

WISENET

ANALOG CAMERA

User Manual

HCF-8010V

Analog Camera

User Manual

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❖ Design and specifications are subject to change without prior notice.

Safety information



CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT OPEN



CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.



This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

- To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.
- To prevent injury, this apparatus must be securely attached to the floor/wall in accordance with the installation instructions.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.
3. Do not connect multiple cameras to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. insecure connection may cause fire.
5. When installing the camera, fasten it securely and firmly. The fall of camera may cause personal injury.

Safety information

6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the camera. doing so may cause personal injury due to fire, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. doing so may cause fire or electric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. in such case, immediately disconnect the power source and contact the service center. continued use in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. never disassemble or modify this product in any way. (Hanwha Techwin is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. doing so may cause fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong shock to it. Keep away from a location subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature (over 55 °C), low temperature (below -30 °C), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when there is a lightning. Neglecting to do so may cause fire or damage to the product.
5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.
7. Avoid aiming the camera directly towards extremely bright objects such as sun, as this may damage the CMOS image sensor.
8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
9. The Mains plug is used as a disconnect device and shall stay readily operable at any time
10. Do not expose the camera to radioactivity. Radioactivity exposure may damage the CMOS.

FCC Statement

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.

CAUTION

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of 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.



IC Compliance Notice

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations of ICES-003.



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.

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 only with dry cloth.
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, 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 is 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 cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as powersupply 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 supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" and rated from 24V AC (50/60 Hz) min. 0.2 A or 12V DC, min. 0.3 A.
16. 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.



Important safety instructions

17. 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.
18. 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.
19. 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.
20. Installing or using the product in water can cause serious damage to the product.



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



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.

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Overview

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.)



Camera



Quick Manual



Warranty card



Template



Tapping Screw



Anchor

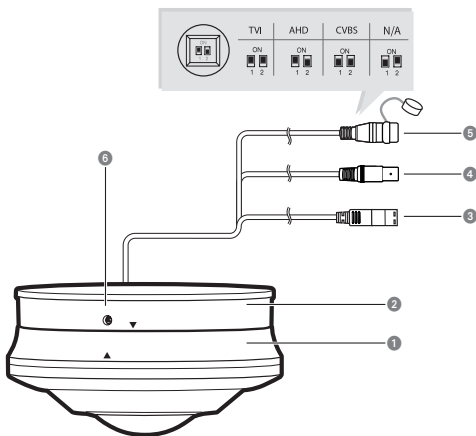


Screw

Overview

AT A GLANCE

Appearance



- 1 Camera
- 2 Mounting Plate: Used to mount the camera.
- 3 Power Input Connector (Dual (24V AC & 12V DC))
- 4 Video Output Jack : Outputs a video in the set video format.
- 5 Video Format Setting Switch: Allows to set to a video format (TVI/AHD/CVBS) of your choice.
- 6 Screw Hole: Used to assemble/disassemble the camera and plate.

Installation

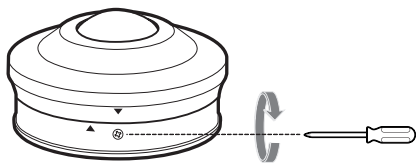
BEFORE INSTALLATION

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

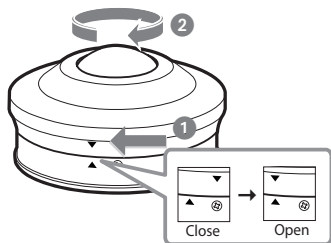
- You have to check whether the location (ceiling or wall) can bear five times the weight of your camera.
- Don't let the cable to be caught in improper place or the electric line cover to be damaged. Otherwise it may cause a breakdown or fire.
- Before installing your camera, you have to adjust the front direction.
- When installing your camera, don't allow any person to approach the installation site.

DISASSEMBLING

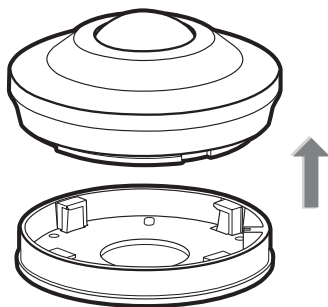
1. Remove the screws on the side using a phillips screwdriver.



