

HDCVI Active Deterrence Camera

User's Manual

V1.0.0

Regulatory Information

The regulatory information herein might vary according to the model you purchased. Some information is only applicable for the country or region where the product is sold.

FCC Information



Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC conditions:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

FCC compliance:

This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. This equipment generate, uses and can radiate radio frequency energy and, if not installed and used in accordance with the guide, may cause harmful interference to radio communication.

- For class A device, these limits are designed to provide reasonable protection against harmful interference in a commercial environment. 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.
- For class B device, these limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

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, could 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.	December 15, 2018

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.

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1.1 General

This series of products comply with the HDCVI standard and support the transmission of audio, video and control signal over coaxial cable. They produce video signal with megapixel resolution and require XVR 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 high definition monitoring needs for locations like financial center, telecom site, supermarket, hotel, government, school and factory.

1.2 Features

- 720p series support over 800 m real-time transmission of video and control signal from RG59 cable. For 1080p, 4M and 4k series, the distance is 500 m.
- Support detection of human trespass with PIR.
- Switch automatically between color images at daytime and black-and-white images at night with ICR.
- Provide clear black-and-white images at night by avoiding overexposure of IR light with smart IR.
- Configure devices easily with OSD menu.

2.1 Dimensions

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

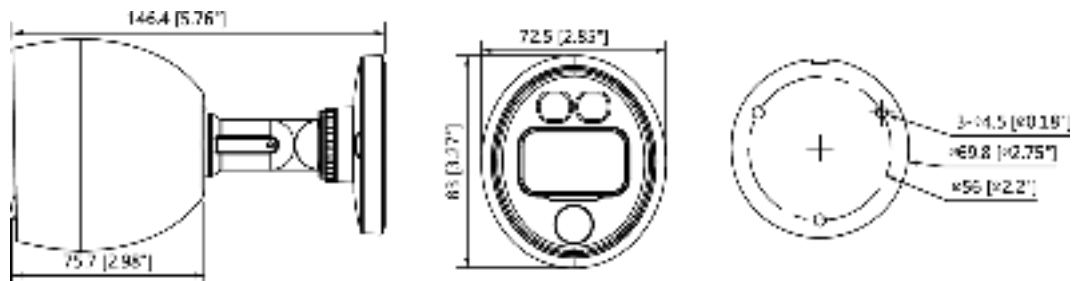


Figure 2-2 Model B (mm [inch])

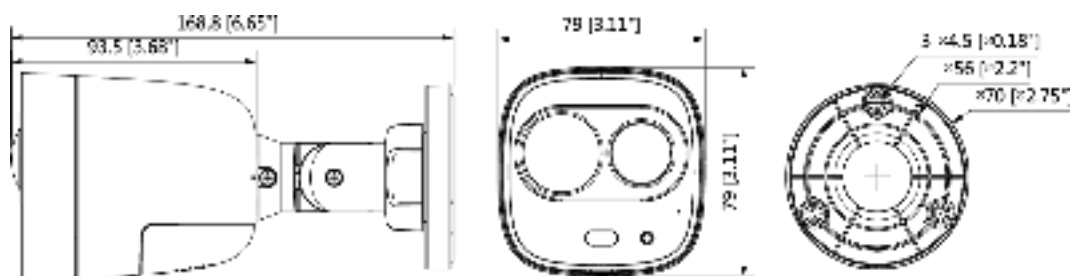


Figure 2-3 Model C (mm [inch])

