



# **Dahua HD Pinhole Network Camera Quick Start Guide**

**Version 1.0.0**

**ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD.**

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## Welcome

Thank you for purchasing our network cameras.

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

Please read the following safeguards and warnings carefully before you use this series product.

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

## 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 IEC60950-1. Please note that the power supply requirement is subject to the device label.
- Make sure the power supply is correct before operating the device.
- A readily accessible disconnect device shall be incorporated in the building installation wiring
- 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, otherwise it might cause over brightness or light marks, which are not the device malfunction, and affect the longevity of Charge Coupled Device (CCD) or Complementary Metal-Oxide Semiconductor (CMOS).
- Do not place the device in a damp or dusty environment, extremely hot or cold temperatures, or the locations with strong electromagnetic radiation or unstable lighting.
- Keep the camera away from water or other liquid to avoid damages to the internal components.
- Keep the indoor device away from rain or damp to avoid fire or lightning.
- Keep sound ventilation to avoid heat accumulation.
- Transport, use and store the device within the range of allowed humidity and temperature.
- 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.
- The device needs to be installed in the location where professional staff can cover (professionals need to know the attentions of using the device), non-professionals are not allowed to enter device installation area when the device is operating normally, which may cause accidental damage.

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## Operation and Daily Maintenance

- Do not directly touch the heat dissipation component of the device to avoid scald.
- Do not dismantle the device because there is no component that can be fixed by users themselves. Otherwise, it might cause water leakage or bad image due to unprofessional dismantling.
- Please contact after-sale service to replace desiccant when it becomes green. (The desiccant is not provided by default)
- 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.
- Do not directly touch the optic component CCD or CMOS. You can use the air blower to blow away the dust or dirt on the lens surface. Please use a dry cloth wetted by alcohol to wipe away the dust gently if necessary.
- Use the dry soft cloth to clean the device. If the dust is difficult to be removed, please wipe it away with a clean cloth wetted slightly by the mild detergent, and then use the dry cloth to clean the device. Do not use volatile solvents like alcohol, benzene, thinner, or strong detergent with abrasiveness, otherwise it will damage the surface coating or reduce the working performance of the device.
- When installing or using the device, do not directly touch or wipe the surface of the dome cover because it is an optical device. If stained with dirt, use oil-free soft brush or air blower to gently wipe it away. If stained with grease or fingerprint, use soft cloth to gently wipe the water drop or oil and wait till it is dry, and then use oil-free cotton cloth or lens cleaning paper soaked with alcohol or detergent to wipe from the lens center outward till it is clean.
- We are not liable for any problems caused by unauthorized modification or attempted repair.
- The dome cover is a kind of optical component, please do not touch or wipe the cover surface during installation and application, it may stain dust, grease or fingerprint, you can use absorbent cotton to dip some diethyl ether or use soft cloth to dip some water and then wipe gently. You can also use air gun to remove the dust if the cover is stained with dust.

## Warnings

- Please strengthen the protection of network, device data and personal information, adopt necessary measures of guarantee device network security, including but not limited to using strong password, modifying password regularly, upgrading firmware to the latest version, isolating computer network and so on. For the IP camera firmware of some old version, the ONVIF password won't be modified automatically after the main password of the system is modified. You need to upgrade the camera firmware or upgrade the ONVIF password manually.
- Please modify the default password after login to avoid being stolen.
- Use the standard components provided by manufacturer and make sure the device is installed and fixed 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.

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- Do not provide two or more power supply sources for the device; otherwise it might damage the device.

## Disclaimer

- This manual is for reference only. Please refer to the actual product for more details.
- Minor differences might be found in user interface, and there might be deviation between the actual value of some data and the value provided in the manual due to the reasons such as the real environment is not stable. Please refer to the final explanation of the company if there is any doubt or dispute.
- All the designs and software are subject to change without prior written notice. The manual will be regularly updated according to the product upgrade without prior announcement.
- Please contact the supplier or customer service if there is any problem occurred when using the device.
- Please contact the customer service for the latest procedure and supplementary documentation.
- Please visit our website or contact your local service engineer for more information.
- The company is not liable for any loss caused by the operation that does not comply with the manual.
- If there is any uncertainty or controversy, please refer to our final explanation.

## Regulatory Information

### FCC Information

#### 1.1 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.

#### 1.2 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. These limits are designed to provide reasonable protection against harmful interference. This equipment generate, 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 communication. 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.

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**Note**

- Please refer to the disk for more details, check and download the corresponding user's manual and tool.
- Before installation, please open the package and check all the components are included.
- Contact your local retailer as soon as possible if something is broken in your package.

