1 Megapixel HDCVI Fixed and Dome Camera User's Manual

Version 1.0.0

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Welcome

Thank you for purchasing our HDCVI camera!

This user's manual is designed to be a reference tool for your system.

Please read the following safeguard and warnings carefully before you use this series product!

Please keep this user's manual well for future reference!

Important Safeguards and Warnings

1．Electrical safety

All installation and operation here should conform to your local electrical safety codes.
The power shall conform to the requirement in the SELV (Safety Extra Low Voltage) and the Limited power source is rated 12V DC (24V AC) in the IEC60950-1.
We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

2．Transportation security

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

3．Installation

Do not apply power to the camera before completing installation.
Please install the proper power cut-off device during the installation connection.
Always follow the instruction guide the manufacturer recommended.
If this product is installed in the ceiling, please make sure the installation position can sustain the min 50N.

4．Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers.
We are not liable for any problems caused by unauthorized modifications or attempted repair.

5．Environment

This series camera should be installed in a cool, dry place away from direct sunlight or strong light, inflammable, explosive substances and etc.
This series camera shall work on the specified working temperature. Please keep it away from the electromagnetic radiation object and environment.
Please keep the sound ventilation.
Do not allow the water and other liquid falling into the camera.

6. Accessories
Be sure to use all the accessories recommended by manufacturer.
Before installation, please open the package and check all the components are included.
Contact your local retailer ASAP if something is broken in your package.

7. Daily Maintenance
Please shut down the device and then unplug the power cable before you begin daily maintenance work.

Use the dry soft cloth to clean the device.

If there is too much dust, please use the water to dilute the mild detergent first and then use it to clean the device. Finally use the dry cloth to clean the device.

Please put the dustproof cap to protect the CCD (CMOS) component when you do not use the camera.

1 General Introduction

1.1 Overview

This series megapixel HD camera conforms to the HDCVI standard. It supports video signal high-speed long distance transmission without any delay. It can be controlled by the DVR conforming to the HDCVI.

1.2 Features

- High-performance CMOS image sensor, megapixel definition.
- HD video, coaxial cable to transmit the control signal.
- Support 75-3 coaxial cable transmission without any loss. Transmission distance is over 500m.
- High speed, long distance real-time transmission.
- Support ICR switch to realize surveillance both in the daytime and at night.
- Support auto exposure, auto white balance, auto electronic shutter and auto gain function.
- Support DC12V power supplying.
- IP66 compliance. (For HAC-HFW1100SP/N series only.)
- Support intelligent IR function.

1.3 Functions

HDCVI Specification
HDCVI（High Definition Composite Video Interface） is an over-coaxial –cable HD video transmission standard. The technology renders two HD video formats by progressive scanning.

ICR
The IR cut removal is to filter the IR light in the daytime and then auto switch to the general fitter at night. This function allows the camera to output the high sensitivity and clear video.

Smart IR technology
The sensor controls the IR light on/off via the combination work of the hardware and software, which realizes the automatically IR light compensation according to the environment illumination.

Auto gain function
To output the standard video signal in the different illumination environments, the amplifier needs to adjust in a wide range. The system can enhance the camera sensitivity in low illumination and enhance the video signal output to get the clear and high definition video.

Auto white balance
The white balance refers to the camera to restore the white object color. It allows the camera to automatically adjust the color temperature in indoor and outdoor environment, just like our human eyes does.

Auto exposure
System can automatically set shutter speed and iris value according to the snapshot video exposure condition.

Auto electronic shutter

The system can automatically adjust the electronic shutter when the environment light changes.