2. Turn the camera body clockwise to remove the mounting plate.

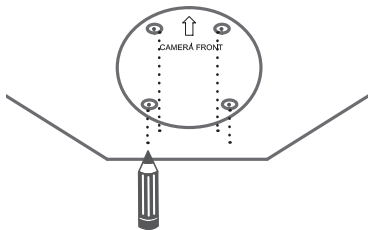


Installation

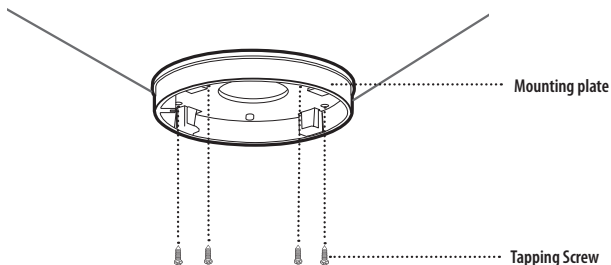


INSTALLATION

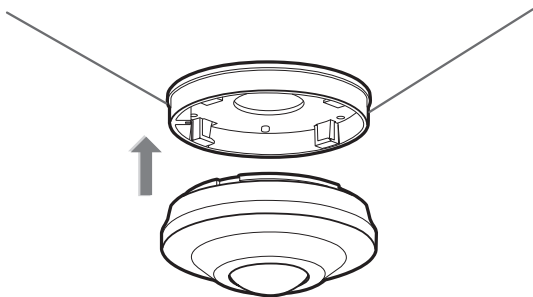
1. Attach the installation template to the selected area and punch 4 holes as shown in the figure.



2. Align the installation holes of the camera and use the tapping screws to fix the mounting plate.
 - Make sure that the <FRONT> marking on the bottom mounting plate is turned towards the direction to monitor.



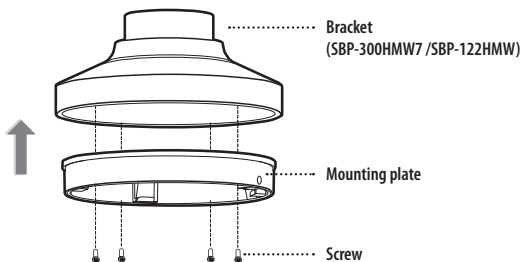
3. Refer to "Disassembling" to attach the camera to the mounting plate.



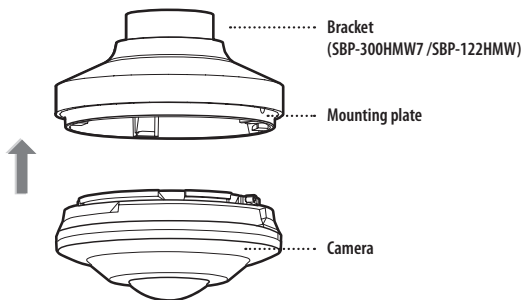
Optional Accessories for Installation

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

1. Install the mounting plate to the bracket (SBP-300HMW7 /SBP-122HMW) as shown below, and then attach the camera to the mounting plate.

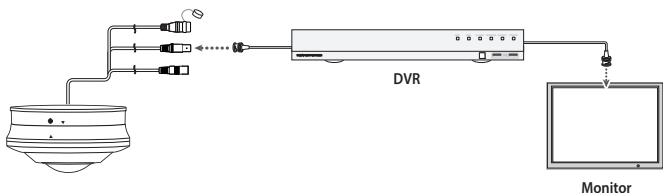


2. See "Disassembling" to attach the camera to the mounting plate.



CONNECTING TO MONITOR

Connect the Video OUT port on the rear panel of the camera to a DVR.



- As the connecting method varies with the instruments, refer to the manual supplied with the instrument.
- Only connect the cable when the power is turned off.

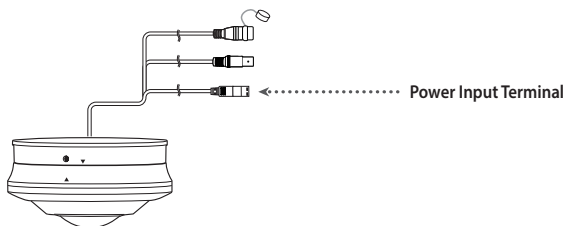


- This product supports 3 video output formats of AHD, CVBS, and TVI. The default is AHD. Select the video output appropriate for your DVR.

Connection

CONNECTING TO POWER

You can connect power as shown in the following figure.



