

Underwater CCTV Camera

Product user manual

Class A equipment (business broadcasting and communication equipment)

—
This device is a business (class A) electromagnetic wave suitability device, and sellers or users are advised to pay attention to this point. It is intended for use outside the home.



Through QR code,
you can find PDF file

Product User Manual

IAQUA Series

Notice on Copyright and Trademark Usage

Products and company names mentioned in this manual are trademarks or registered trademarks belonging to the company.

WARRANTY

If the product is not normally installed due to a defect under normal use conditions,

The manufacturer will repair it free of charge through the place of purchase.

The warranty period is 1 years, and the following situations are excluded from the warranty.

- Abnormalities caused by product changes over time or natural wear and tear during use
 - Damage to fastening parts due to negligence when assembling the product
 - ※ The appearance and specifications of the product may be changed without prior notice to improve performance.
-

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PC System Recommended Specifications

- * CPU: Intel Core 2 Duo 2.4 GHz or higher (when using 1920x1080 30fps)
Intel Core i7 2.8 GHz or higher (when using 1920x1080 60fps)
- * Resolution: 1280x1024 or higher (32-bit color)
- * Memory: 2GB or more
- * Supported OS: Windows XP, VISTA, 7, 8, 10 / Mac OS 10.7 or later
- * Supported web browsers: Microsoft Internet Explorer (Ver. 8~11),
Microsoft Edge (Ver. 94 ~118) Latest 118
Mozilla Firefox (Ver. 9~19) Latest 85
Google Chrome (Ver. 15~15) Latest 88
Apple Safari (Ver. 6.0.2) Latest 14
 - Windows 8 is supported only in desktop mode.
 - Beta version or developer version other than the version released on the official site Not supported.
 - For IPv6 access, Windows 7 or later is recommended.
 - Safari Browser is supported only on Mac OS X.
- * Video memory: 256MB or more
 - The video memory card driver is not installed correctly, or the latest version is not available. If not, the video may not play normally.
 - When using two or more monitors, playback performance may decrease depending on system specifications.
may fall.




Component Information

Before starting the installation, carefully check the following components enclosed in the product box to ensure that no parts are missing during installation.

Basic Components

Picture	Qty	Explanation	Picture	Qty	Explanation
	1	L-Wrench (M5)		1	Hex Bolt Set (M8*15)
	1	Spare Bolt Set		1	Knife block Set
	1	Product instruction Manual		1	Underwater Cable

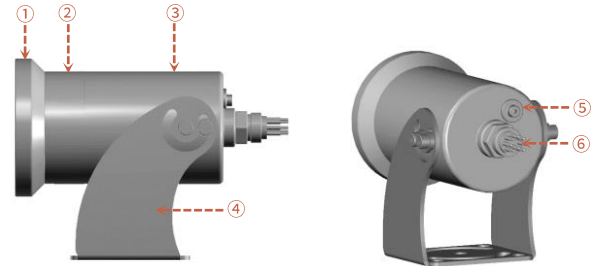
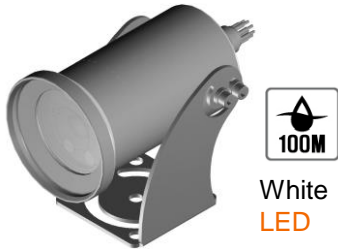
Optional components (Purchased Separately)

Picture	Qty	Explanation	Picture	Qty	Explanation
	1	Wall bracket		1	Sealing Bracket
	1	Anchor Bolt			

Product Division and Part Names

Please familiarize yourself with the part names of each product as they are important to provide fast and accurate service for problems in each part.