1.4 Specifications

Model / Parameter	1 Megapixel HDCVI Mini IR Waterproof Fixed Camera Series	1 Megapixel HDCVI Mini IR Dome Camera Series
	HAC-HFW1100SP/N	**HAC-HDW1100SP/N**
Video Processor	1/2.9" 1.0 Mega Pixels CMOS	
Video Format	PAL/NTSC	
Effective Pixel	1280（H）＊720（V）	
Min Illumination	0.01Lux @（F1.2,AGC ON）， 0Lux with IR	
Electronic Shutter	PAL：1/50s~1/100,000s NTSC：1/60s~1/100,000s	
Video Standard	HDCVI compliance	
Video Frame Rate	PAL：1280×720@25 fps NTSC：1280×720@30 fps	
Lens Port	M12	
Lens Type	2.8/3.6/6/8mm optional	
Day/Night Switch	ICR mechanic auto switch	
Sync Mode	INT	
Video Output	1-channel HDCVI high definition video output	
White Balance	Auto	
Gain Control	Auto	
BLC	Auto	
IR Light Control Plan	Advanced non-photosensor control plan	
Transmission Distance	Over 500m via 75-3 coaxial cable.	
Smart IR	Support	
Max IR Distance	20m	
Protection Level	IP66	N/A
Working Temperature /Humidity	-30℃~+60℃. Humidity is less than 95%(no condensation)	
Power	DC 12V±10%	
Power Consumption	3.5W MAX (Input: 12V ⎓ 0.29A)	2.5W MAX (Input: 12V ⎓ 0.21A)
Dimension(mm)	φ65.0×154.7	φ113.6×85.4
Weight	380g	200g
Installation Mode	Wall mount	Wall mount/In-ceiling mount

2 Framework and Dimensions

2.1 HAC-HFW1100SP/N

Please refer to the following figures for dimension information. The unit is mm. See Figure 2-1 and Figure 2-2.
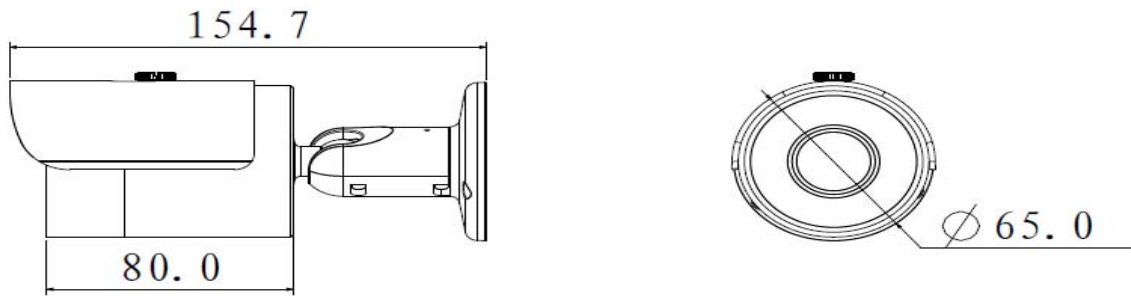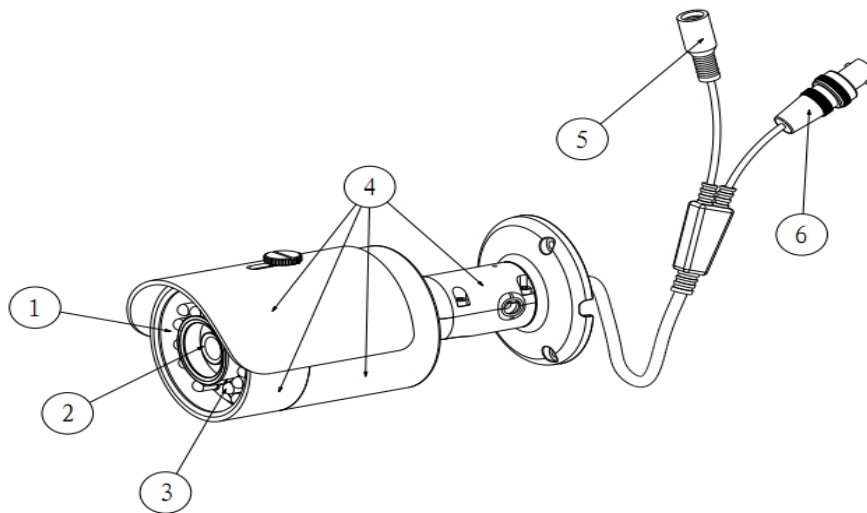

Figure 2-1

Figure 2-2

Please refer to the following sheet for detailed information.

