

HDCVI Mobile Camera

User's Manual





V1.0.1

General

This user's manual (hereinafter referred to be "the Manual") introduces the functions, installation and operations of the camera.

Safety Instructions

The following categorized signal words with defined meaning might appear in the Manual.

Signal Words	Meaning
 WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 CAUTION	Indicates a potential risk which, if not avoided, may result in property damage, data loss, lower performance, or unpredictable result.
 TIPS	Provides methods to help you solve a problem or save you time.
 NOTE	Provides additional information as the emphasis and supplement to the text.

Revision History

No.	Version	Revision Content	Release Date
1	V1.0.0	First release.	2018.03

Privacy Protection Notice

As the device user or data controller, you might collect personal data of others' such as face, fingerprints, car plate number, Email address, phone number, GPS and so on. You need to be in compliance with the local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures include but not limited to: providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact.

About the Manual

- The Manual is for reference only. If there is inconsistency between the Manual and the actual product, the actual product shall govern.
- We are not liable for any loss caused by the operations that do not comply with the Manual.
- The Manual would be updated according to the latest laws and regulations of related regions. For detailed information, see the paper User's Manual, CD-ROM, QR code or our

official website. If there is inconsistency between paper User's Manual and the electronic version, the electronic version shall prevail.

- All the designs and software are subject to change without prior written notice. The product updates might cause some differences between the actual product and the Manual. Please contact the customer service for the latest program and supplementary documentation.
- There still might be deviation in technical data, functions and operations description, or errors in print. If there is any doubt or dispute, please refer to our final explanation.
- Upgrade the reader software or try other mainstream reader software if the Guide (in PDF format) cannot be opened.
- All trademarks, registered trademarks and the company names in the Manual are the properties of their respective owners.
- Please visit our website, contact the supplier or customer service if there is any problem occurred when using the device.
- If there is any uncertainty or controversy, please refer to our final explanation.

Important Safeguards and Warnings



Electrical Safety

- All installation and operation should conform to your local electrical safety codes.
- The power source shall conform to the requirement of the Safety Extra Low Voltage (SELV) standard, and supply power with rated voltage which conforms to Limited power Source requirement according to IEC60950-1. Please note that the power supply requirement is subject to the device label.
- A readily accessible disconnect device shall be incorporated in the building installation wiring.
- Make sure if the camera power adapter meets the camera operating voltage requirement before powering up the device (The material and length of the power cable might influence the device voltage).
- Prevent the power cable from being trampled or pressed, especially the plug, power socket and the junction extruded from the device.
- We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

Environment

- Do not aim the device at strong light to focus, such as lamp light and sun light.
- Transport, use and store the device within the range of allowed humidity and temperature.
- Keep the camera away from water or other liquid to avoid damages to the internal components.
- Keep sound ventilation to avoid heat accumulation.
- Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.
- Pack the device with standard factory packaging or the equivalent material when transporting the device.
- It is recommended to use the device together with lightning arrester to improve lightning protection effect.
- It is recommended to get the grounding holes to be grounded to enhance the reliability of the device.
- It is recommended to use qualified video transmission cable to improve video quality. It is recommended to use RG59 coaxial cable or higher standard.



- Use standard components or accessories provided by manufacturer and make sure the

device is installed and maintained by professional engineers.

- The surface of the image sensor should not be exposed to laser beam radiation in an environment where a laser beam device is used.
- Do not provide two or more power supply sources for the device; otherwise it might damage the device.
- When the camera is in the condition of PoC power supply, do not connect any other device between the camera and PoC transceiver including UTC, Balun, optical transceiver, distributor and convertor and so on; otherwise, the device might get burned.
- PoC supply voltage is up to 52V. Do not dismantle the device during normal operation; otherwise it might cause danger to both device and users due to high voltage.

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1.1 General

This series of products comply with the HDCVI standard and support the transmission of video and control signal over coaxial cable. They produce video signal with megapixel resolution and require HCVR device that comply with the HDCVI standard to achieve high speed, long distance and zero lag transmission of the signal. They are applicable to cover the monitoring needs for bus, school bus and subway.