iAQUA-100 Series



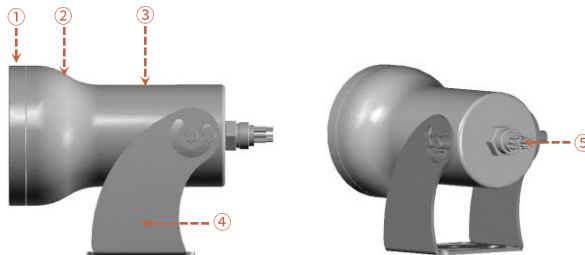
Series Name	Model Name	Details
iAQUA-100 Series	IAQUA-100A	Vari-Focal(2.7-12mm) + IP 2M _ WH_LED + iAQUA-Q410 Cable
	IAQUA-100AF	Fixed Lens (3.3mm) + IP 2M _ WH_LED + iAQUA-Q410 Cable

No	Detailed name	No	Detailed name
1	DECO-Ring	11	
2	Front Cover	12	
3	Main Body	13	
4	Mount Bracket	14	
5	Temperature Sensor	15	
6	Submersible connector (Male)	16	
7		17	
8		18	
9		19	
10		20	

Product Division and Part Names

Please familiarize yourself with the part names of each product as they are important to provide fast and accurate service for problems in each part.

iAQUA-200 Series

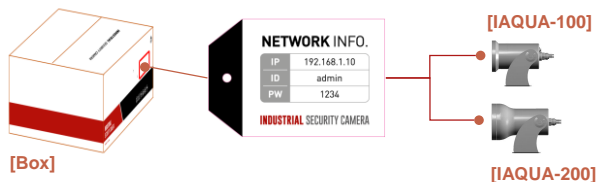


Series Name	Model Name	Details
iAQUA-200 Series	IAQUA-200Z	Vari-Focal(2.7-12mm) + IP 2M _ WH_LED + iAQUA-Q410 Cable
	IAQUA-200ZF	Fixed(3.3mm) + IP 5M _ WH_LED + iAQUA-Q410 Cable

No	Detailed name	No	Detailed name
1	DECO-Ring	11	
2	Front Cover	12	
3	Main Body	13	
4	Mount Bracket	14	
5	Submersible connector (Male)	15	
6		16	
7		17	
8		18	
9		19	
10		20	

Checklist before Product Installation

Check product operation information and appearance status



* On the product label on the product packaging box and on the tag on the sunshield portion of the product
After checking the information necessary for initial operation such as IP address, ID, password, etc. Keep it so you don't lose it.

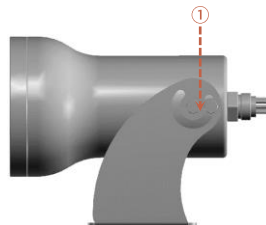
Check the packing box

- When delivering the product, check that the packaging is intact and has not been dropped or torn.
- In the case of returning a broken product, we recommend that you reuse the packaging box provided for transportation. Recommended.
- The box label attached to the product box contains the information shown in the picture above.
- Before discarding the box, back up the information entered on the label to prevent product operation problems. wish.

Safe Disposal of Packaging Materials

- Among packaging materials, PE foam, excluding paper, is subject to separate discharge. Therefore, please separate and dispose according to the separate collection method or regulations.

Check the specifications of the L wrench



No	L wrench specification	No	L wrench specification
1	M5 (Mount bracket)	11	
2		12	
3		13	
4		14	
5		15	
6		16	
7		17	
8		18	
9		19	
10		20	

Select Product Installation Location

When selecting a location to install the product, be sure to install it in a place that does not have any inconsistencies as in the case below.

Things to consider when installing the product

Salt 35% ↓

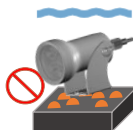


①

100M ↑



②



③



④



⑤



⑥

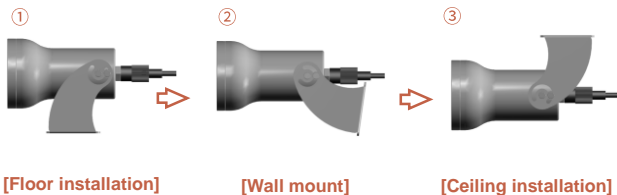
When selecting the initial location to install the product, consider the following.