SN	Name	Function
1	Double-circle glasses	Protection lens, optical sensitive part. **Do not touch.**
2	Lens	It is to receive the optical signal from the environments.
3	IR light	It is to send out the IR compensation light to enhance the night vision.
4	Device body	It is the main supporting part of the camera. It includes sunshield cap, front cap, rear part, bracket and etc.
5	Power input port	Connect to the DC 12V power to input the power.
6	Video output port	BNC port is to output HDCVI video signal. You can connect to the devices such as the DVR or the NVS conforming to the HDCVI specifications.

2.2 HAC-HDW1100SP/N

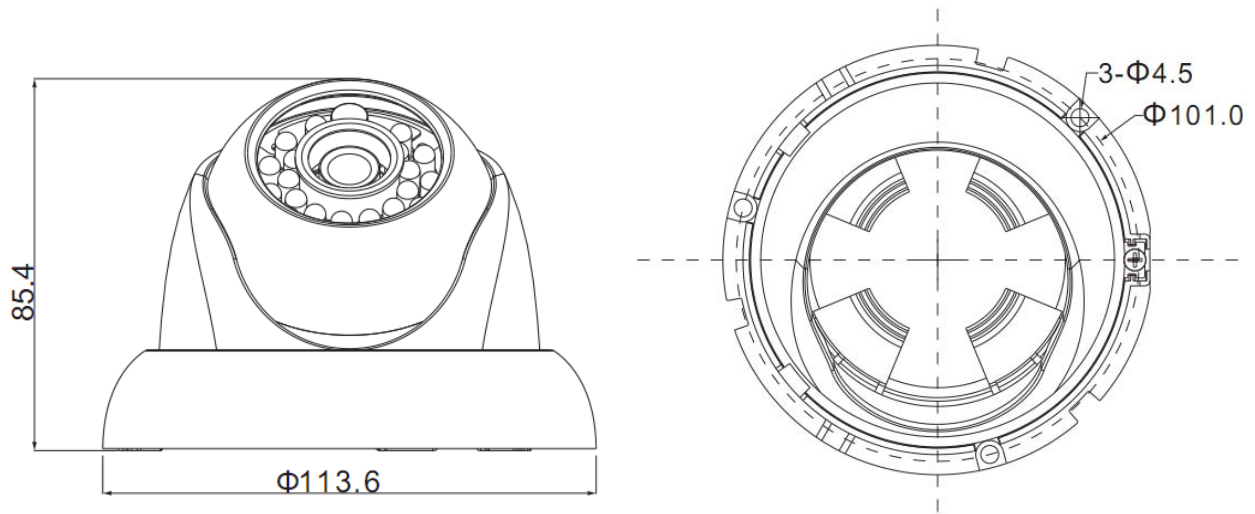Please refer to the following figure for dimension information. The unit is mm. See Figure 2-3 and Figure 2-4.
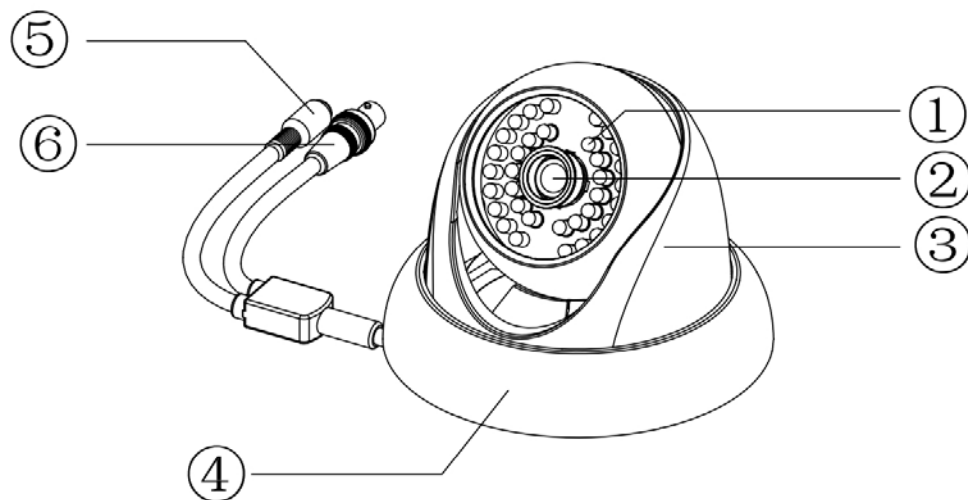

Figure 2-3

Figure 2-4

Please refer to the following sheet for detailed information.