1.2 Features

- 720p series support over 800 meter real-time transmission of video and control signal from RG59 cable, for 1080p series, the distance is 500 meter.
- Configuring devices easily with OSD menu.
- Support switching between HD/SD outputs.

2.1 Dimension

Figure 2-1 Model A (1) (mm [in])

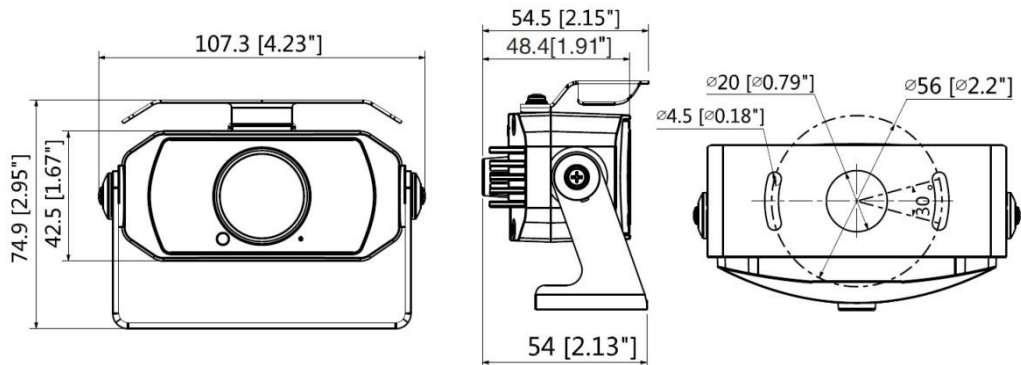


Figure 2-2 Model A (2) (mm [in])

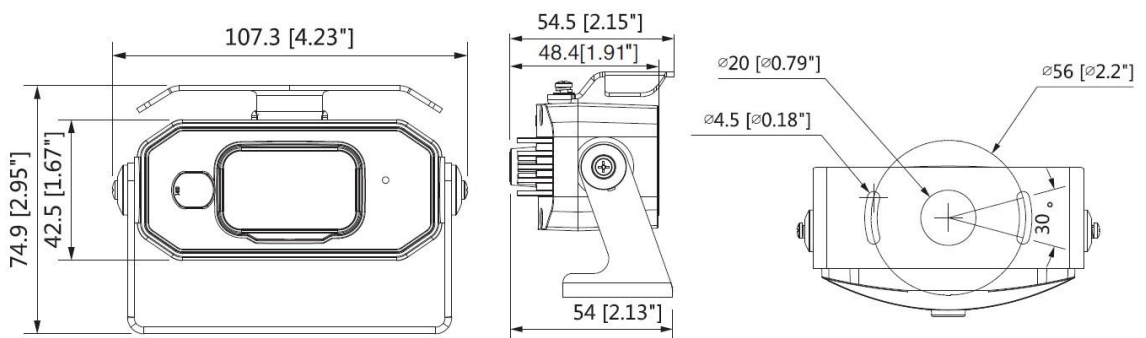


Figure 2-3 Model B (mm [in])

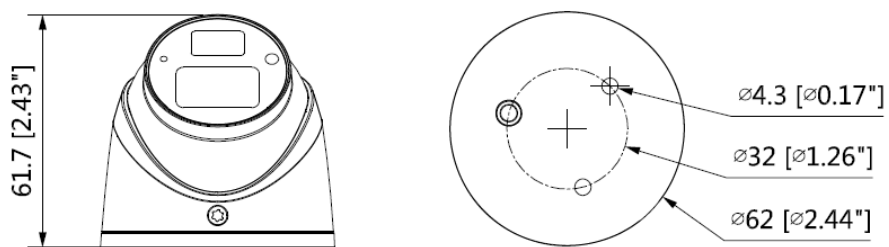


Figure 2-4 Model C (mm [in])