When the resistance value of copper wire is at [20°C(68°F)]

Copper wire size (AWG)	#24 (0.22 mm ²)	#22 (0.33 mm ²)	#20 (0.52 mm ²)	#18 (0.83 mm ²)
Resistance value(Ω/m)	0.078	0.050	0.030	0.018
Voltage Drop (V/m)	0.028	0.018	0.011	0.006

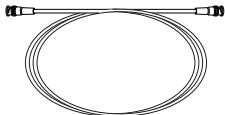
- As shown in the table above, voltage decreases as the wire gets longer. Therefore use of an excessively long adaptor output line for connection to the camera may affect the performance of the camera.
- ※ Standard voltage for camera operation : DC 12 V ± 10%, AC 24 V ± 10%
- ※ There may be some deviation in voltage drop depending on the type of wire and the manufacturer.



- Be sure to connect power only after all the installation is complete.

- Video Cable

The camera's video output port is connected to the DVR with a BNC coaxial cable, shown below.



Distance	Recommended Cable Specification
500 m	5C2V



- It is recommended that pure copper coax cable is used and not copper coated steel, as this will cause issues with the communication over the coaxial cable.
- To ensure picture quality, only single-channel video output connector can be used while camera connected to other video equipments.

camera operation

MENU CONFIGURATION

MAIN SETUP			
VIDEO FORMAT	• FORMAT	• RETURN	
WHITE BAL	• ATW • MANUAL	• INDOOR • AWC → SET	• OUTDOOR • RETURN
EXPOSURE	• BRIGHTNESS • SSNR	• SHUTTER • RETURN	• AGC
BACKLIGHT	• USER BLC	• D-WDR	• RETURN
SPECIAL	• LANGUAGE • RETURN	• IMAGE ADJ	• DAY&NIGHT
EXIT	• SAVE&END	• NOT SAVE	• RESET

CAMERA SETUP

VIDEO FORMAT

1. From the Setup menu, select the <VIDEO FORMAT >.
2. Select the VIDEO mode.
 - The video output can be selected from AHD/CVBS/TVI.

MAIN SETUP	
▶ 1. VIDEO FORMAT	FORMAT ← ↓
2. WHITE BAL	ATW
3. EXPOSURE	← ↓
4. BACKLIGHT	OFF
5. SPECIAL	← ↓
6. EXIT	SAVE

White Bal (White Balance)

Use the White Balance function to adjust the screen color.

1. From the Setup menu, select the <White Bal>.
 2. Select the desired mode.
- ✗ Select one of the following 5 modes, as appropriate for your purpose.

MAIN SETUP	
1. VIDEO FORMAT	FORMAT ↵
▶ 2. WHITE BAL	ATW
3. EXPOSURE	↵
4. BACKLIGHT	OFF
5. SPECIAL	↵
6. EXIT	SAVE

- **ATW** : Select this when the color temperature is between 2,400K and 10,500K.
- **INDOOR** : Select this when the color temperature is between 4,500K and 8,500K. Automatically adjusts the camera color for optimization to the indoor environment.
- **OUTDOOR** : Select this when the color temperature is between 1,800K and 10,500K. Automatically adjusts the camera color for optimization to the outdoor environment.
- **MANUAL** : Select this to fine-tune White Balance manually. Set White Balance first by using the ATW or AWC mode. After that button to MANUAL mode, fine-tune the White Balance and the Function Setup switch.
- **AWC→SET** : To find the optimal luminance level for the current environment, point the camera towards a sheet of white paper and press the Set button. If the environment changes, readjust it.

WB MANUAL	
▶ 1. RED GAIN	50
2. BLUE GAIN	40
3. RETURN	↵



- White Balance may not work properly under the following conditions. In this case select the AWC mode.
 - 1 Select this When the color temperature of environment surrounding the subject is out of the control range (e.g. clear sky, or sunset)
 - 2 When the ambient illumination of the subject is dim.
- If the camera is directed towards a fluorescent light or is installed in a place where illumination changes dramatically, the White Balance operation may become unstable.

Camera operation

EXPOSURE

1. From the Setup menu, select the <EXPOSURE>.
2. Select each item and set it properly.

- **BRIGHTNESS** : Adjusts the video brightness.
- **SHUTTER** : You can select the shutter.
 - MIN/MAX : 1/30s~ 1/50,000s (NTSC),
1/25s~ 1/50,000s (PAL)
 - A.FLK : Select this when you experience picture flicker, this happen when there is a clash with the installed lighting frequency.

MAIN SETUP	
1. VIDEO FORMAT	FORMAT ↵
2. WHITE BAL	ATW
▶ 3. EXPOSURE	↵
4. BACKLIGHT	OFF
5. SPECIAL	↵
6. EXIT	SAVE



- The greater the shutter value the brighter the screen is but the more the residual images of objects there are.
- If the min shutter value is large, it can cause noise, spots and white areas but still operate normally.
- If you do not use the AGC mode on the exposure menu, it cannot be set above 1/60sec.
- Depending on the setting range of the minimal/maximal shutter, the screen exposure can become saturated.