SN	Name	
1	IR light	It is to send out the IR compensation light to enhance the night vision.
2	Device lens	/
3	Dome camera enclosure	/
4	Dome camera decoration ring	/
5	Power input port	Connect to the DC 12V power to input the power.
6	Video output port	BNC port is to output HDCVI video signal. You can connect to the devices such as the DVR or the NVS conforming to the HDCVI specifications.

3 Installation

Important

Please make sure the installation surface can min support the 3X weight of the camera and the bracket.

3.1 Mini IR Waterproof Fixed Camera

In Figure 3-1, ①Installation surface；②Bracket；③Screws；④Camera.

Step 1

Dig three holes in the installation surface of the wall or the ceiling. Insert three expansion bolts to the three holes and then lock firmly.
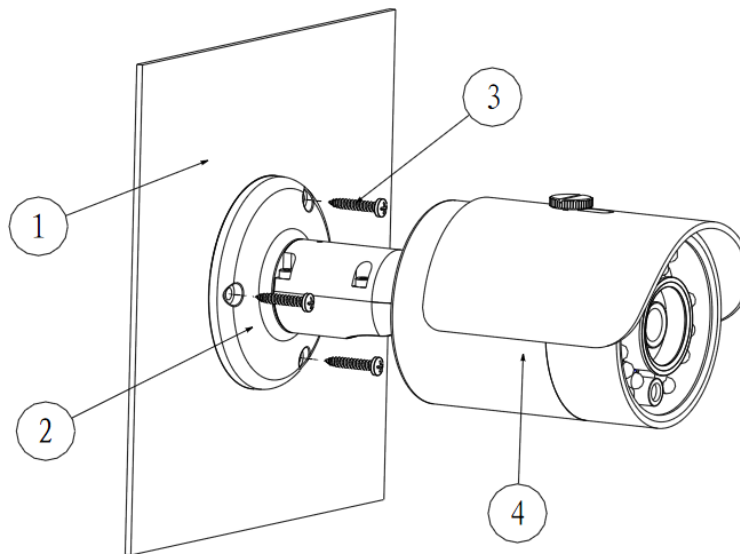
Figure 3-1

Step 2

First prepare the cable according to the cable. Line up the three screw holes at the bottom of the bracket to the three installation holes in the wall or the ceiling, and then insert three screws to the three holes of the chassis of the bracket and fix them firmly. Now secure the bracket on the installation surface of the wall or the ceiling.

Step 3

Adjust the camera to the proper monitor area via the three directions indicated in Figure 3-2 after you fixed the camera.
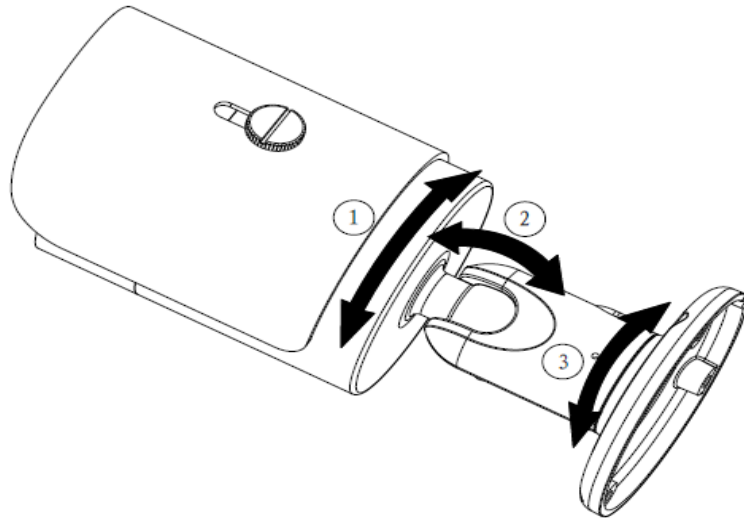
Figure 3-2

Step 4

Connect the device video output port to the terminal devices such as the DVR, NVS and etc. Then connect the power cable to the device.