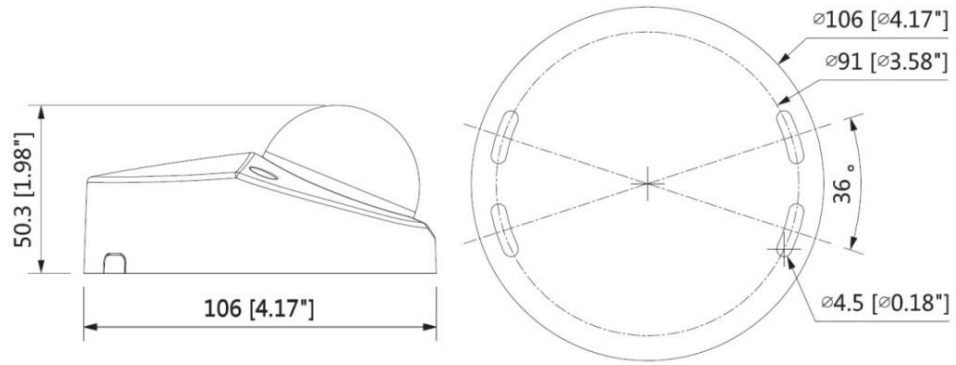


Figure 2-5 Model D (1) (mm [in])

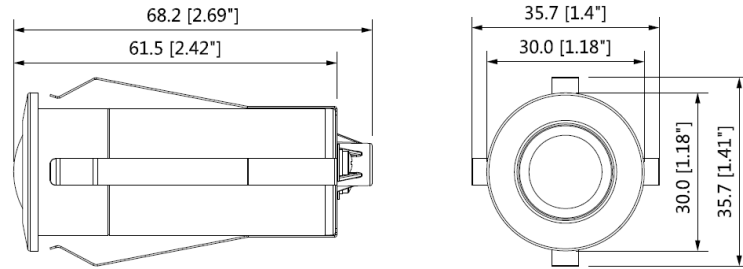


Figure 2-6 Model D (2) (mm [in])

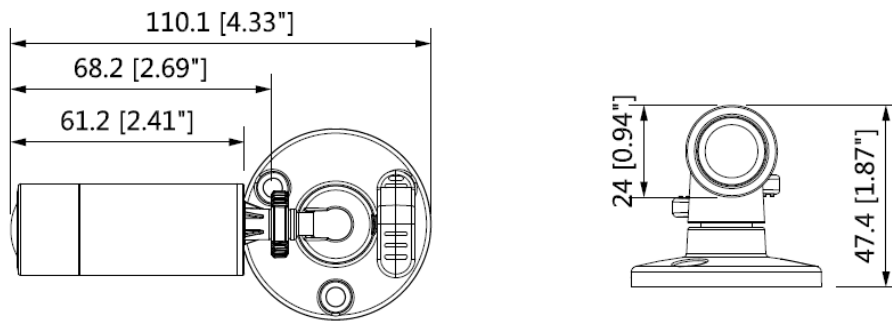
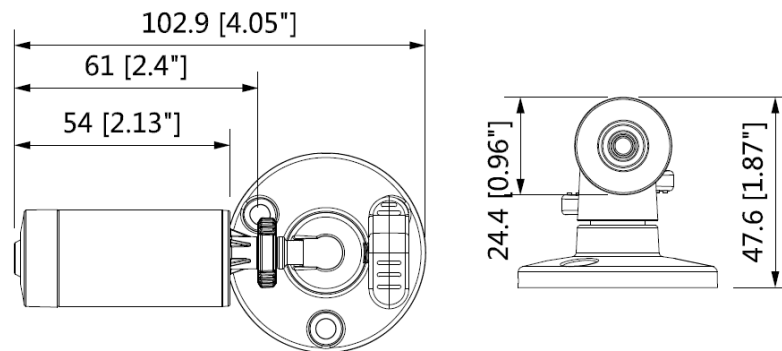


Figure 2-7 Model D (3) (mm [in])



2.2 Cable

 NOTE

Cable type might vary with different cameras, and the actual product shall prevail.