- **AGC (OFF/LOW/MIDDLE/HIGH)** :

The higher the gain level, the brighter the screen - but the greater the noise.

- **SSNR** : This function reduces the background noise in a low luminance environment.

- 2DNR (OFF/LOW/MIDDLE/HIGH)
- 3DNR (OFF/LOW/MIDDLE/HIGH)



- When adjusting the noise reduction level in the SSNR mode, remember that the higher the level set, the more the noise level will be reduced, as will the brightness of the image.

BACKLIGHT

The camera uses high performance DSP chips that are designed to clearly display the object and the background despite severe reverse light.

1. From the Setup menu, select the <BACKLIGHT>.
2. Select the desired mode.

- **USER BLC :**

Enables a user to select a desired area on a picture and view that area more clearly.

- LEVEL : Adjusts the brightness level of a monitoring area.
- AREA : Adjust the area to be enhanced.
- DEFAULT : Resets the USER BLC setting.
- RETURN : Return to the MAIN SETUP menu.

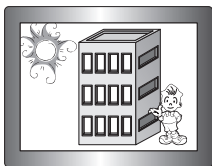
MAIN SETUP	
1. VIDEO FORMAT	FORMAT ↵
2. WHITE BAL	ATW
3. EXPOSURE	↵
▶ 4. BACKLIGHT	OFF

USER BLC SETUP	
▶ 1. LEVEL	MIDDLE
2. AREA	POSITION
3. DEFAULT	↵
4. RETURN	↵

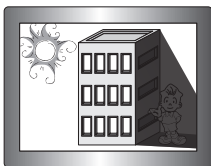
- **D-WDR**

If an object has a large variance between bright and dark areas, it will keep bright areas bright and make selected dark areas bright, so that the overall brightness can be maintained.

- LEVEL : The setting range is 1 ~ 32.



<D-WDR ON>



<D-WDR OFF>

Camera operation

SPECIAL

1. From the Setup menu, select the <SPECIAL>.
2. Select the desired mode.

- **LANGUAGE** : Only english can be used with this unit.
- **IMAGE ADJ**
 - ① Select <IMAGE ADJ>.
 - ② Select each item and set it properly.

SPECIAL SETUP	
▶ 1. LANGUAGE	ENG
2. IMAGE ADJ _{←,→}	
3. DAY/NIGHT	AUTO _{←,→}
4. RETURN	←,→

- **GAMMA** : The setting range is 0.35 ~ 1.0. The closer to 1.0 the setting is, the darker it gets.
- **PED LEVEL** : The setting range is 1 ~ 100. The closer to 100 the setting is, the higher the PED level gets.
- **COLOR GAIN** : The setting range is 1 ~ 100. The smaller the setting value is the smaller the color gain gets and the more color blind it gets.
- **MIRROR**
 - **MIRROR** : Flip an image horizontally.
 - **V-FLIP** : Flip an image vertically.
 - **ROTATE** : Rotates the video captured by the camera according to the set angle.
- **SHARPNESS** : Select a mode to adjust the thickness of an image's sharpness. Increase or decrease the level of each mode to adjust the level of sharpness.
 - **OFF** : Released state
 - **ON** : The setting range is 1 ~ 32.
- **RETURN** : Return to the SPECIAL menu.

IMAGE SETUP	
▶ 1. GAMMA	USER
2. PED LEVEL	5
3. COLOR GAIN	50
4. MIRROR	OFF
5. SHARPNESS	ON _{←,→}
6. RETURN	←,→



- If you increase the SHARPNESS level too high, the picture may become distorted or noise may appear.

- **DAY/NIGHT:** You can display pictures in color or in black and white.

- ① Select <DAY/NIGHT>.
- ② Select each item and set it properly.

- **AUTO:** The mode is switched to 'Color' in a normal environment, but switches to 'B/W' mode when ambient illumination is low. To set up the switching time for AUTO mode, press the Function Setup switch. You can turn on or off the burst signal on B/W mode.

