

INDUSTRIAL SECURITY CAMERA

Product instruction 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

iCUBE-PF 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 set (M5, M3)		1	Hex bolt set (M8*15)
	1	Ground lug (M6)		1	Product User Manual
	1	Spare bolt (M3*4, M4*2)			

Optional components (purchased separately)

Picture	Qty	Explanation	Picture	Qty	Explanation
	1	ICUBE-PF Wall mount Brackets		1	Dual Wall mount bracket
	-	Mount bracket accessories			

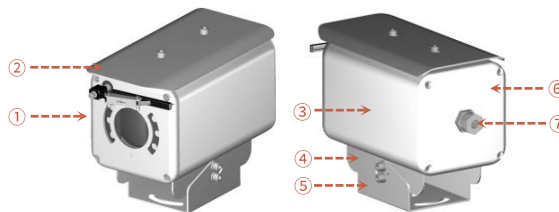
Component notes

- When purchasing a wall mount bracket, 4 or 6 set anchors are provided as standard.

Product classification and part names

Please be aware of the part names for each product as they are important for providing quick and accurate service for problems in each part.

ICUBE-PF Series



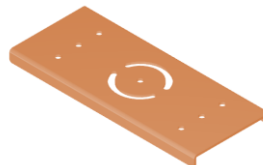
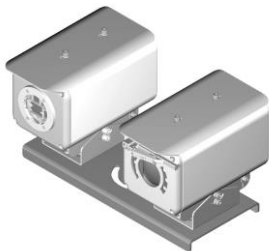
Series	Model	Details
iCUBE Series	ICUBE-PF-100	36X CAMERA + Wiper + IRLED + PoE 30W

No	Details	No	Details
1	Front Cover	11	
2	Sun Shield	12	
3	Camera Housing Body	13	
4	Base bracket	14	
5	Mount bracket	15	
6	Rear Cover	16	
7	Cable Entry, M20	17	
8		18	
9		19	
10		20	

Product classification and part names

Please be aware of the part names for each product as they are important for providing quick and accurate service for problems in each part.

iCUBE PF Dual Series



Series	Model	Details
iCUBE Series	ICUBE-PF-100D	36X CAMERA + Wiper + IRLED + PoE 30W + GE Glass

No	Details	No	Details
1	Dual Housing Base Bracket	11	
2		12	
3		13	
4		14	
5		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.

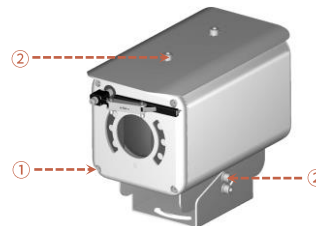
Check the packing box

- 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

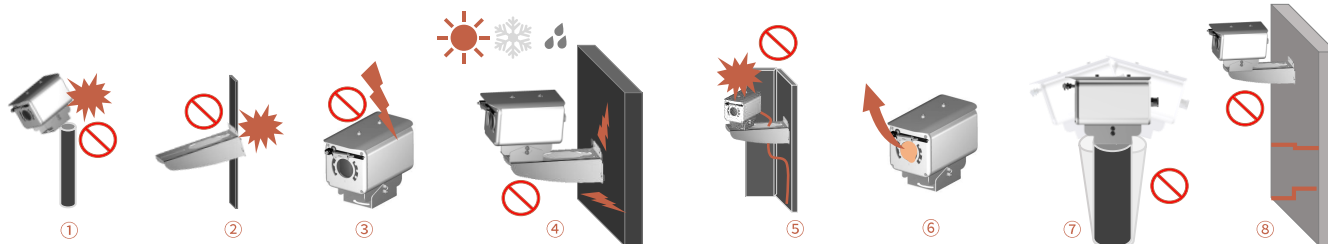


No	L wrench specification
1	M3 (Front & Rear Cover)
2	M5 (Sun shields and brackets)
3	
4	
5	
6	
7	
8	
9	
10	