- ① It is not recommended to install the product in a place where the concentration of salt or chlorine is higher than the general marine environment.
- ② The manufacturer does not guarantee the installation of the product in an installation environment with a depth of 100M or more underwater guaranteed by the manufacturer.
- ③ It is not recommended to install the product on an uneven surface.
- ④ Product defects caused by putting the product into the sea without fixed installation are not guaranteed by the manufacturer.
- ⑤ The product supports the load only with the cable of the product without fixed installation, and if the product is damaged by movement, the manufacturer does not guarantee it.
- ⑥ When installing the product, be sure to insert and dismantle according to the shape of the cable connector.

Product Installation and Precautions

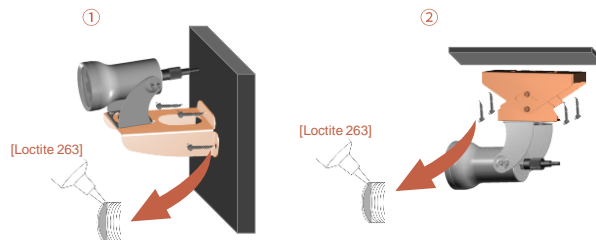
The manufacturer is not responsible for any problems caused by installing a bracket other than the genuine bracket provided by the manufacturer.

Installation using the product's mount bracket



- First, select the installation method from the picture above.
- Place the base bracket where it will be installed and mark the perforation point.
- Insert the knife block provided with the product into the perforation.
- Insert the cross piece provided with the product into the knife block position on the bracket.
- Loosen the bolts on the base bracket slightly to adjust the height and level of the video and finish.
- Equipment for wall perforation is not provided.

Installation using wall mount brackets and ceiling brackets

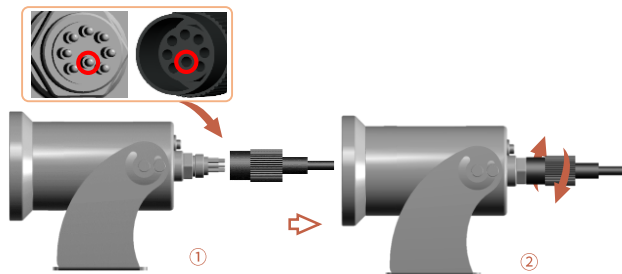


- The wall mount bracket can be fixed on a vertical wall.
- The sealing bracket can be fixed to the ceiling surface.
- Attach the bracket to the wall with the supplied set anchors capable of withstanding at least four times the weight of the unit. Please fix.
- Then, fix the device to the bracket using the supplied hex bolt SET. At this time, check that there are no foreign substances in the thread or fastening hole of the product.
- After applying enough locking compound (Loctite 263) on 3~4 screws, screw them in. lock.
- The thread compound should set for one hour, during which time the installation should be completed.
- When tightening the bolts, tighten the torque to 35Nm.

Product Installation and Precautions

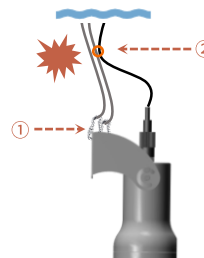
The manufacturer is not responsible for water damage caused by not tightening the underwater connector.

Underwater connector installation



- Check the shape of the male/female pins of the underwater connector as shown in ①, and fasten accordingly.
- Finish the fastening by turning the entry of the female part of the underwater connector all the way as in ②.

How to use the underwater inlet form

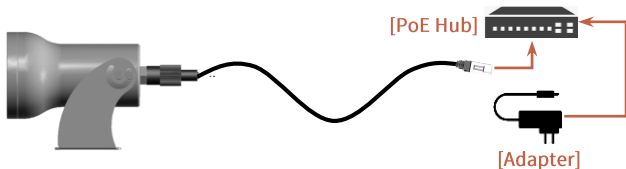


- As shown in ①, connect the product's mount bracket and carabiner, and use a steel wire to Freeze the product.
- As shown in ②, use a cable tie to fix the underwater cable to the connected steel wire. At this time, the underwater cable should be connected as much as possible so that the tension is not transmitted to the underwater cable. Loosen it so that the tension is distributed to the steel wire.