Accessory Name	Amount	Accessory Name	Amount
Network Camera	1	Installation Position Map	1
Quick Start Guide	1	Screw Package	1
CD	1	Decoration Cover (Optional)	1

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# 1 Device Framework

## 1.1 External Cable

### Note

- The following structure figures are for reference only. They are only used to know the functions of structure components and cable ports.
- There might be some minor differences between different devices, so please refer to the actual products you purchased.

Please refer to Figure 1-1 and Figure 1-2 for the structure of front panel.

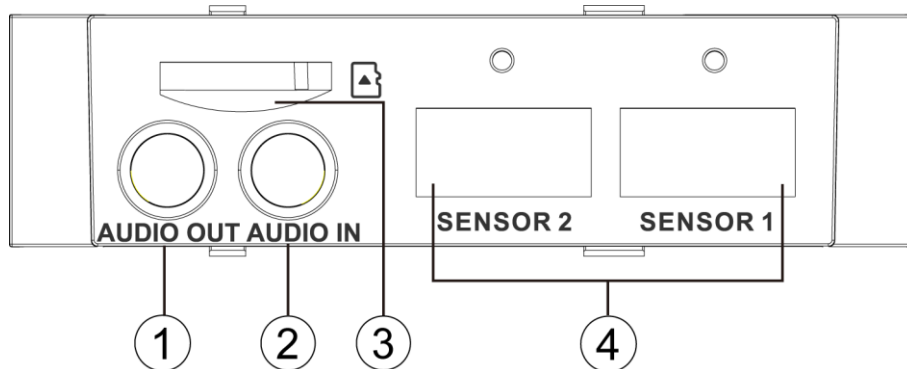


Figure 1-1

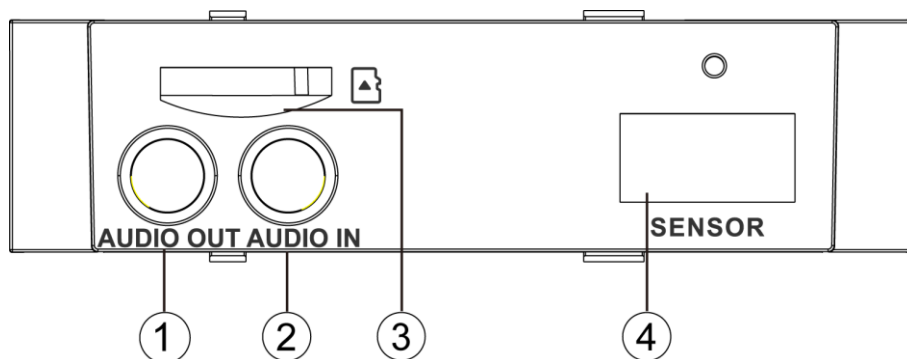


Figure 1-2

Please refer to Figure 1-3 for the structure of rear panel.

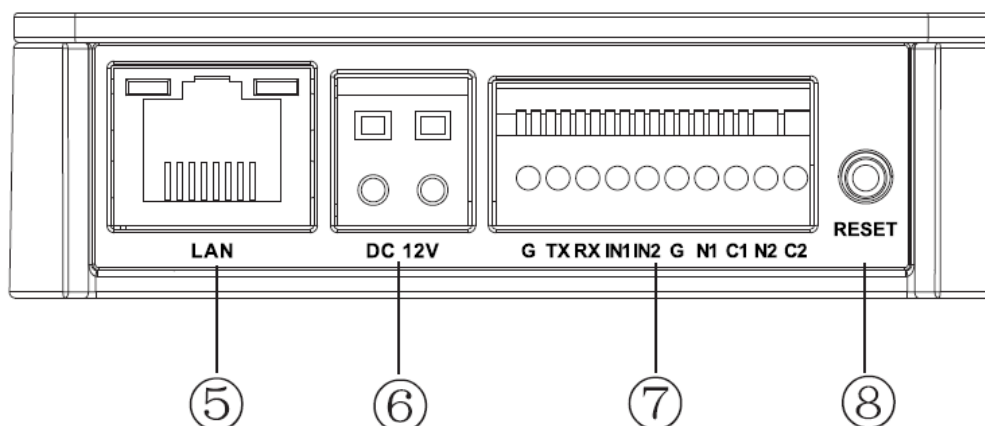


Figure 1-3

The following tables show more information about port function.

No.	Port	Port name	connector	Function description
1	AUDIO OUT	Audio output port	3.5mm TRS	Output audio signal to the speakers and other devices.
2	AUDIO IN	Audio input port	3.5mm TRS	Input audio signal, receive analog audio signal from pickup and other devices.
3	SD Card	Micro SD	Micro SD Card slot	Micro SD card storage.
4	SENSOR	Sensor port	Sensor board	Connect front end sensor board, acquire image data.
5	LAN	Network port	Ethernet port	Connect to standard Ethernet cable, provide PoE power supply function.
6	DC12V	Power input port	-	Input DC12V; please be sure to power the device according to the instruction of device label. <b>Caution</b> It may cause damage to the device if it fails to power the device according to the instruction of device label.
7	I/O	I/O port	-	Alarm input and output; refer to Table 1-2 for more details.
8	Reset Button	Reset	-	It is used to restore factory default settings for the device. <b>Note</b> Continuously press the button for over 5 seconds in the situation where the device is working normally, then the system configuration info can be restored to factory default settings.