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



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

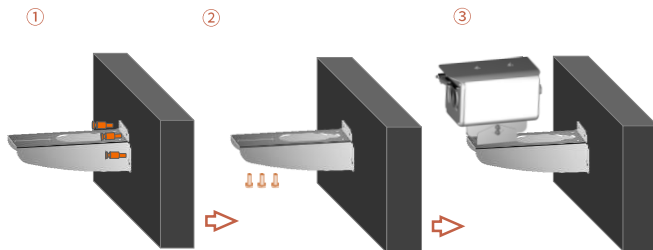
- ① Check whether the size of the 'pedestal mount bracket' provided by the manufacturer is appropriate for the size of the top of the pole.
- ② Check whether the size of the mounting parts such as the 'wall mount bracket' and H-beam provided by the manufacturer are suitable for installation.
- ③ Make sure that the environment in which the product is installed is not an area where lightning frequently occurs, and if possible, install it in a place that is not affected by lightning.
- ④ If the environment where the product is installed is subject to external factors such as high temperature, high humidity, and low temperature due to direct sunlight, it is recommended to install the product to avoid these influences.
- ⑤ The environment in which the product is installed must be installed in an environment that sufficiently considers the length of the explosion-proof installation material connected to the product.
- ⑥ After receiving the product, be sure to remove the protective sponge inserted into the back of the cable gland to prevent damage to the cable sheath while moving the product.
- ⑦ If there is severe vibration in the environment where the product is installed, it may affect the video, so it is recommended to attach and install a device that can attenuate vibration, such as a separate damper.
- ⑧ If the environment in which the product is installed is poor and cannot support the high weight of the product (approximately 15 kg), it may pose a safety problem, so it is recommended to install it in another safe location.

Product installation and precautions

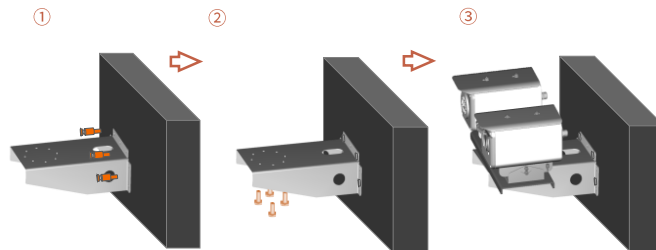
The manufacturer is not responsible for any problems caused by installing a bracket other than the genuine bracket provided by the manufacturer.

Pole installation using ICUBE-PF wall mount bracket

Wall installation using Dual wall mount bracket



- The wall mount bracket can be fixed to a vertical wall. Secure the bracket to the wall with the supplied set anchors that can withstand at least 4 times the weight of the device.
- Then, secure the device to the bracket using the provided hex bolt set. At this time, check that there are no foreign substances in the threads or fastening holes of the product.
- Apply locking compound Loctite 263) generously on the three screws and then lock the screws.
- The thread compound must harden for one hour, during which time the installation must be completed.
- When tightening the bolt, tighten the torque to 35Nm.

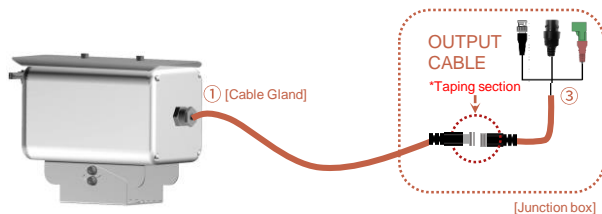


- The wall mount bracket can be fixed to a vertical wall. Secure the bracket to the wall with the supplied set anchors that can withstand at least 4 times the weight of the device.
- Then, secure the device to the bracket using the provided hex bolt set. At this time, check that there are no foreign substances in the threads or fastening holes of the product.
- Apply locking compound (Loctite 263) generously on the four bolts and then lock the bolts.
- The thread compound must harden for one hour, during which time the installation must be completed.
- When tightening the bolt, tighten the torque to 35Nm.

Product installation and precautions

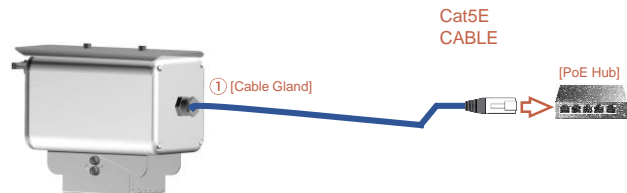
Product defects due to connection errors between the power terminal and RS-485 connector will be treated as customer error and will be repaired at a cost.

Multi cable connection



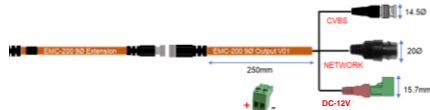
- As shown in the picture, insert the cable into the junction box and connect the end connector so that the cable connector connection area is not exposed to the outside.
- At this time, tape the connection area of the cable connector with insulating tape.