Product Installation and Precautions

The manufacturer is not responsible for damages caused by product failure due to product connector wiring errors.

Installation of IP type (PoE)



- When connecting to a network through a PoE HUB, do not connect a separate power adapter.
- iAQUA-200 must be connected to 30W PoE equipment such as PoE HUB or PoE injector iAQUA-100 must be connected with PoE 15W equipment.

LED control via Presets

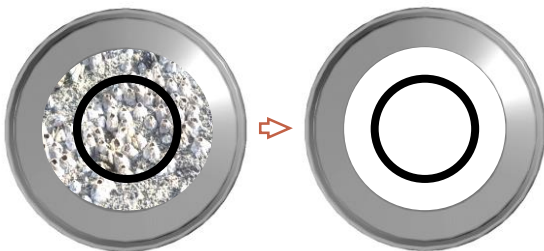
PRESET	FUNCTION	iAQUA-100	iAQUA-200
#1	Light ON/OFF	With Function	With Function
#2	Brightness UP	With Function	With Function
#3	Brightness Down	With Function	With Function
#4	Flash ON/OFF	-	With Function
#5	Red LED Apply	-	With Function
#6	Green LED Apply	-	With Function
#7	Blue LED Apply	-	With Function
#8	White LED Apply (Default)	-	With Function

- The LED control function through presets is a separate function when interlocking with NVRs without connecting a web viewer. This function is to provide LED control function. Therefore, in situations where the use of a web viewer is possible, please use the web viewer.

Maintenance after Product Installation

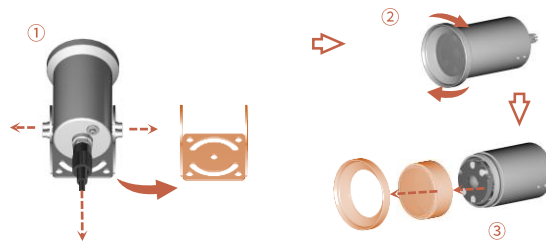
When replacing or maintaining the camera, be sure to move to a safe area.

Periodic cleaning



- This product is an underwater installation type CCTV camera. Attachment of marine organisms may interfere with image acquisition. Therefore, for normal image acquisition, it is necessary to clean the surface of the glass at least once every 3 months. Recommended.
- When cleaning the surface, the tempered glass coating may be damaged, so be careful when cleaning.
- When cleaning the tempered glass surface, clean the exterior of the product at the same time.

Disassembly/assembly of products for inspection

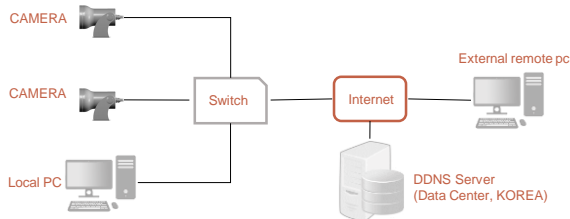


- Remove all bolts on the exterior of the mount bracket as shown in ①.
- As shown in ②, disassemble the decoration ring on the top of the main body and the front cover by turning it clockwise.
- You can inspect the module inside by disassembling the front cover + main body assembly as shown in ③. there is.
- However, the front cover + decoration of the product can be assembled/disassembled using special tools such as a belt wrench. Must be able to maintain waterproof performance.
- When disassembling the product, it must be disassembled/inspected in a place without ambient moisture, and For smog caused by moisture inflow during disassembly/inspection, the manufacturer not responsible.
- Due to the nature of underwater products, any disassembly/assembly of the product may deteriorate the waterproof performance. The manufacturer is not responsible for problems such as flooding caused by customer's arbitrary disassembly.

Network Connection and Setup

You can set the network environment of the camera according to the user's network connection configuration.