Table 1-1

Port name	Cable port name	Function description	
I/O port	G	Ground terminal connecting to RS232 serial port.	<b>Note</b> Some devices support RS485 port.
	TX	RS232 sending port.	
	RX	RS232 receiving port.	
	IN1	Alarm input port 1, receive on-off signal from external alarm source.	
	IN2	Alarm input port 2, receive on-off signal from external alarm source (reserved).	
	G	Alarm GND	



Port name	Cable port name	Function description
	N1	Alarm output port 1, output alarm signal to alarm device.
	C1	
	N2	Alarm output port 2 (reserved).
	C2	

Table 1-2

## 1.2 Dimension

Refer to Figure 1-4 for the dimension of Model A. The unit is mm (inch).

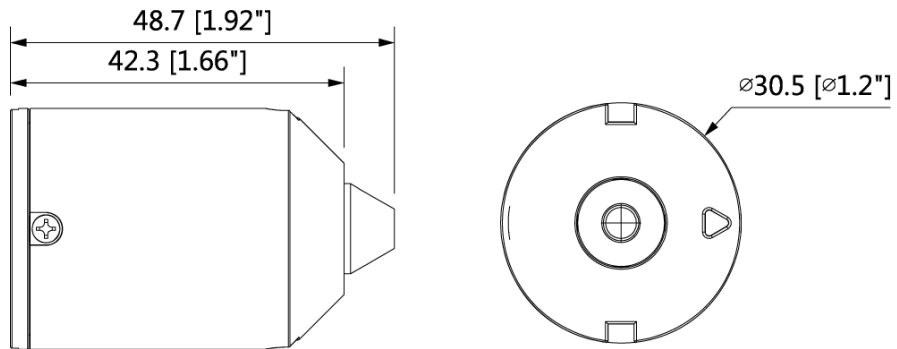


Figure 1-4

Refer to Figure 1-5 for the dimension of Model B. The unit is mm (inch).

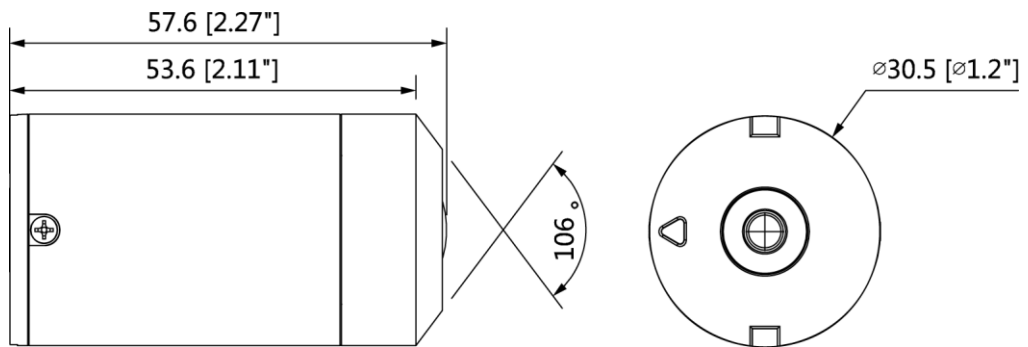


Figure 1-5

Refer to Figure 1-6 for the dimension of Model C. The unit is mm (inch).

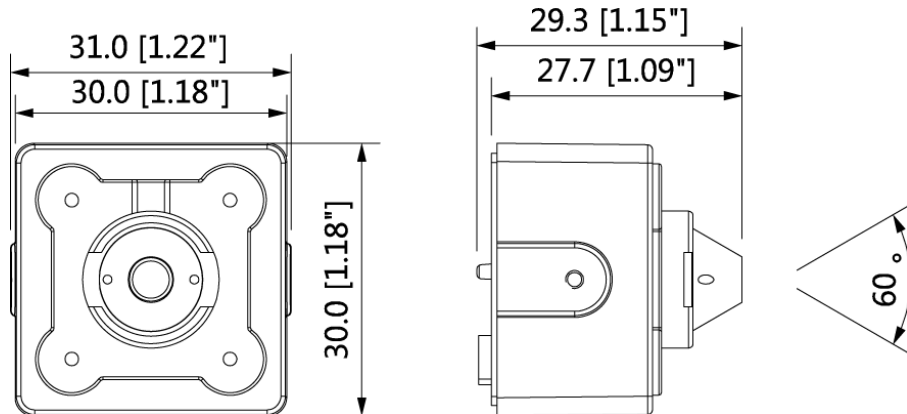


Figure 1-6

Refer to Figure 1-7 for the dimension of Model D. The unit is mm (inch).