Connection of PoE dedicated cable



- Connect the network cable to the junction box as shown in the picture, being careful not to damage the cable.
- After inserting the cable, cut it to adjust the length of the network cable and proceed with direct cable arrangement, referring to the picture above.

Tip



Product installation and precautions

The manufacturer is not responsible for damage to the product due to lightning, surge, etc. due to failure to ground the product.

Ground installation



- Product grounding must be done using an external cable (12 AWG) with a cross-section of 3 mm².
- For the copper tube terminal to be used for power connection, such as grounding, use the copper tube terminal provided with the product and the M5*8 (wrench bolt) screw to secure it to the grounding hole with an M4 L wrench.
- A separate compressor is required to compress copper tube terminals. At this time, the press is not provided separately.

Installation completed and inspected

Manufacturers strongly recommend that all devices undergo final testing prior to installation at their final installation location.

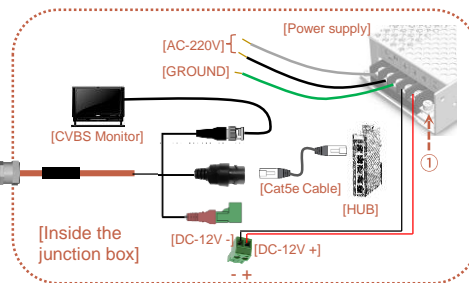
Finalization of product installation



- Once installation of cables and piping is complete, connect them to the junction box as shown on the right.
- For optional functions, refer to the classification table below to operate.

Operation function by preset number	Built-in CAMERA No	BOX CAMERA No
IR-LED ON/OFF (Set Preset -> GO Preset Select)	#15	#15
Wiper ON/OFF (Set Preset -> GO Preset Select)	#16	#16
Run Home Position	#241	#241
Reboot	#242	#242
Factory Reset	#243	#243

Junction box internal wiring

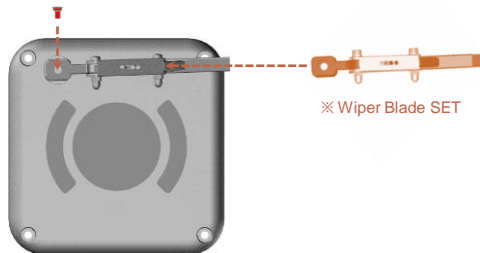


- After all installation is complete, install the power supply included with the product inside the explosion-proof enclosure and install necessary devices such as network and CVBS output transmission equipment.
- Carefully connect the + and - terminals of the DC-12V power supply and turn on the power.
However, for the PoE version, do not connect the power supply, but connect to a PoE hub, etc.
- Carefully check all connections to the product before turning on the power.
- At this time, if there are no problems during inspection, it is connected to the NETWORK and can be used normally.
- If a problem occurs due to lack of power, turn the variable resistor in ① to increase the voltage to solve the problem due to cable resistance.
- If an abnormality is discovered in the initial state, immediately turn off the power and contact the manufacturer.

Maintenance after product installation

The manufacturer only guarantees the use of genuine parts guaranteed by the manufacturer for parts used during device maintenance.

Wiper replacement



- For models equipped with wipers, the blades may wear out and video quality may deteriorate.
- At this time, you can replace the wiper blade by loosening the bolt that secures the wiper blade and pulling it by hand as shown in the picture.
- If the wiper blade is pushed too far left or right when replacing, the wiper motor may malfunction.

Cleaning of GE Glass Protection Grid



- Through routine cleaning, the product must be managed periodically to prevent more than 5 mm of dust from accumulating on the surface.
(for static electricity prevention purpose)
- Tempered glass should be cleaned with mild soap and water diluted with water.
- Care must be taken when cleaning germanium glass to avoid scratching or damaging the carbon-coated surface.
- If the coating of germanium glass is damaged, the ultraviolet light projection of the surface may decrease.
- When cleaning germanium glass, unscrew the bolts of the germanium glass protector grid, clean with mild soapy water diluted with water, and then reassemble.
- Be sure to clean the surface of the device with a damp cloth

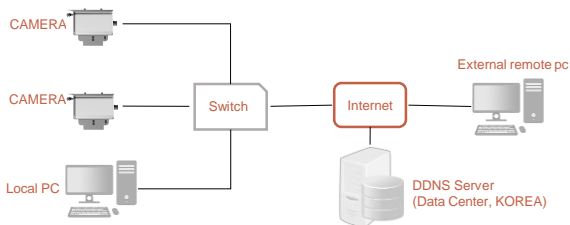
Tip

- The device must be disposed of appropriately in accordance with electronic waste guidelines and environmental regulations.