Installing the camera directly in a LAN environment

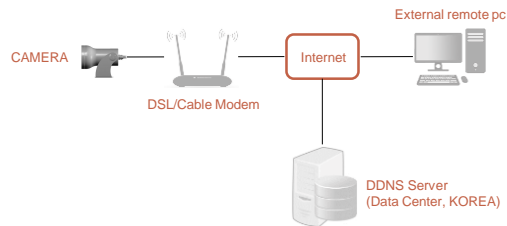


- Run the Internet browser of the local PC.
- Enter the IP address of the camera you want to access in the browser's address bar.
- From a remote PC on the external Internet in a LAN environment to a camera installed in a LAN environment When connecting, if port forwarding is not done or if a firewall is installed, the connection is not possible. may not be
In this case, contact your network administrator.
- When the product is shipped, the IP address is a fixed IP as in 'Checking product operation information and appearance status' It is set.

Tip

- If you lose the box or tag displaying the IP address, ID, and PW, you can contact us through the manufacturer's website. You can download the IP Search program.

Install the camera directly to the DSL/Cable modem of the DHCP method



- Direct connection between user computer and network camera.
- Use the IP Search program to find the IP address of the camera from the user's computer to the Internet.
Change it to an IP address that can be accessed through a browser.
- Connect to the web viewer using an internet browser.
- Move to the [Setup] page.
- Go to [Network] - [DDNS] setting page and set DDNS.
- [Basic] - Go to the [IP & Port] setting page and set the IP type to [DHCP].
- Disconnect the camera from the user's computer and connect it directly to the modem.
- Reboot the camera.

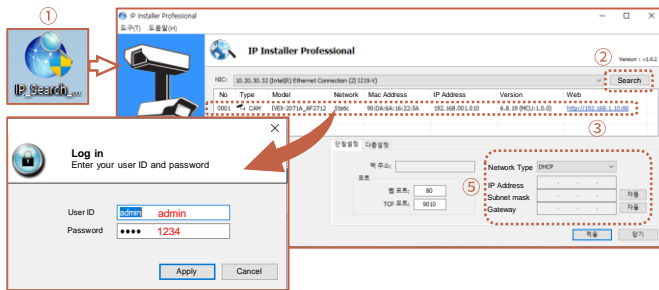
Tip

- Disposal of the device must be properly disposed of in accordance with the e-waste guidelines and environmental regulations.

Network Connection and Setup

The IP address range of the user's computer and the IP address range of the camera must match for normal web viewer access.

Using the IP Search program

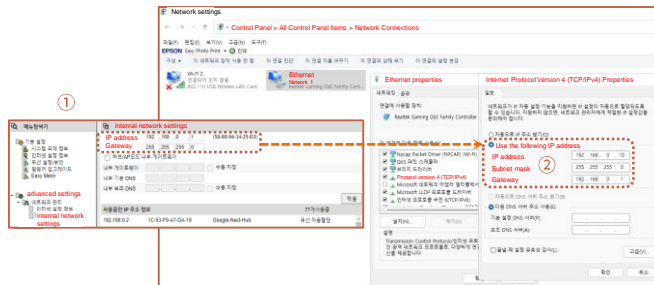


- Click the icon such as ① on the IP Search program downloaded to the user's computer Run.
- When the IP Search program is executed, click the search button as shown in ② to start IP search. If the IP address is normally searched as shown in ③, double-click the searched IP address to open the web viewer. can connect.
- When the input window like ④ appears, enter ID / PW. (default IP address: 192.168.1.10 / ID: admin / PW: 1234)
- If you need to change the IP address, set the corresponding camera as in ⑤ in the IP Search program. You can change the IP address by clicking on the search content.

Tip

- HTTP Port: HTTP used when accessing the camera using an Internet browser Port, the initial value is 80.
- RTSP Port: This is the port that controls real-time streaming. The initial value is 554.

PC network settings depending on whether an IP sharer is used



- As in ①, connect to the internal network settings of the user's router. (The menu name or access method may differ depending on the router manufacturer.)
- IP Address: Set according to the private IP range provided by the IP sharer. Ex) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254
- Subnet Mask: If the <Subnet Mask> of the IP router is the <Subnet Mask> of the camera It's possible.
- Gateway: The IP router's <Local IP Address> becomes the camera's <Gateway> value.
- ② Check if the IP settings of the same band are set in the network settings of the user's computer. Check.