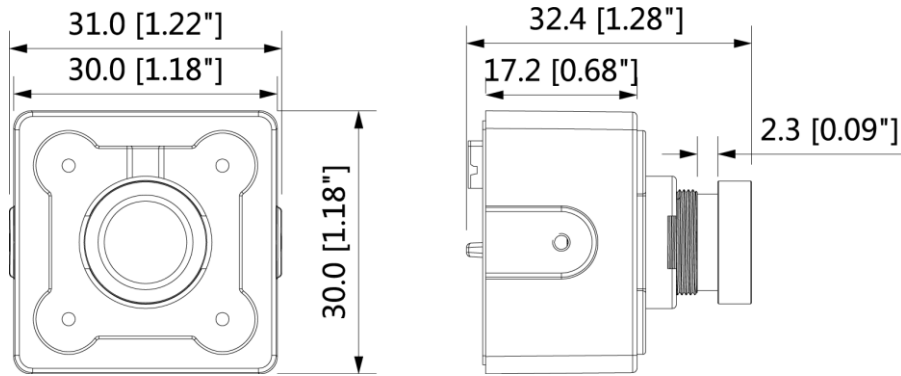


Figure 1-7

Refer to Figure 1-8 for the dimension of Model E. The unit is mm (inch).

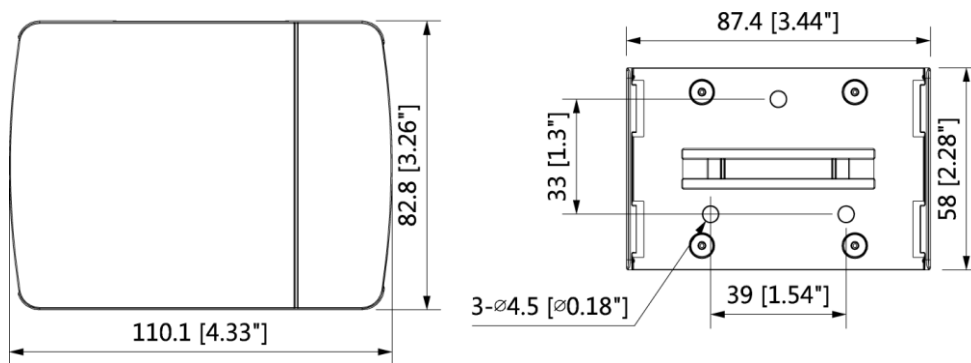


Figure 1-8

## 2 Device Installation

The device is detachable, which means both front and rear part of the device need to be installed respectively. There are four types of shape for front part.

### Note

- The following figures are for reference only; please refer to the product for more details.
- Make sure the bracket installation surface can sustain at least 3X weight of the total weight of bracket and camera.
- The device is not equipped with bracket by default; please purchase it separately if necessary.

Step 1 Rear pinhole box installation for all the models.