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

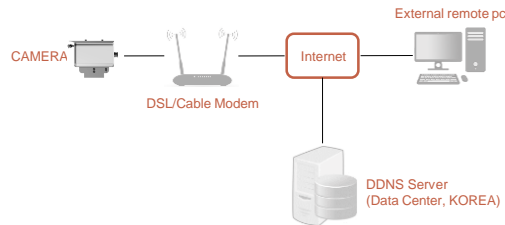


- Run the Internet browser of the local PC.
- Enter the IP address of the camera you want to access in the browser's address bar.
- From a remote PC on the external Internet in a LAN environment to a camera installed in a LAN environment. When connecting, if port forwarding is not done or if a firewall 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.

Installing the camera directly in a LAN environment

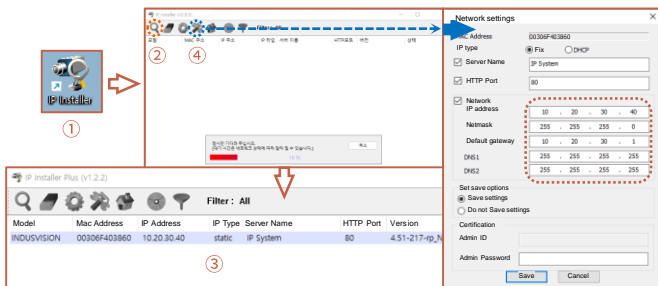


- Direct connection between user computer and network camera.
- Use the IP Search program to find the IP address of the camera from the user's computer to the Internet. Change it to an IP address that can be accessed through a browser.
- Connect to the web viewer using an internet browser.
- Move to 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.

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

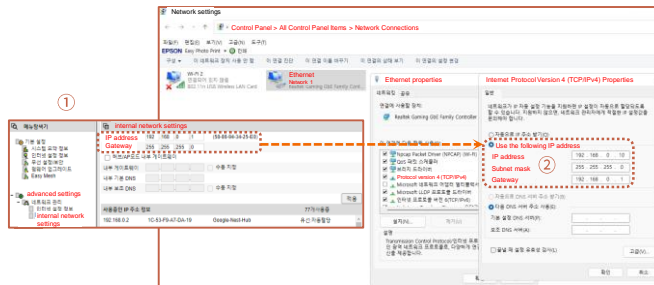


- Click the icon such as ① on the IP Search program downloaded to the user's computer Run.
- When the IP Search program is executed, click ② icon to start IP search.
If the IP address is normally searched as shown in ③, double-click the searched IP address to open the web viewer.
can connect. (default IP address: 10.20.30.40 / ID: root / PW: root)
- If you need to change the IP address, click the corresponding icon as ④ in the IP Search program. Click to change IP address.

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, and 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.

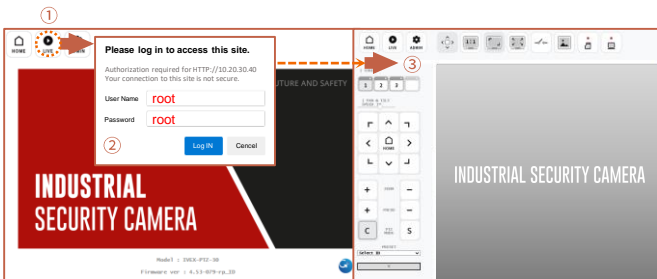
Tip

- 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

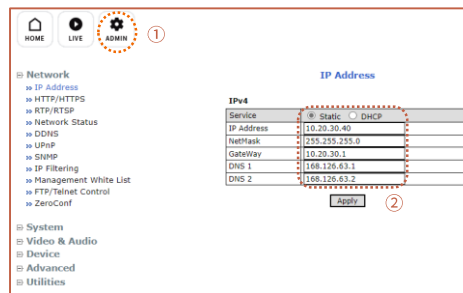


- Run a web browser such as Chrome or Edge on the user's computer.
 - Enter the IP address set on the camera into the web browser address bar.
 - If you connect to the camera normally as in ① and press the 'LIVE' button on the top left of the screen, the same as ②
- The ID/PW input window is executed, and input the initial ID/PW 'root'.
(For security, be sure to change the initial ID/PW after setting.)
- As shown in ③, you can check the OSD window for PTZ control along with the output of the live screen. there is.