Figure 2-8 DC 12V Power Input

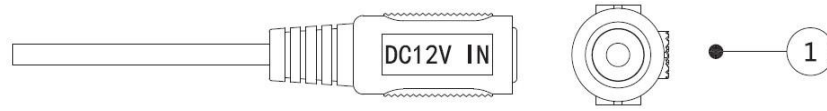


Figure 2-9 Video Output

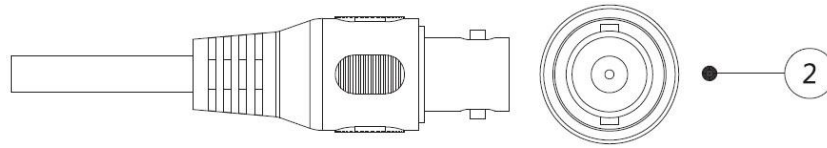
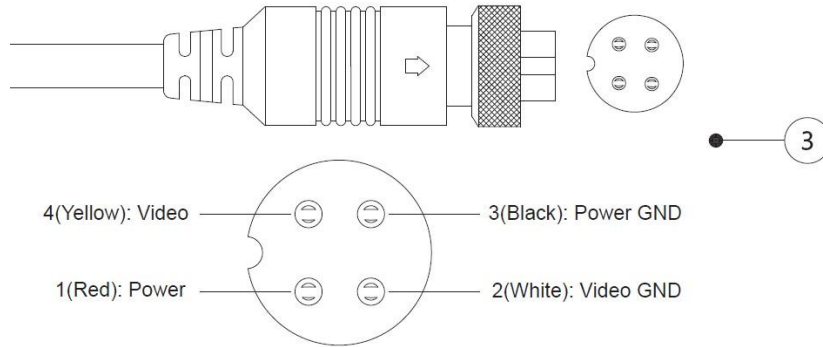


Figure 2-10 Aviation Port



For more information about cable ports, see Table 2-1.

Table 2-1 Cable information

No.	Port Name	Function
①	DC 12V Power Input	Inputs DC 12V power. Please be sure to supply power as instructed in the Manual. CAUTION Device abnormality or damage could occur if power is not supplied correctly.
②	Video Output	Connects to HCVR to output video signal.
③	Aviation Port	Connects to HCVR to output video signal.

CAUTION

- Make sure the mounting surface is strong enough to hold at least three times of the camera weight.
- Keep the protection film on the dome before installation and adjustment finished to avoid possible scratch.
- Properly handle the device after unpacking. Do not expose the device in humid environment.
- The following figure is for reference only, and the actual product shall prevail.

3.1 Installing Model A Series

For the installation diagram and item list of model A (1) and model A (2), see Figure 3-1 and Table 3-1.

Figure 3-1 Model A series installation diagram

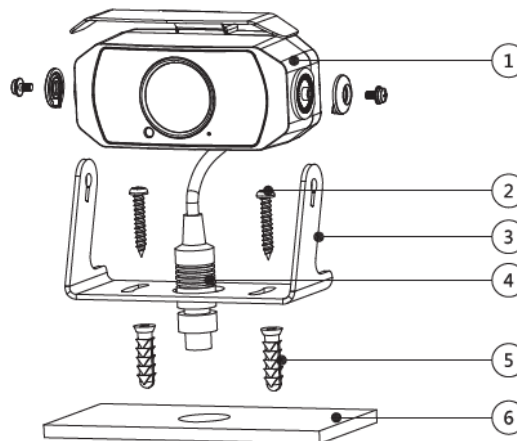


Table 3-1 Model A series installation item list

No.	Item	No.	Item	No.	Item
①	Device	②	Self-tapping screw	③	Bracket
④	Cable	⑤	Expansion bolt	⑥	Mounting surface

Step 1 Unscrew the locking screws on the bracket③ to detach it.

Step 2 Drill screw holes (and the cable outlet hole if it needs to go through the mounting surface) on the mounting surface⑥, then insert expansion bolts⑤ in the screw holes.