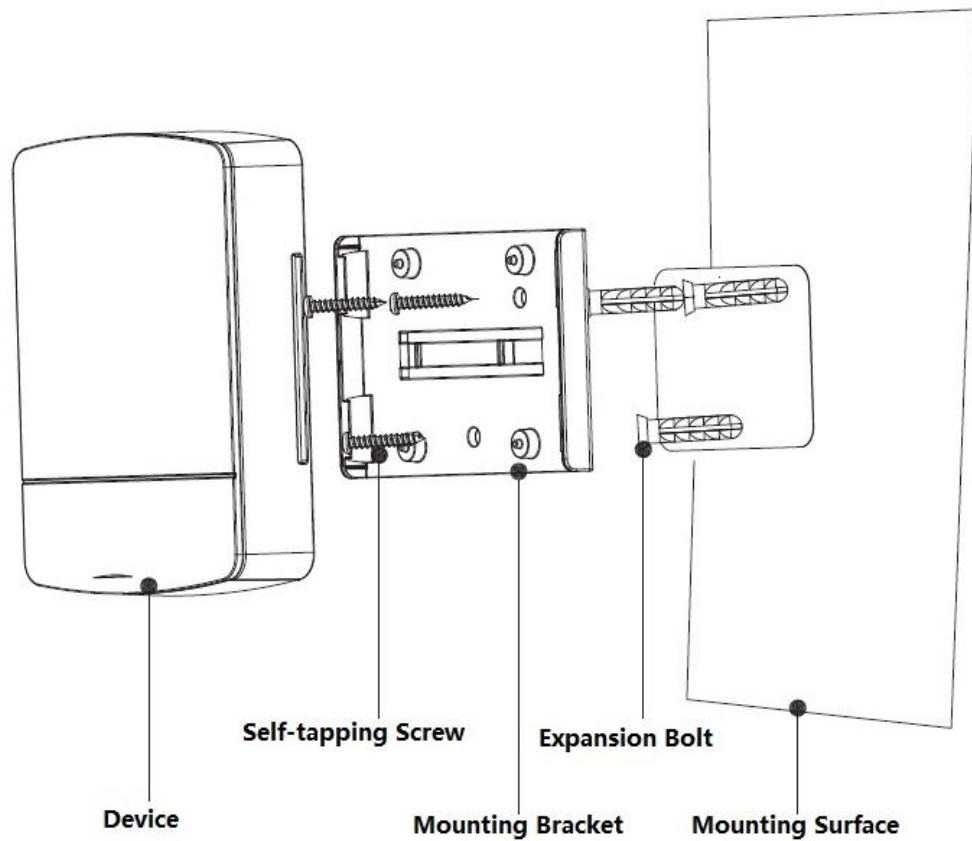


Figure 2-1

To install the back-end box, do the following:

- 1) Stick installation position map to the mounting surface where you will install the device. Dig holes according to the hole sites marked on installation position map.
- 2) Open accessories bag, take out expansion bolts and insert them into the holes you just dug.
- 3) Take out self-tapping screws and tighten 3 screws to fix the device on the installation surface where the bolts are located.
- 4) Put the device into the mounting bracket directly.
- 5) Connect front-end lens to camera body via cable.

**Step 2** Front part installation for model A, B, C and D (optional). Please select installation mode according to the actual situation.

**Note**

It needs to implement the following steps when it is model A, B or C.

- **Mode 1**

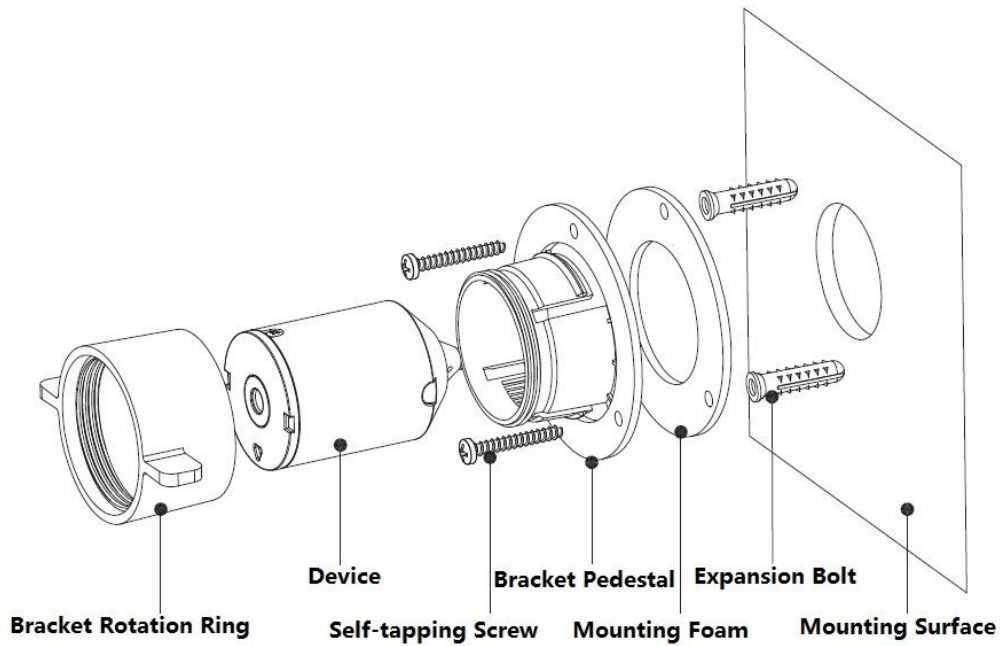


Figure 2-2

- 1) Take out mounting bracket from the packing box (with mounting foam), tear off the foam membrane and stick it on the mounting surface.
- 2) Put the front lens into the mounting bracket and then lock the self-tapping screw firmly.
- 3) Tighten the rotation ring firmly.

● **Mode 2**

**Note**

It needs to implement the following steps when it is model D.