D&N AUTO	
▶ 1. BURST MODE	ON
2. DURATION	NORMAL
3. DWELL TIME	30 SEC
4. RETURN	←

- **BURST:** Activate or deactivate the burst mode to maintain or remove the color signal.
- **DURATION:** This function is used to select the brightness of light where switching occurs.
- **DWELL TIME:** You can select day/night switching delay time from.
→ 3s, 5s, 7s, 10s, 15s, 20s, 30s, 40s, 60s



- If you set the AGC mode to off on the exposure menu, you cannot switch the day/night mode to auto.
- When a bright light source is in the screen or there are frequent brightness changes, if you use the auto night/day mode, and set the switching time to short (3, 5 sec), a hunting can be caused. In this situation, it is recommended to use the default setting (30 sec).
- **COLOR:** The picture is always displayed in color.
- **B/W:** The picture is always displayed in black and white.
You can turn on or off the burst signal on B/W mode.

EXIT

- **SAVE&END:** Save the current settings and exit the MAIN SETUP menu.
- **NOT SAVE:** Do not save the current settings and exit the MAIN SETUP menu.
- **RESET:** Revert camera to factory settings.

troubleshooting

TROUBLESHOOTING

If you have trouble operating your camera, refer to the following table.

If the guidelines do not enable you to solve the problem, contact an authorized technician.

Problems	Troubleshooting
Nothing appears on the screen.	<ul style="list-style-type: none">• Check that the power cord and line connection between the camera and monitor are properly connected.• Check that you have properly connected BNC cable to the camera.• Check the type of lens.
The image on the screen is dim.	<ul style="list-style-type: none">• Is lens stained with dirt? Clean your lens with soft, clean cloth.• Set the monitor or DVR to the proper condition.• If the camera is exposed to very strong light, change the camera position.
The image on the screen is dark.	<ul style="list-style-type: none">• Adjust the contrast feature of the monitor or DVR.• If you have an intermediate device, set the 75Ω / Hi-z properly.
The camera is not working properly, and the surface of the camera is hot.	<ul style="list-style-type: none">• Check that you have properly connected the camera to an appropriate power source.
he DAY/NIGHT menu does not work.	<ul style="list-style-type: none">• Check that AGC of EXPOSURE SETUP menu is 'OFF'.
Color is not correct.	<ul style="list-style-type: none">• Check the setting of WHITE BAL SETUP menu
The screen flickers continually.	<ul style="list-style-type: none">• Ensure the camera is not pointing towards the sun.

specifications

SPECIFICATIONS

HCF-8010V	
Video	
Imaging Device	1/2.9" CMOS
Total Pixels	2560(H) x 1944(V)
Effective Pixels	1944(H) x 1944(V)
Scanning System	Progressive Scan
Min. Illumination	Color : 0.95 Lux(F 2.1, 30IRE), B/W : 0.005Lux(F2.1, 30IRE)
Video Output	BNC(AHD / TVI / CVBS Selectable)
Resolution	5MP(2560x1944)
Max, Framerate	20fps @5MP
Lens Type	
Focal Length (Zoom Ratio)	0.98 mm
Max. Aperture Ratio	F2.1
Angular Field of View	H : 180° V : 180°
Min. Object Distance	0.2 m
Operational	
On Screen Display	English
Day & Night	Auto (ICR) / Color / B/W
Backlight Compensation	Off / User BLC
Wide Dynamic Range	D-WDR
Digital Noise Reduction	SSNR (3DNR, 2DNR)
Gain Control	OFF/LOW/MIDDLE/HIGH
White Balance	ATW / Indoor / Outdoor / Manual / AWC (1,800 K° ~ 10,500 K°)
Electronic Shutter Speed	1/25s ~ 1/50,000s
Reverse	Mirror/V-Flip/Rotate
Remote control interface	Coaxial
Protocol	AHD : ACP (AHD Protocol) CVBS : Pelco-C (Coaxitron) TVI : TCP (TVI Coax Protocol)
Video Transmission Distance	500 m(5C2V Coaxial Cable)

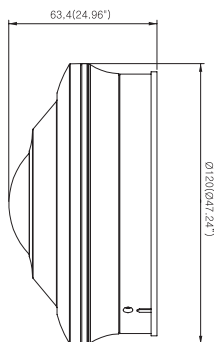
Specifications

HCF-8010V	
Environmental	
Operating Temperature	-30 °C ~ +55 °C (-22 °F ~ +131 °F)
Ingress Protection	IP66
Vandal Resistance	IK10
Electrical	
Input Voltage	DC 12 V and AC 24 V
Power Consumption	Max 2 W
Mechanical	
Color / Material	White / Metal
Dimension (Ø x H)	Ø 120 x 63.4 mm (Ø 4.724"x2.496")
Weight	500 g

※ The specification for this product may change without prior notice for product improvement.

DIMENSION

Unit: mm (inch)



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