing https, click "View Authentication Certificate" and select the "Always trust when connecting to the designated webviewer IP" check box. • If the webviewer continues failing to display a video after you select "Next" on the message window below, press the command key + Q to exit the Safari browser, access again and follow the procedures stated above.
I can't access the camera from a web browser.	• Check to make sure that the camera's Network settings are appropriate. • Check to make sure that all network cables have been connected properly. • If connected using DHCP, verify that the camera is able to acquire dynamic IP addresses without any problem. • If the camera is connected to a Broadband Router, verify that port forwarding is properly configured.
Viewer got disconnected during monitoring.	• Connected Viewers become disconnected upon any change to camera or network configurations. • Check all network connections.
No video is displayed when I newly access the webviewer or connect streaming to the client.	• The maximum number of profiles available is 3. The connection may be lost if you use 4 or more of profiles. Example) If you access MJPEG, H264 and H265 and then access with a different profile, the connection will be lost.
The camera connected to the network is not detected in the Device Manager program.	• Turn off the firewall settings on your PC and then search the camera again.
Images overlap.	• Check whether two or more cameras are set to a single multicast address instead of different addresses. If a single address is used for multiple cameras, the images may overlap.
No image appears.	• If the transmission method is set to multicast, check whether there is a router that supports multicast in the LAN the camera is connected to.
Voice is not recorded even though audio input settings are configured.	• You must enable the <Audio In> check box in <Basic> - <Video Profile>.

PROBLEM	SOLUTION
<Motion detection> of <Analytics> is set to <Enable>, but no notification e-mail reaches me even when an analysis event had occurred.	• Verify the settings in the following sequence: A. Check <Data & Time> settings. B. The <Motion detection> should be set to <Enable>. C. Check if the <E-mail> option of <Event setup> menu is checked to use.
No signal is found at the Alarm Output port even when an intelligent video analysis event is generated.	• Check alarm output port settings.
Cannot record into the Micro SD card.	• Check if the memory card is defective. • When replacing the Micro SD card, it must be done while the power is disconnected from the product.
Micro SD card is inserted but the camera does not operate properly.	• Check if the Micro SD card is inserted in the proper direction. Operation of Micro SD card that is formatted by other devices is not guaranteed with this camera unit. • Format the Micro SD card again in <Setup> ➞ <Event> ➞ <Storage> menu.
Cannot record in the NAS.	• Confirm that the information registered in the NAS is correct.
It reports that NAS setting has failed.	• Confirm that the IP address of the NAS is valid. • Confirm that the ID/password of the NAS is valid. • Confirm that you can access the folder designated as the default folder using the ID of the NAS. • Confirm that the NAS SMB/CIFS items are unchecked. • Confirm that the NAS IP address and the camera IP address are in the same format. ex) The NAS & camera subnet mask initial value is 255.255.255.0. If the IP address is 192.168.20.32 then the NAS IP address should be in the range of 192.168.20.1~192.168.20.255. • Check whether you tried to access as another user without formatting the default folder saved or used. • Confirm that you used recommended NAS equipment.

Any changes or modifications in construction of this device which are 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.

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.

Hanwha Techwin cares for the environment at all product manufacturing stages, and is taking measures to provide customers with more environmentally friendly products.
The Eco mark represents Hanwha Techwin's devotion to creating environmentally friendly products, and indicates that the product satisfies the EU RoHS Directive.

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.
Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.
Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.
To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

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