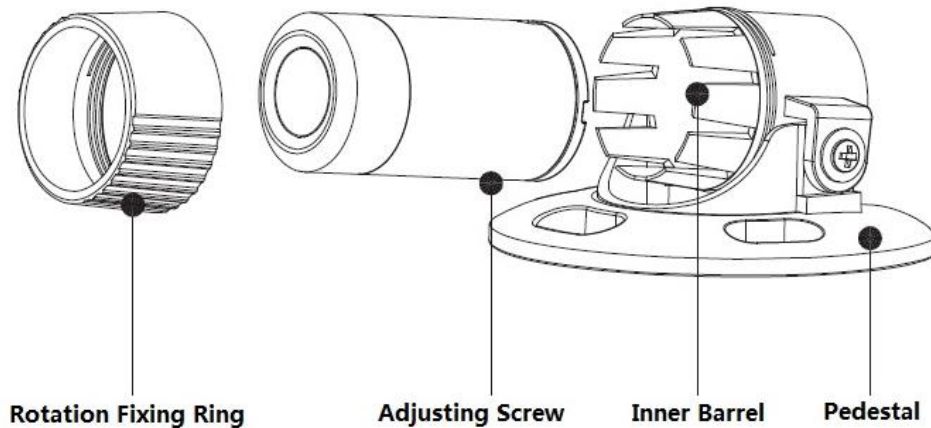


Figure 2-3

- 1) Take out mounting bracket from the accessories bag (including adjusting screw, rotation fixing ring, pedestal and inner barrel).
- 2) Put the round lens into the inner barrel properly.
- 3) Twist the rotation fixing ring into the inner barrel and make sure the round lens is firmly fixed.
- 4) Rotate the lens to a proper angle, lock the adjusting screw firmly.
- 5) Use three self-tapping screws to fix the pedestal on the mounting surface.

**Step 3** Installation for model F and G. Please select installation mode according to the actual situation.

**Note**

It needs to implement the following step when the device is model F or G.

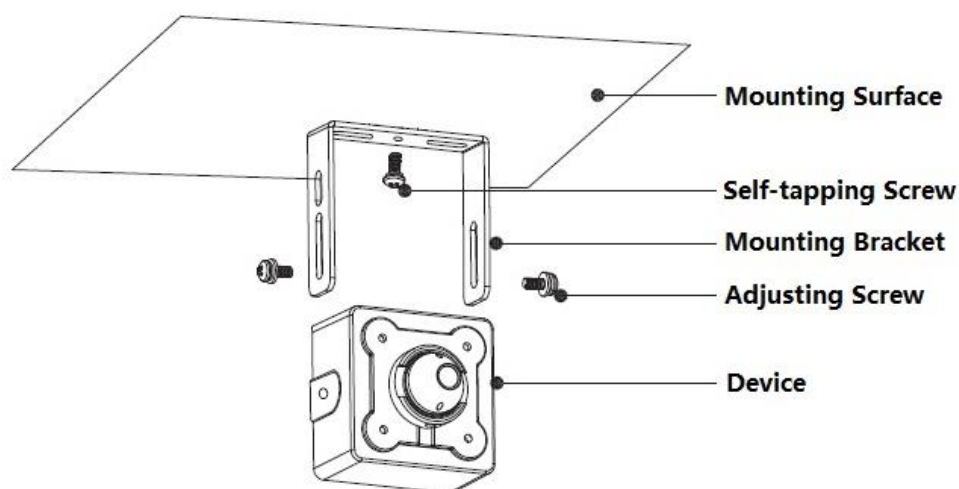


Figure 2-4

- 1) Use self-tapping screws to fix the mounting bracket on the mounting surface.
- 2) Use adjusting screw to fix the device on the mounting bracket and adjust the device to a proper monitoring angle.
- 3) Tighten the adjusting screw firmly.

**Step 4** Connect Device Cable

- Connect device corresponding power and audio cable well according to requirement, and then use insulated tape to twine the connection respectively to make it waterproof.
- Connect alarm input and output terminal to external cable according to "Connect Alarm Input/output Port", and use insulated tape to twine connection to make it waterproof.

**Connect Alarm Input / Output Port**

**Note**

Some models do not support alarm function, which cannot be applied to this chapter.

**Step 1** Connect alarm input device to the alarm input of I/O port.

When the input signal is idle or grounded, the device can collect the different statuses of the alarm input port. When the input signal is connected to 3.3V or it is idle, the device collects the logic "1". When the input signal is grounded, the device collects the logic "0".

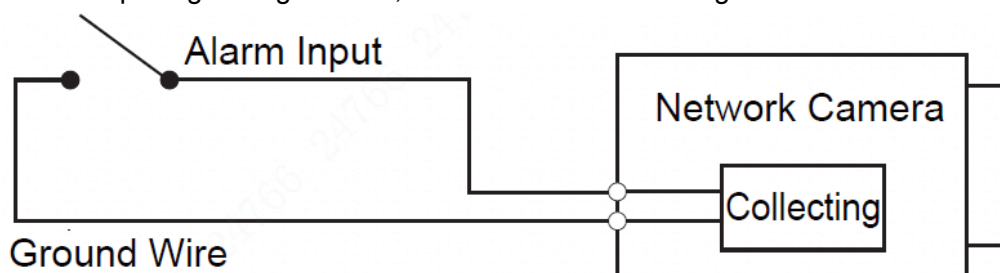


Figure 2-5

**Step 2** Connect alarm output device to the alarm output port of I/O port cable.

N1 and C1 or N2 and C2 form a switch, which is shown in Figure 2-6, the switch is used to provide alarm output. Generally the switch is opened; the switch will be closed when there is alarm output.