Step 3 Align the screw holes on the bracket③ to those on the mounting surface⑥, then put in and fasten the supplied self-tapping screws② to attach the bracket③ to the mounting surface.

Step 4 Adjust the location of the device① on the bracket③ and fasten the locking screws to attach the device① on the bracket③.

3.2 Installing Model B

For the installation diagram and item list of model B, see Figure 3-2 and Table 3-2.

Figure 3-2 Model B installation diagram

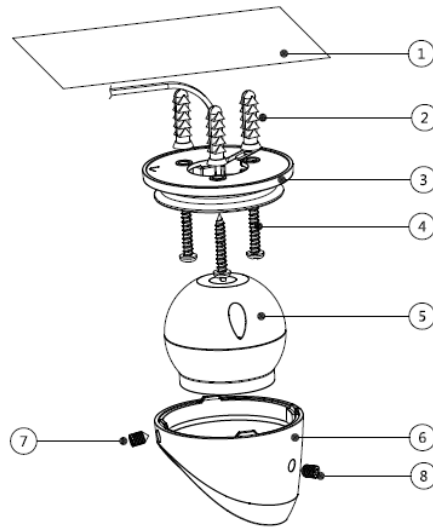


Table 3-2 Model B installation item list

No.	Item	No.	Item	No.	Item	No.	Item
①	Mounting surface	②	Expansion bolt	③	Pedestal	④	Self-tapping screw
⑤	Device	⑥	Enclosure	⑦/⑧	Locking screw	—	—

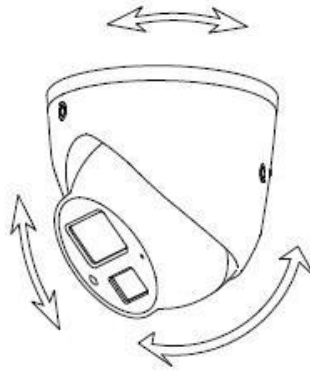
Step 1 Drill screw holes (and the cable outlet hole if it needs to go through the mounting surface) on the mounting surface ① as indicated on the positioning map, then insert expansion bolts ② in the screw holes.

Step 2 Loosen the locking screws ⑦/⑧ and take the pedestal ③ off.

Step 3 Adjust the location of the pedestal ③ according to cable outlet requirement (top out or side out), then pull the cable out through the mounting surface ① or the side cable tray. Align the screw holes on the pedestal ③ to those on the mounting surface, then put in and fasten the self-tapping screws ④ to attach the device ⑤ to the mounting surface.

Step 4 Put the enclosure ⑥ back on and adjust the locking screws ⑦/⑧ to hold it. Connect the device ⑤ to power source and HCVR, aim the lens to the ideal angle (see Figure 3-3) and fasten the locking screws ⑦/⑧.

Figure 3-3 Adjusting Model B



3.3 Installing Model C

 NOTE

Screw cover is available on select models.

For the installation diagram and item list of model C, see Figure 3-4 and Table 3-3.

Figure 3-4 Model C installation diagram

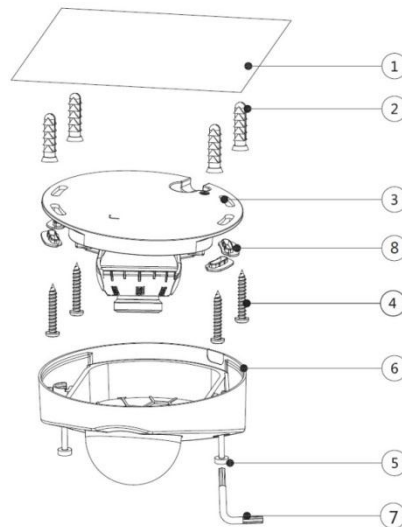


Table 3-3 Model C installation item list

No.	Item	No.	Item	No.	Item	No.	Item
①	Mounting surface	②	Expansion bolt	③	Pedestal	④	Self-tapping screw
⑤	Locking screw	⑥	Dome	⑦	Wrench	⑧	Screw Cover

Step 1 Drill screw holes (and the cable outlet hole if it needs to go through the mounting surface) on the mounting surface① as indicated on the positioning map, then insert expansion bolts② in the screw holes.