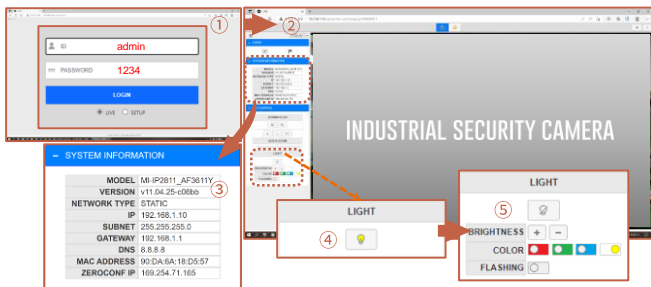
Tip

- If there are more than 2 cameras, camera 1 (192.168.0.3), camera 2 (192.168.0.4), etc. Set different IP addresses and use the same subnet mask and gateway.

Network Connection and Setup

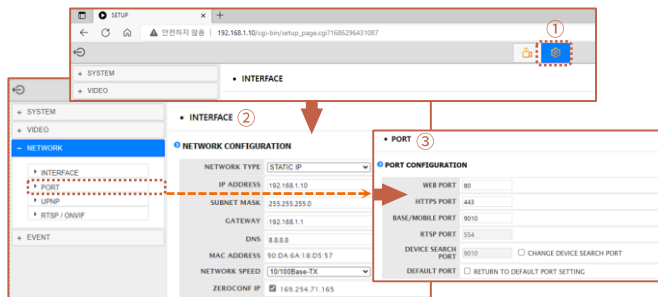
Web viewer access can be checked in normal operation through Google Chrome and Microsoft Edge browsers.

Web viewer access



- Run a web browser such as Chrome or Edge on the user's computer.
 - Enter the IP address set on the camera into the web browser address bar.
 - Connect to the camera normally as in ①, and enter the initial ID/PW 'admin / 1234' in the pop-up window.
- Enter. (For security, be sure to change the initial ID/PW after setting.)
- After accessing the LIVE screen as in ②, select F/W version and F/W version from the system information menu on the left as in ③ Information such as IP address can be checked.
 - If you press the LED ON/OFF icon as shown in ④, the LED control menu will be created as shown in ⑤.
- The menu in ⑤ may have different options depending on the model.

Change IP Settings in Web Viewer



- If you press the 'SETUP' icon in ① on the live screen, it will take you to the SETUP menu where you can set. enter.
 - Click the 'INTERFACE' menu in ② to set a fixed IP and DHCP for the camera IP address. status, and static IP can change the IP address.
 - When all changes are completed, press the 'SAVE' button to save the settings.
 - After about 30 seconds, you will be able to connect to the changed IP address in your web browser.
 - If you click 'PORT' in ③, you can check each port address.
- Please refer to the port settings of the router, etc.

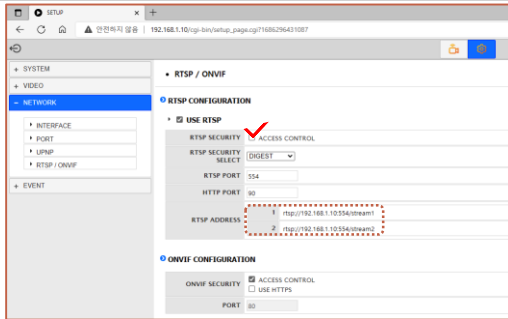
Tip

If the IP address you want to change is an IP address that is being used by another device in the same band You may not be able to access the web viewer due to an IP conflict.

Network Connection and Setup

When setting RTSP, you must first check if the '554 PORT' of the router is open.

RTSP settings



RTSP SECURITY : Set whether to use RTP/RTSP.

RTSP SECURITY SELECT: Sets whether or not to control RTSP access.

RTSP Port : Set the RTSP Port. The default value is 554.