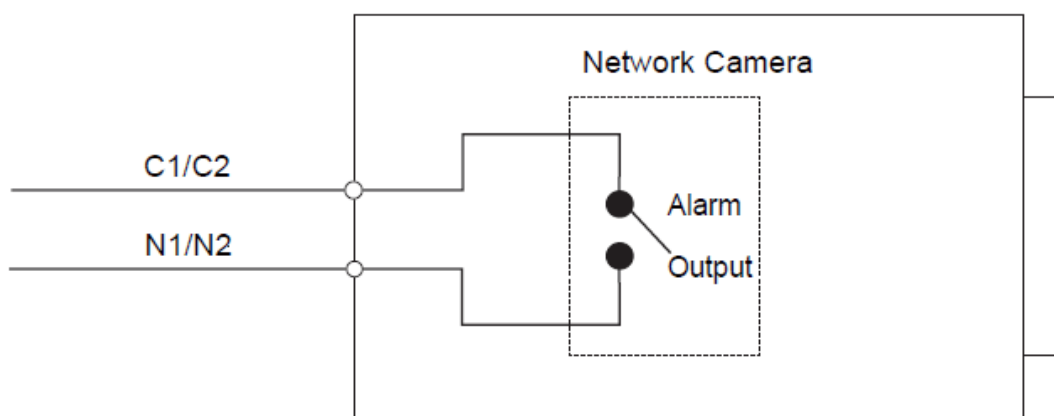


Figure 2-6

**Step 3** Log in WEB interface, make corresponding settings upon alarm input and output on the interface of alarm setup.

- Alarm input of WEB is corresponding to the alarm input of I/O port cable. It is to set corresponding NO, NC input according to the high and low level signal generated when alarm happens for alarm input device.
- Set alarm output on the WEB, alarm output is corresponding to the alarm output end, which is the alarm output port of the I/O port cable.

## 3 Network Configuration

You can initialize the device and modify IP address via "Quick Configuration Tool"; you can also initialize device and modify IP address on the WEB interface. Please refer to the *WEB Operation Manual* in the disk for more details.

### Note


- It needs to implement initialization if it is the first time use device or the device is restored to factory default. Only some device support initialization function.
- It can implement initialization only when the device IP address (192.168.1.108 by default) and the IP address of PC are in the same network segment.
- In order to make the camera have access to network smoothly, please plan available IP segment according to the actual network environment.
- The following figures are for reference only; different models may have different interfaces.

### 3.1 Device Initialization

#### **Step 1**

Double click "ConfigTool.exe" and open quick config tool.

#### **Step 2**

Click  to enter the interface where you can modify IP address, click **Search Setting**, the system will display the **Setting** dialog box.

### **Step 3**

Set the device network segment, login user name and password, and then click **OK**. The system will display the searched devices after searching completes.

### **Step 4**

Select the devices which need initialization and click **Initialization**. The system will display the interface of **Device Initialization**, which is shown in Figure 3-1.