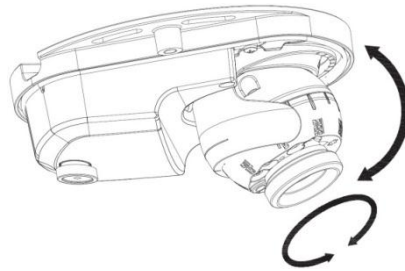
Step 2 Loosen the locking screws⑤ on the dome⑥ with the supplied wrench⑦ and take the dome⑥ off.

Step 3 Adjust the location of the pedestal③ according to cable outlet requirement (top out or side out), then pull the cable out through mounting surface or the side cable tray. Align the screw holes on the pedestal③ to those on the mounting surface.

Step 4 Put the screw covers⑧ in the screw holes on the pedestal③, then put the supplied self-tapping screws④ through the screw covers⑧ and fasten them to attach the device to the mounting surface.

Step 5 Connect the camera to power source and HCVR, and aim the lens to the ideal angle, see Figure 3-5. Put the Dome⑥ back on and fasten the locking screws⑤.

Figure 3-5 Adjusting Model C



3.4 Installing Model D (1)

For the installation diagram and item list of model D (1), see Figure 3-6 and Table 3-4.

Figure 3-6 Model D (1) installation diagram

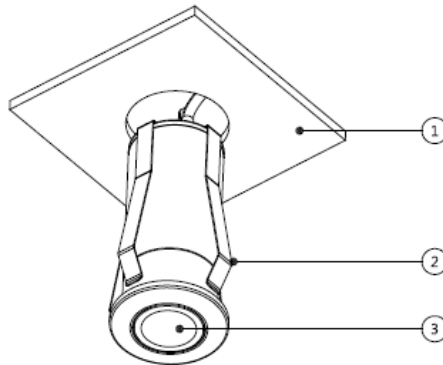


Table 3-4 Model D (1) installation item list

No.	Item	No.	Item	No.	Item
①	Mounting surface	②	Clamp	③	Device

Step 1 Pull the cable through mounting surface① and attach the device③ to the mounting surface① with the clamp②.

Step 2 Reinforce the device③ to the mounting surface① by putting more sealant to the joint.

3.5 Installing Model D (2) and Model D (3)

For the installation diagram and item list of Model D (2) and Model D (3), see Figure 3-7 and Table 3-5.

Figure 3-7 Model D (2) and Model D (3) installation diagram

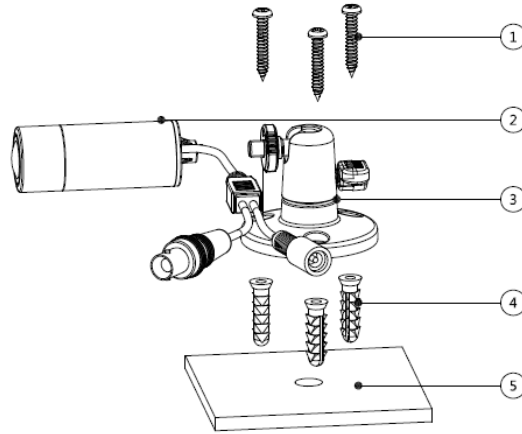


Table 3-5 Model D (2) and Model D (3) installation item list

No.	Item	No.	Item	No.	Item
①	Self-tapping screw	②	Device	③	Pedestal
④	Expansion bolt	⑤	Mounting surface	—	—

- Step 1** Drill screw holes on the mounting surface⑤, then insert expansion bolts④ in the screw holes.
- Step 2** Align the screw holes on the pedestal③ to those on the mounting surface⑤, then put in and fasten the supplied self-tapping screws① to attach the pedestal③ to the mounting surface.
- Step 3** Adjust the location of the device② on the pedestal③ and fasten the locking screw to attach the device on the pedestal③.