Now you have completed the device installation and cable connection.
You can use the terminal encode devices to view the monitor video.

3.2 IR Dome Camera

The dome camera usually uses the ceiling installation. It can be installed on the ceiling or the wall.

Step1

Please take the installation position map in the accessories bag, and then paste it on the ceiling or the wall according to your monitor area requirements. Draw and then dig three holes in the installation surface and then insert three expansion bolts in the holes. Secure these three bolts firmly.

Step 2

Turn counter clockwise to remove the decoration ring. Please dig a "cable exit hole" in the surface according to the installation position map if you want to draw out the cable from the top of the installation surface. You need to draw out the cable from the cable channel side port of the pedestal if you want to draw out the cable from the side port of the cable channel. Adjust the device installation pedestal to the proper position and then draw the cable through the cable exit. Line up the three screw holes in the device pedestal to the three plastic expansion bolt holes in the installation position. Put the three self-tapping screws in the three plastic expansion bolts firmly. Now the dome camera is secure in the installation surface. See Figure 3-3.
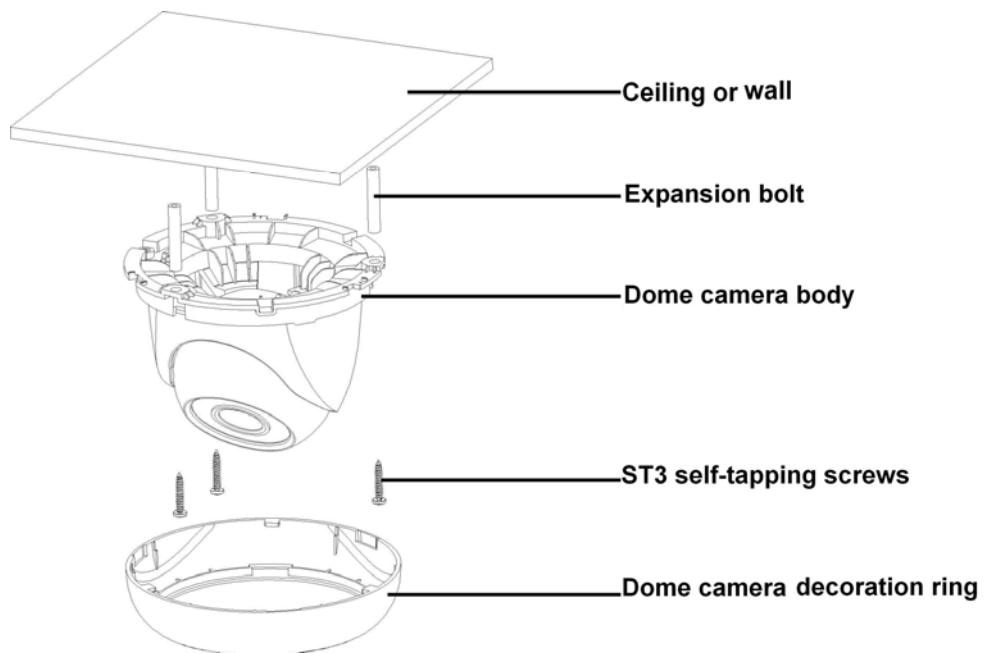
Figure 3-3

Step 3

Adjust the lens to get the clear monitor video. See Figure 3-4. Use crosshead screwdriver to loosen the screw and the turn the camera body to the proper position manually. Fix the screw again.