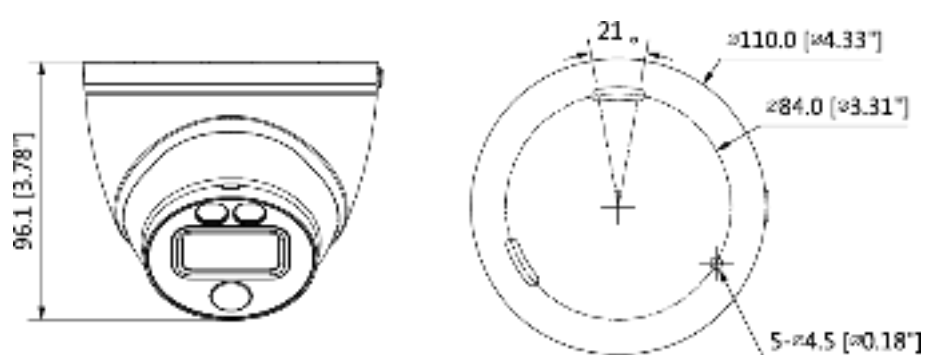
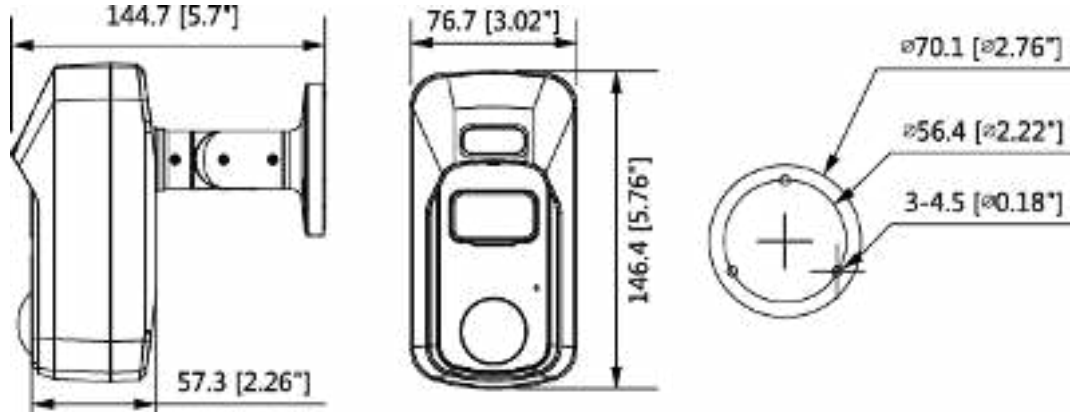


Figure 2-4 Model D (mm [inch])