RTSP ADDRESS:

Multicast MAIN Stream (Channel 1) : `rtsp://camera IP:554/stream1`

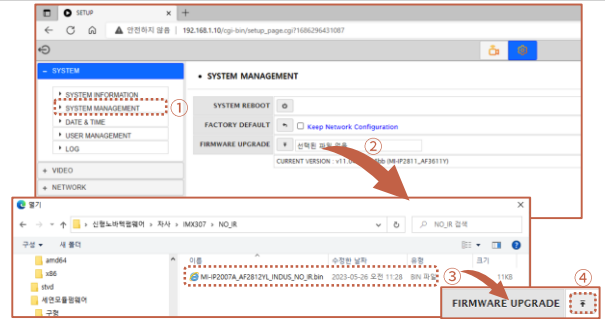
Multicast SUB Stream (Channel 2) : `rtsp://camera IP:554/stream2`

ONVIF SECURITY : Set whether to use WS-SECURITY (web service security).

When accessing RTSP through a web browser, without entering ID/PW in the following way Access is possible.

- `rtsp://admin:1234@192.168.1.10:554/stream1`

Firmware update method



- Press the 'SETUP' icon at the top of the web viewer to enter the SETUP menu.

- Press the 'SYSTEM UPGRADE' menu as in ① and click the 'Select File' menu in ②.

- You can select the downloaded file in the pop-up window as shown in ③.

- After selecting the file, click the 'UPGRADE' button in ④ to proceed with the upgrade.

* Upgrade files can be provided through the manufacturer.

Tip

- If the firmware update is not completed normally, the product cannot be used.

- Please note that this problem must be returned to the manufacturer and repaired.

Installation Inspection Check Sheet

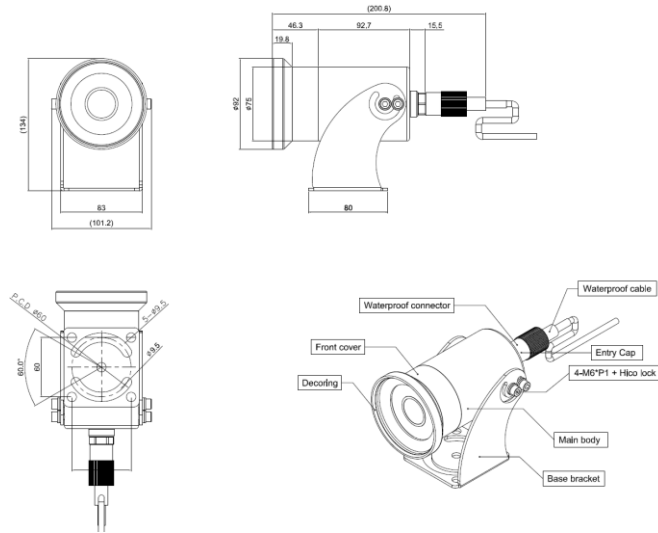
1. When receiving the product, prior to on-site installation, be sure to perform on-site installation only when there is no problem after inspecting the pre-checklist according to the following order.
2. Please note that service measures may be charged for problems that occur during on-site delivery without prior checklist inspection.

No	Checking list	Check
1	Remove the IP address tag attached to the product's mount bracket after installing and fixing the device.	<input type="checkbox"/>
2	Do not throw away at least one product box and PE foam for defective shipment to the manufacturer.	<input type="checkbox"/>
3	Depending on the input specifications of the separate power supply or the power supply (SMPS) supplied by the manufacturer and the PoE injector Connect with care.	<input type="checkbox"/>
4	Connect the CAT.5 cable (RJ-45 Jack) to the connection terminal correctly and check that video and control operate normally under the optimal network environment.	<input type="checkbox"/>
5	Check/set if the ZOOM IN/OUT control protocol and control baud rate match the NVR or communication equipment you are using.	<input type="checkbox"/>
6	If applicable, check LED Behavior.	<input type="checkbox"/>
7	Make a final check to see if there are any abnormalities in the zoom / video / control status.	<input type="checkbox"/>