Tip

When operating the web viewer in Internet Explorer 11, 'Active X' must be downloaded and executed.

Change IP Settings in Web Viewer



- There is a SETUP menu that displays the 'ADMIN' icon in ① on the live screen. Now.
- You cannot go back to the static IP and DHCP status for the camera IP address by clicking the 'IP Address' menu.
it's okay. Static IP allows you to change your IP address.
- When all changes are complete, click the 'Apply' button to save the settings.
- After 30 seconds, you can connect to the changed IP address in your web browser.

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

RTP/RTSP			
Service	<input checked="" type="radio"/> Enable <input type="radio"/> Disable		
RTSP Port	554 (Default:554, 554 ~ 65534)		
Packet Size	1 (Default:1, 1 ~ 12)		
Keep-Alive	<input checked="" type="radio"/> On <input type="radio"/> Off		
RTP Auth Algorithm	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA256		
Camera 1	Multicast Address	0.0.0.0	Disable:0.0.0.0
	Multicast Port	0	(225.0.0.0 ~ 239.255.255.255)
	Multicast Port	0	(Disable:0, 2048 ~ 65534)
Camera 2	Multicast Address	0.0.0.0	Disable:0.0.0.0
	Multicast Port	0	(225.0.0.0 ~ 239.255.255.255)
	Multicast Port	0	(Disable:0, 2048 ~ 65534)
Camera 3	Multicast Address	0.0.0.0	Disable:0.0.0.0
	Multicast Port	0	(225.0.0.0 ~ 239.255.255.255)
	Multicast Port	0	(Disable:0, 2048 ~ 65534)

- **Service:** Set whether to use RTP/RTSP.
- **RTSP Port:** Sets the RTSP Port. The default value is 554.
- **Packet Size:** This is the menu to set the Packet Size to be transmitted via RTP/RTSP. If the value is low, compatibility with many S/Ws is maintained. It divides and transmits small amount of packets. The higher the value, the fewer packets are divided and transmitted. However, if the program does not support a high value, no video is displayed.
- **Keep-Alive:** Sends the current camera status through continuous UDP communication. Some S/W and equipment are not supported.
- **RTP Auth Algorithm:** Determines the RTP encryption authentication method.
- **MD5** is highly compatible with many S/W. If set to **SHA256**, stronger encryption is applied, but it cannot be played on S/W or devices that do not support SHA256, such as VLC.

Unicast Primary Stream (1번 Channel) : rtsp://camera IP/cam0_0

Unicast Secondary Stream (2번 Channel) : rtsp://camera IP/cam0_1

Unicast Tertiary Stream (3번 Channel) : rtsp://camera IP/cam0_2

Multicast Primary Stream (1번 Channel) : rtsp://camera IP/mcam0_0

Multicast Secondary Stream (2번 Channel) : rtsp://camera IP/mcam0_1

Multicast Tertiary Stream (3번 Channel) : rtsp://camera IP/mcam0_2

Firmware update method

HOME LIVE ADMIN

- Network
- System
- Video & Audio
- Device
- Advanced
- Utilities
 - Log
 - Reboot
 - Restore Default
 - Update

Update

Firmware Update

PTZ Device Driver Update

Sensor Device Driver Update

PTZ Firmware Update

System Information

Mac Address (E/N) 00:30:6F:40:3F:55
Firmware version 1.4.53-007p_IP_ID

Please upload *_of_nTarga_*.bin file for Firmware.
For the system safety, "Do not close this window compulsory."

Select file: 003_07C_07B_2_6

Next Cancel & Report

Description
Processing: 0 %

- Press the 'ADMIN' icon at the top of the web viewer to enter the SETUP menu.
- Press the 'UPDATE' menu as in ① and click the 'Firmware Update -> Start' button at the top of the menu. Click.
- When a pop-up window like ② appears, click the 'Select File' button to specify the file to be upgraded. do.
- Click the 'NEXT' button at the bottom of the pop-up window in ② to proceed with the upgrade.