2.2 Components

Figure 2-5 Model A and B

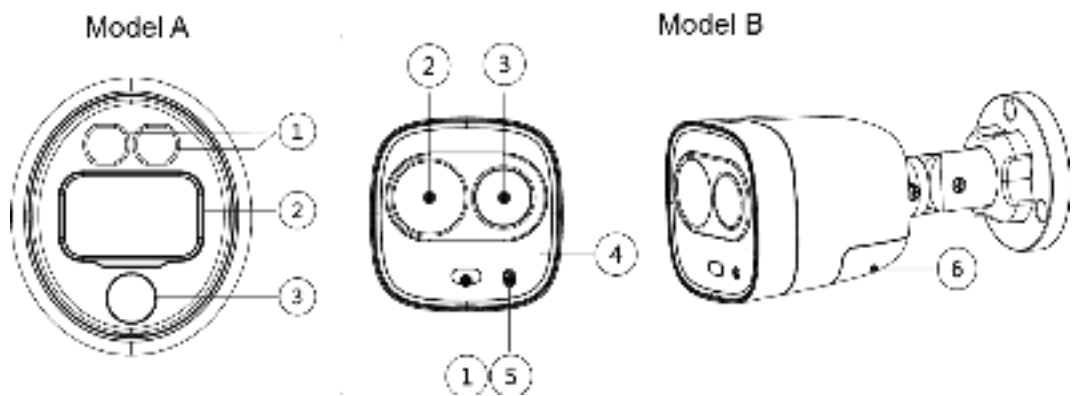


Figure 2-6 Model C and D

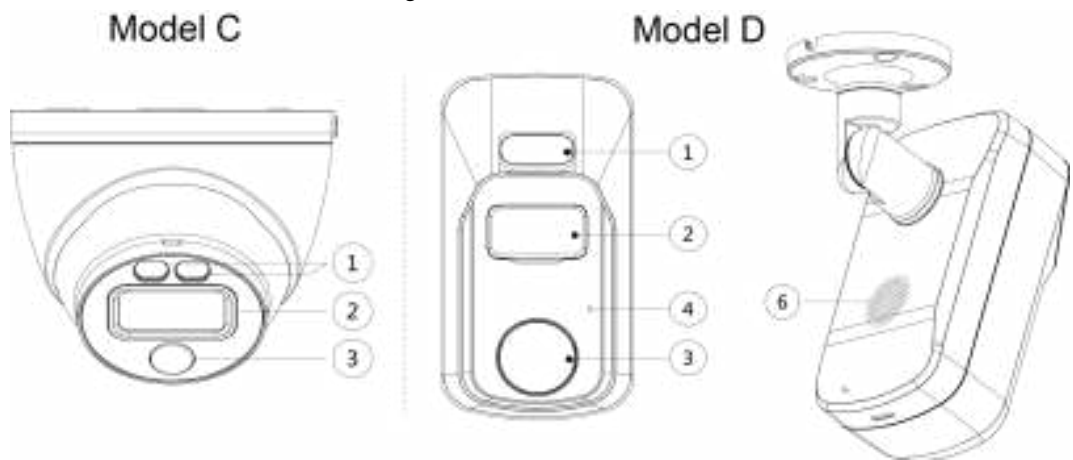


Table 2-1 Component list

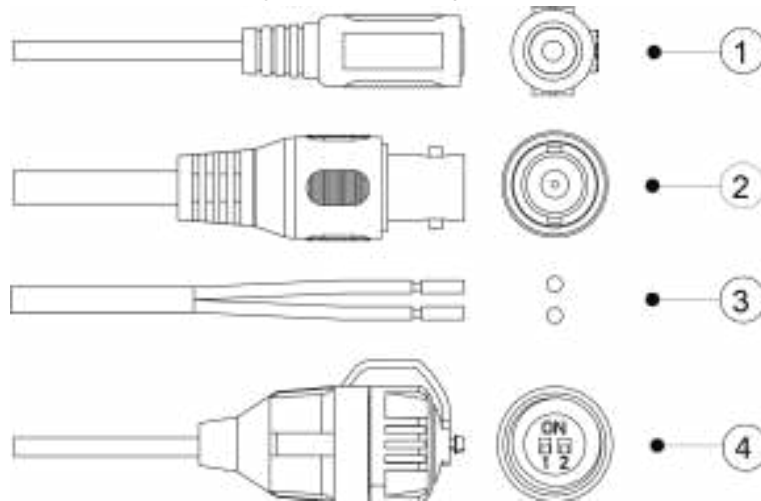
No.	Name
①	White light
②	Lens
③	PIR sensor
④	MIC  For model B and D, their revised versions do not have MIC.
⑤	Light sensor
⑥	Speaker

2.3 Cable



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

Figure 2-7 Cable port list



For more information about cable ports, see Table 2-2; for the operation method of ④(DIP switch), see Table 2-3.

Table 2-2 Cable port description

No.	Port Name	Function
①	12V DC power input	Inputs 12V DC power. Please be sure to supply power as instructed in the manual.  Device abnormality or damage could occur if power is not supplied correctly.
②	Video output	Connects to XVR to output video signal.
③	Alarm	- The yellow cable (alarm output): Outputs alarm signal to the storage device. - The brown cable (ground): Connects to the ground.
④	DIP switch	Dial switches to change output mode. Switch up indicates "ON", and switch down indicates "OFF."

Table 2-3 DIP switch operation

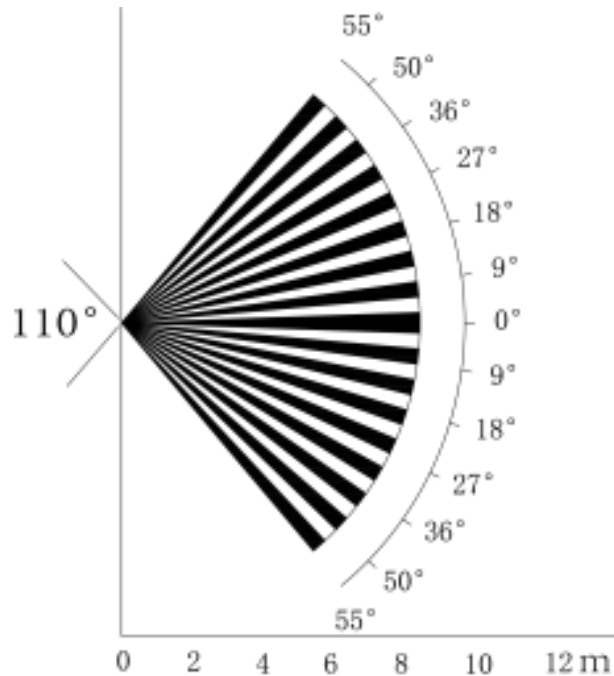
Switch1	Switch2	Output Mode
OFF	OFF	CVI
ON	ON	CVBS
ON	OFF	AHD
OFF	ON	TVI