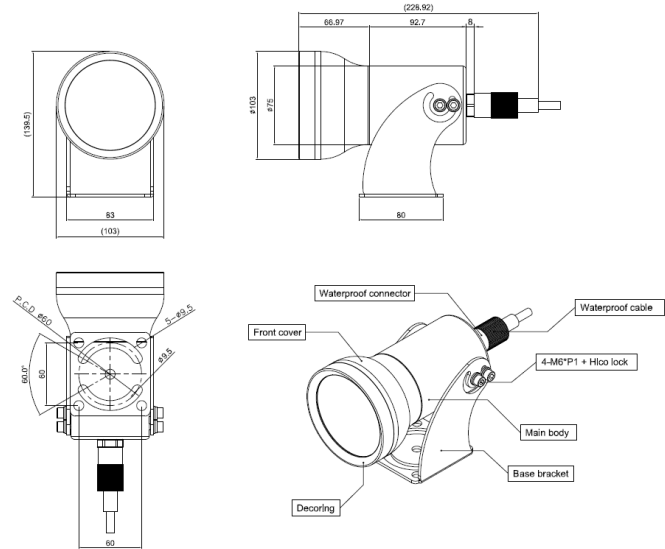
Technical Drawing

Before/after product installation, refer to technical drawings to review site conditions.

IAQUA-100 Series



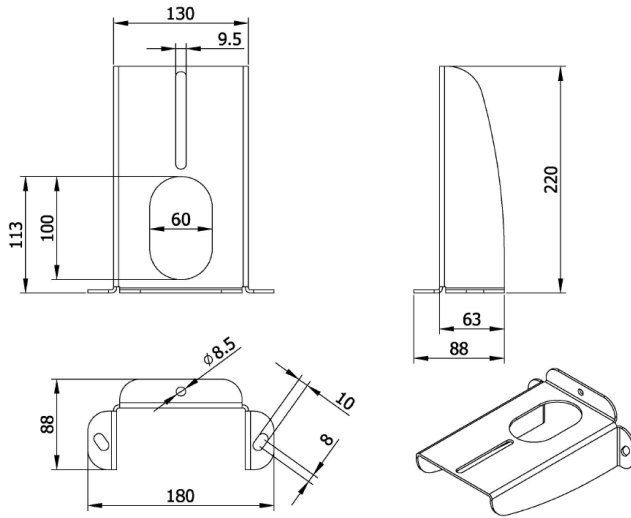
IAQUA-200 Series



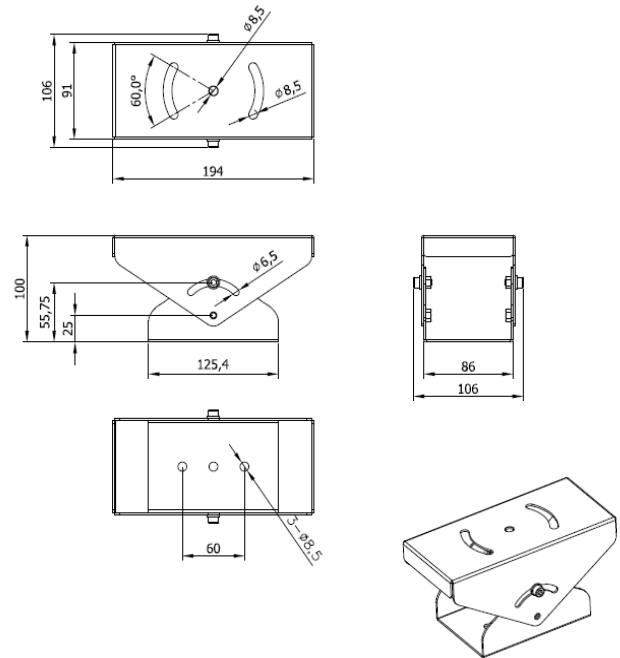
Technical Drawing – Mount Bracket

Before/after product installation, refer to technical drawings to review site conditions.

Wall Mount Bracket



Sealing Bracket



INDUSTRIAL SECURITY CAMERA