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

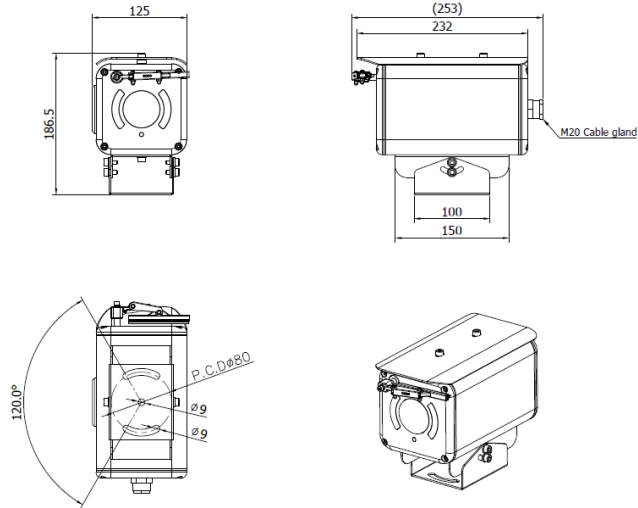
1. When receiving the product, before on-site installation, please check the pre-checklist in the following order and only install on-site if there are no problems.
2. Please note that in some cases, service measures may be provided at a cost for problems that occur during on-site delivery without prior checklist inspection.

No	Checking list	Check
1	If applicable, remove the IP address tag attached to the bracket area of the product after installing and fixing the device.	<input type="checkbox"/>
2	Do not throw away at least one product box and PE foam for shipping defective products to the manufacturer.	<input type="checkbox"/>
3	Please remove the tempered glass protective vinyl after fixing the device.	<input type="checkbox"/>
4	Depending on the input specifications of a separate power supply, power supply (SMPS) supplied by the manufacturer, or PoE injector, Connect with caution. (DC12V / AC220V / AC110V, etc.)	<input type="checkbox"/>
5	If applicable, connect the video cable (BNC terminal) correctly to the recorder or monitor to check for normal video output.	<input type="checkbox"/>
6	If applicable, connect the CAT.5 cable (RJ-45 Jack) correctly to the connection terminal and use it under optimal network environment conditions. Check that video and control operate normally.	<input type="checkbox"/>

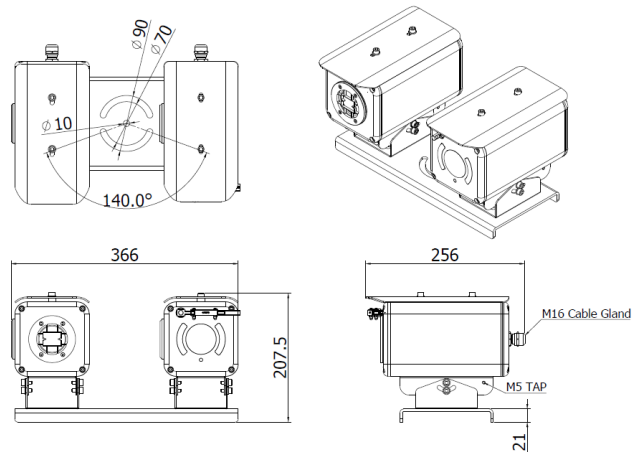
Technical drawing – ICUBE-PF Series

Please refer to the technical drawings and review the site situation before and after product installation.

ICUBE-PF Series



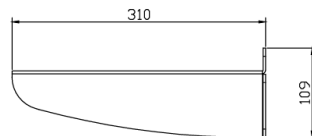
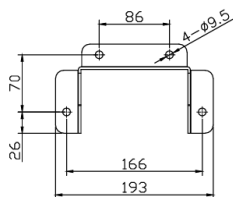
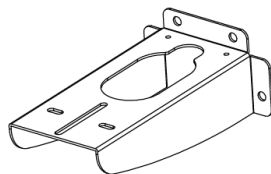
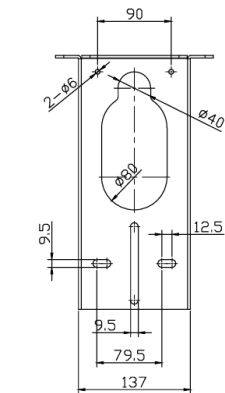
ICUBE-PF-Dual Series



Technical drawing – Mount bracket

Please refer to the technical drawings and review the site situation before and after product installation.

Wall Mount Bracket (IVEX-WB-01)



| Memo

INDUSTRIAL SECURITY CAMERA