3

Detection Range

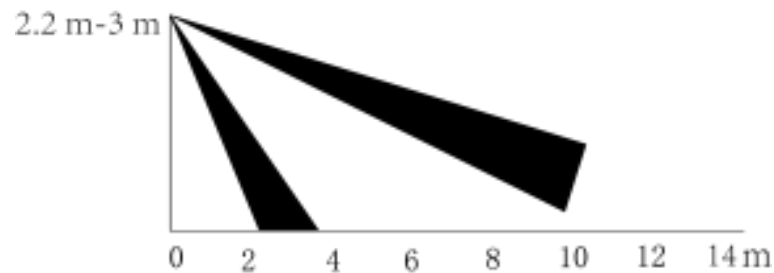
The horizontal detection range of the sensor for model A, B, C and D is all 110°. See Figure 3-1.

Figure 3-1 Horizontal detection range



For model A, B and C, the vertical detection distance of the sensor is 2 m–10 m. For model D, the distance is 1 m–14 m. See Figure 3-2.

Figure 3-2 Vertical detection distance



4 Installation



- Make sure the mounting surface is strong enough to hold at least three times of the camera weight.
- The following figure is for reference only, and the actual product shall prevail.

4.1 Installing Model A, B and D

Figure 4-1 Model A installation

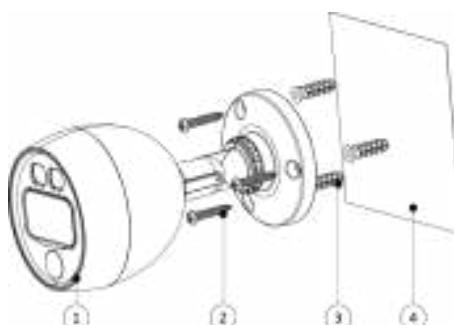


Figure 4-2 Model B installation

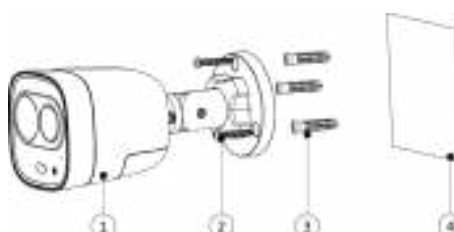


Figure 4-3 Model D installation

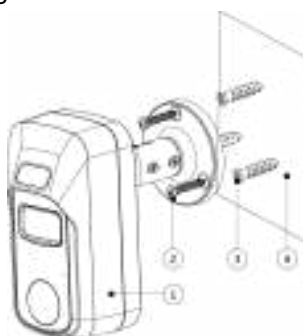


Table 4-1 Installation item list

No.	Item	No.	Item
①	Main body	②	Self-tapping screw
③	Expansion bolt	④	Mounting surface

Step 1 Confirm the position of screw holes (and the cable outlet hole if it needs to go through the mounting surface④) and drill them on the mounting surface④, and then insert the expansion bolts③ in the screw holes.

Step 2 Align the screw holes on the bracket to those on the mounting surface④, and then pull the cable out through mounting surface or the side cable tray. Attach the bracket to the mounting surface④ with the self-tapping screws②.

Step 3 Connect the camera to power source and the XVR device, and the live view screen is displayed.

Step 4 Loosen the locking screws and aim the lens to the ideal angle, and then fasten them. See Figure 4-4, Figure 4-5 and Figure 4-6.