Important

Do not remove the screw. Loosen a little bit will be OK. Please secure after you completed the setup.
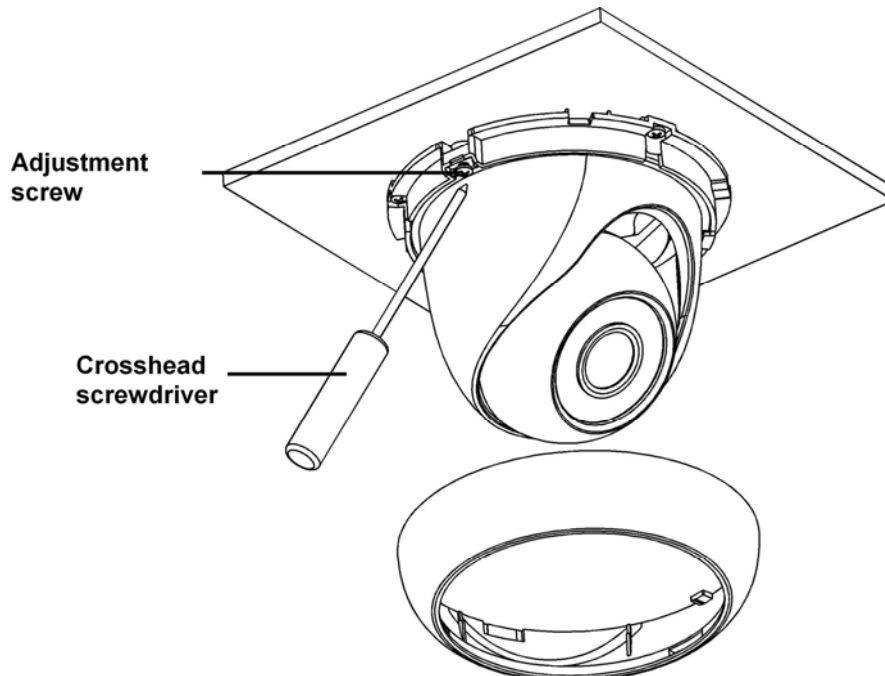

Figure 3-4

Step 4

Line up the bulge of the decoration ring to the nick of the camera body and install along the tilt installation. Push and then turn decoration ring clockwise. The installation completed after you secure the decoration

ring. You need to use the proper tool to open up the side port of the U-cable channel of the decoration ring if you want to draw out the cable from the side port of the cable channel when you are installing the device cable. And then you can draw out the cable from the cable channel of the pedestal. Finally you can install the decoration ring to complete the installation. See Figure 3-5.
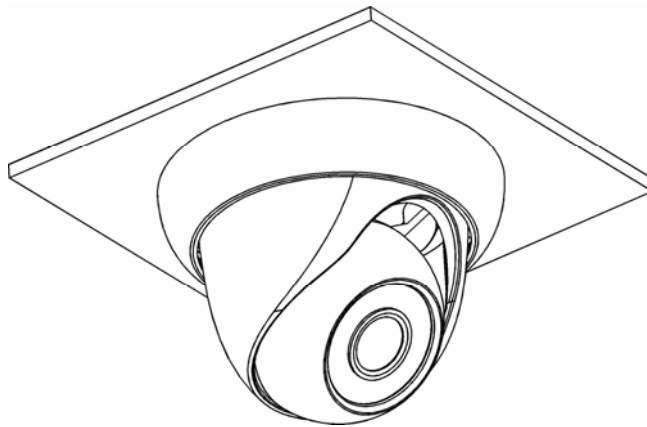

Figure 3-5

Appendix Toxic or Hazardous Materials or Elements

Component Name	Toxic or Hazardous Materials or Elements					
	Pb	**Hg**	**Cd**	**Cr VI**	**PBB**	**PBDE**
Circuit Board Component	○	○	○	○	○	○
Device Construction Material	○	○	○	○	○	○
Wire and Cable	○	○	○	○	○	○
Packing Components	○	○	○	○	○	○
Accessories	○	○	○	○	○	○

O: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

X: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard. During the environmental-friendly use period (EFUP) period, the toxic or hazardous substance or elements contained in products will not leak or mutate so that the use of these (substances or elements) will not result in any severe environmental pollution, any bodily injury or damage to any assets. The consumer is not authorized to process such kind of substances or elements, please return to the corresponding local authorities to process according to your local government statutes.

Note

- **This manual is for reference only. Slight difference may be found in the user interface.**
- **All the designs and software here are subject to change without prior written notice.**
- **All trademarks and registered trademarks mentioned are the properties of their respective owners.**
- **If there is any uncertainty or controversy, please refer to the final explanation of us.**
- **Please visit our website or contact your local service engineer for more information.**