4 Configuration

Power up the camera and connect it to HCVR device with coaxial cable, then the main screen is displayed. The following instructions will guide you to configure your camera.

 NOTE

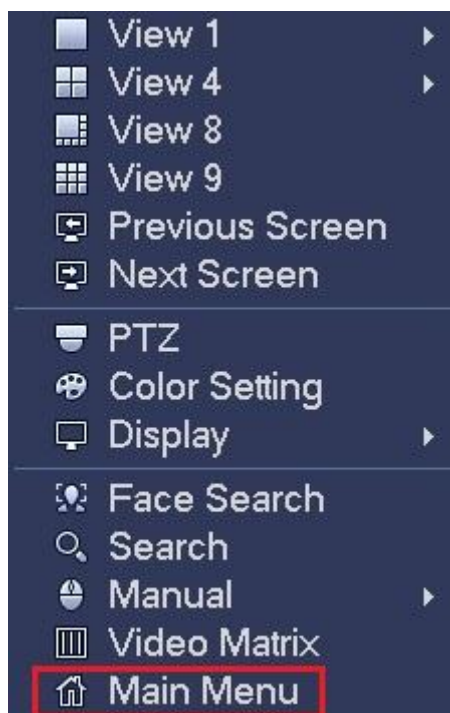
The number of the coaxial port on HCVR will display at the lower left corner of each window to indicate the corresponding camera.

4.1 Setting HCVR

Step 1 Right-click anywhere on the main screen.

The shortcut menu is displayed. See Figure 4-1.

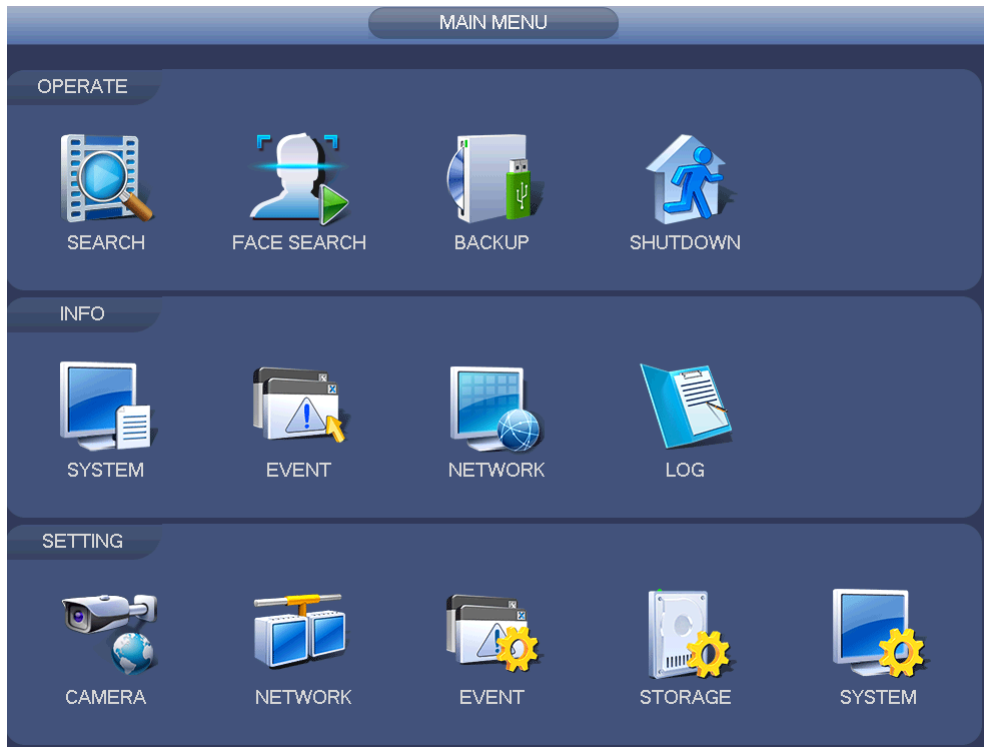
Figure 4-1 Shortcut menu



Step 2 Click **Main Menu**.

The **Main Menu** interface is displayed. See Figure 4-2.