Figure 4-4 Model A adjustment

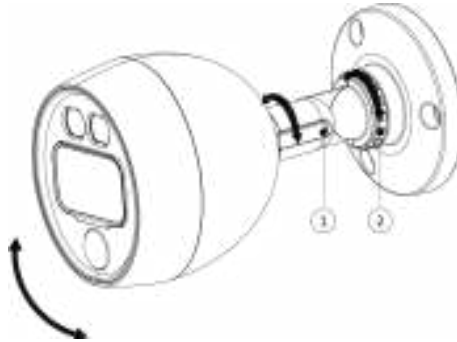


Figure 4-5 Model B adjustment

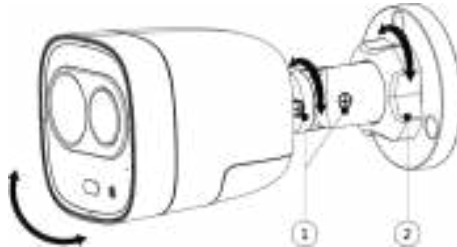
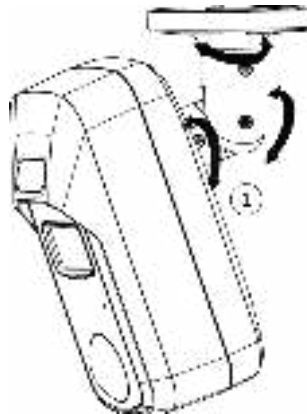


Figure 4-6 Model D adjustment



In Figure 4-4, Figure 4-5 and Figure 4-6, ① represents the locking screws and ② is the locking ring.

4.2 Installing Model C

Figure 4-7 Model C installation

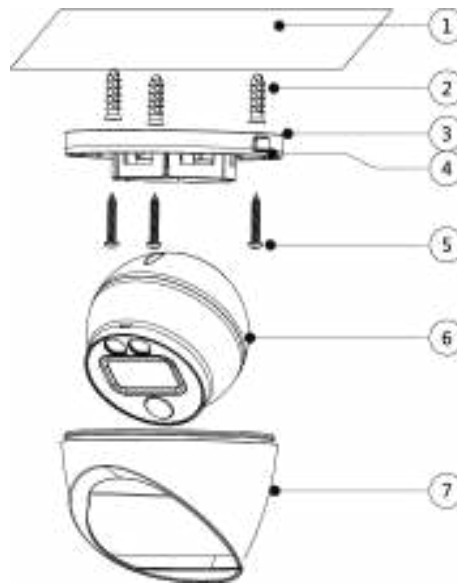


Table 4-2 Installation item list

No.	Item	No.	Item	No.	Item	No.	Item
①	Mounting surface	②	Expansion bolt	③	Pedestal	④	Locking button
⑤	Self-tapping screw	⑥	Main body	⑦	Enclosure	—	—

Step 1 Press the locking button④ to take off the pedestal③.

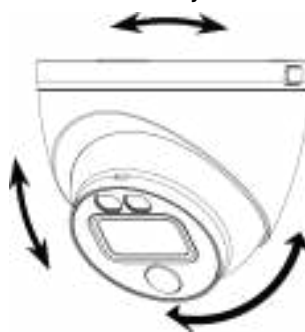
Step 2 Confirm the position of screw holes (and the cable outlet hole if it needs to go through the mounting surface①) and drill them on the mounting surface①, and then insert the expansion bolts② in the screw holes.

Step 3 Align the screw holes on the pedestal③ to those on the mounting surface①, and then pull the cable out through mounting surface or the side cable tray. Attach the pedestal③ to the mounting surface① with the self-tapping screws⑤.

Step 4 Put the enclosure⑦ (with the main body⑥ inside) back into the pedestal③. Connect the device⑥ to power source and the XVR device, and the live view screen is displayed.

Step 5 Rotate the enclosure⑦ and then rotate the main body⑥ to get the lens an ideal angle. See Figure 4-8.

Figure 4-8 Model C adjustment



5 Configuring Alarm



To understand this chapter better, read the user's manual of XVR first.