Figure 4-2 Main menu interface



NOTE

Right-click anywhere on the screen to return to the previous menu until you goes back to main screen.

- Step 3** In the **SETTING** column area, click **SYSTEM > PTZ**.
The **Setting** interface is displayed. See Figure 4-3.

Figure 4-3 Setting interface



- Step 4** In the **Channel** list, select the camera that you want to configure according to the coaxial port number.

- Step 5** In the **Control Mode** list, select **HDCVI**; In the **Protocol** list, select **HD-CVI**.

- Step 6** Click **Save** to save the settings.

4.2 Setting Audio Input



Audio signal acquisition is available on select models.

Step 1 In the **Main Menu** interface (Figure 4-2), select **CAMERA > ENCODE > Encode**. The Encode setting interface is displayed. See Figure 4-4.

Figure 4-4 Encode setting interface



Step 2 In the **Channel** list, select the camera that you want to configure according to the coaxial port number.

Step 3 Configure the audio settings.

- In the **Audio Format** list, select **G711a**.
- In the **Audio Source** list, select **HDCVI**.

Step 4 Click **Save** to save the settings.

4.3 Operating OSD Menu

Step 1 In the main screen, right-click within the live view window of the camera that you want to configure.

The shortcut menu (Figure 4-1) is displayed.

Step 2 Click **PTZ**.

The PTZ setting interface is displayed. See Figure 4-5.

Figure 4-5 PTZ setting interface




Step 3 Click  to see more options. See Figure 4-6.

Figure 4-6 PTZ setting options



Step 4 Click .







The **MENU OPERATION** panel is displayed. See Figure 4-7.
The OSD menu of the corresponding camera is displayed on the live view screen.

Figure 4-7 Menu Operation panel



For the function of the buttons in the MENU OPERATION panel, see Table 4-1.

Table 4-1 Menu Operation panel function

Button	Function	Button	Function
	Enter or confirm an item	 , 	Select item
	Exit OSD menu	 , 	Change item value

If there is "↵" as the value of an OSD item, click **Enter** to go to the next level of this item. Click **Return** to go back to the previous level. Clicking **Cancel** is to exit OSD menu without saving the modifications.

 NOTE

- Interfaces of different HCVR might vary, and the actual product shall prevail.
- The OSD menus of different cameras might vary, and the actual product shall prevail.



CAUTION

In order to maintain the image quality and proper functioning of the device, please read the following maintenance instructions carefully and hold rigid adherence.

Disassembly and Desiccant Replacement

- Carefully follow the instructions in the manual when performing any disassembly operation about the device; otherwise, it might cause water leakage or poor image quality due to unprofessional disassemble.
- Please contact after-sale service for desiccant replacement if there is condensed fog found on the lens after unpacking or when the desiccant turns green. (Not all models are included with the desiccant).

Maintaining Lens and Mirror Surface

- The lens and mirror surface are covered with antireflection coating, which could be contaminated or damaged and result in lens scratches or haze image when being touched with dust, grease, fingerprints and other similar substances.
- Do not touch the image sensor directly (CCD or CMOS). Dust and dirt could be removed with air blower, or you can wipe the lens gently with soft cloth that moistened with alcohol.

Maintaining Device Body

- Device body can be cleaned with soft dry cloth, which can also be used to remove stubborn stains when moistened with mild detergent.
- To avoid possible damage on device body coating which could cause performance decrease, do not use volatile solvent such as alcohol, benzene, diluent and so on to clean the device body, nor can strong, abrasive detergent be used.

Maintaining Dome Cover

Dome cover is an optical component, do not touch or wipe the cover with your hands directly during installation or operation. The following approaches can be used to deal with possible contamination.

- Removing Dust
Wipe gently with non-oil soft brush or use air blower.
- Removing Grease or Fingerprints
Wipe the cover gently with soft cloth to make it dry, then moisten oil-free soft cloth or lens cleaning paper with alcohol or lens cleaner and wipe the cover gently. You may perform repeatedly until the cover is clean.