This chapter introduces how to configure and customize alarm mode, and how to use the camera as a gateway to connect compatible wireless node devices to the XVR.



Gateway function is available on select models.

5.1 Configuring Trigger Mode

In the OSD menu, select **Advanced > Alert > Trigger Mode**.

- If you select **Camera Setting**, the camera would perform siren and white light alarm as configured in the camera.
- If you select **XVR Setting**, the camera would perform siren and white light alarm as configured in the XVR. For more information about **XVR Setting**, see the XVR user's manual.



If you do not get XVR as your storage device, it is recommended to set the trigger mode to **Camera Setting**.

5.2 Configuring Flashlight and Audio Alarm



This part is available only when the alarm priority is set to **Camera Setting**.

In the OSD menu, select **Advanced > Alert**.

- On the **White light Alert** item, set it to **ON**, and then enter the item.
 - ◇ In **Mode**, You can select between **Lighting** or **Flash**.
If you select **Flash**, you can set the **Flash Frequency** from **Low**, **Medium** and **High**.
 - ◇ In the **Alert Duration**, you can adjust from 5 seconds to 60 seconds.
- On the **Audio Alert** item, set it to **ON**, and then enter the item.
 - ◇ In the **Audio** item, you can select from the three audios. You can also customize your own alarm audios. Please contact our after sales.
 - ◇ In the **Volume** item, you can select from **Low**, **Medium** and **High**.
 - ◇ In the **Alert Duration**, you can adjust from 5 seconds to 60 seconds.

5.3 Connecting Node Device



This function is available on select models.

5.3.1 Connecting Node Device from OSD menu

- Step 1 In the OSD menu, select **Advanced**.
- Step 2 On the **Enroll** item, set it to **ON**, and the camera enters pairing mode.
Operate the node device and enter pairing mode according to corresponding manual.
- Step 3 After Paring is completed, you can check the information of the connected device in the **Sensor Pairing** interface. See Figure 5-3.

5.3.2 Connecting Node Device from XVR

- Step 1 In the **Main Menu** interface, select **IoT > MANAGER > Sensor Pairing**.
The **Sensor Pairing** interface is displayed.
- Step 2 Click **Add**.
The **Add** interface is displayed. See Figure 5-1.

Figure 5-1 Add interface

The screenshot shows a form titled "Add" with the following fields and controls:

- Access Type:** A dropdown menu currently showing "Camera Gateway".
- Add Way:** A dropdown menu currently showing "Pair", with a "Pair" button to its right.
- Access Point:** A dropdown menu currently showing "Chn2-Air".
- Serial No.:** An empty text input field.
- Name:** An empty text input field.
- Type:** An empty text input field.
- Class:** An empty text input field.
- Status:** A field with a small icon to its right.
- Back:** A button at the bottom right of the form.

- Step 3 In the **Access Type** list, select **Camera Gateway**.
- Step 4 Click **Pair**, and the camera enters pairing mode.
Operate the node device and enter pairing mode according to corresponding manual.
After Paring is completed, see Figure 5-2.

Figure 5-2 Pairing completed

Add

Access Type

Camera Gateway

Add Way

Pair

Pair

Access Point

Chn6-Air

Serial No.

3J01837

Name

Chn6-Panic Button-1

Type

Panic Button

Class

Alarm In

Status

Connected

Back

Step 5 Click **Back**.
The information of the connected device is displayed. See Figure 5-3.



Click  to modify the device name; click  to delete node device.

Figure 5-3 Connected device

IoT

REAL TIME DISPLAY

SEARCH INFO

MANAGER

Device Pairing

Temperature/Hu...

Wireless Detector

Wireless Alarm

Access Type

Camera Gateway

Channel

All

	Edit	Delete	Status	Access Type	Access Point	Type
1				Camera Gateway	Chn2-Airity	Panic Button

Refresh

Add

Appendix 1 Maintenance



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.

Appendix 2 Technical Specifications

Parameter	Specification
Detection method	PIR technology
Installation height	2.2 m–3 m
Working temperature of PIR	-10°C to 50°C for model A, B and C; -20°C to 60°C for model D
Camera operating humidity	< 95%