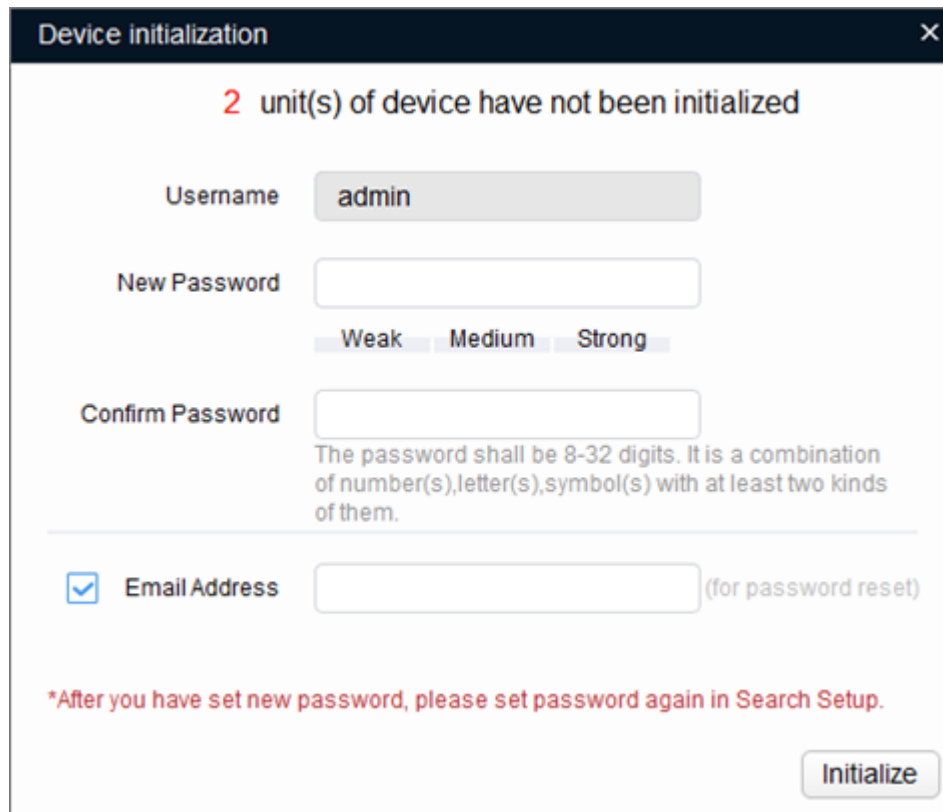


Figure 3-1

### **Step 5**

Set new password and confirm password, select **Email Address** and input email address.

#### **Note**

The password can be set as 8 to 32 characters; it can be a combination of number(s), letter(s) and symbol(s) with at least two kinds of them (excluding “” , “” , “ , ” , “ . ” , “ & ”). Please set password with high security according to the password strong and weak prompt.

### **Step 6**

Click **Initialization**, the system begins to initialize the device.

✓ means initialization succeeded; ⚠ means initialization failed. Click the icon to check more details.

### **Step 7**


Click **OK** to complete device initialization.

## 3.2 Modify IP Address

### Step 1

Double click "ConfigTool.exe" and open quick config tool.

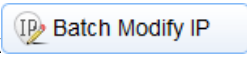
### Step 2

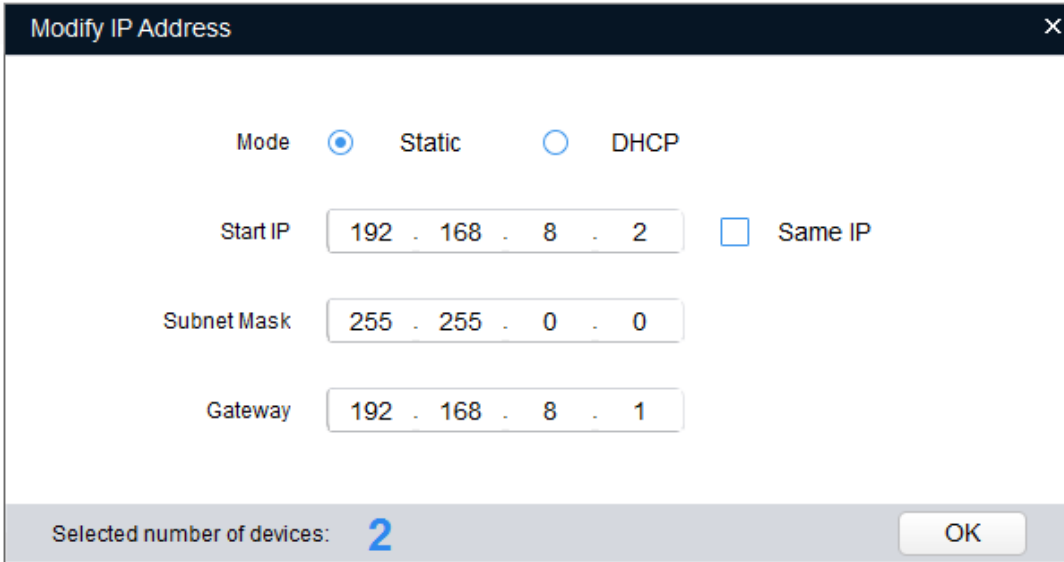
Click  to enter the interface where you can modify IP address, click **Search Setting**, the system will display the **Setting** dialog box.

### Step 3

Set the device network segment, login user name and password, and then click **OK**. The system will display the searched devices after searching completes.

### Step 4

Select the devices whose IP addresses need to be modified, and then click . The system will display the dialog box of Modify IP Address, which is shown in Figure 3-2.



The screenshot shows a dialog box titled "Modify IP Address". It has a close button (X) in the top right corner. The dialog contains the following elements:

- Mode:** Two radio buttons are present. The "Static" radio button is selected (indicated by a blue dot), and the "DHCP" radio button is unselected.
- Start IP:** A text input field containing "192 . 168 . 8 . 2". To its right is an unchecked checkbox labeled "Same IP".
- Subnet Mask:** A text input field containing "255 . 255 . 0 . 0".
- Gateway:** A text input field containing "192 . 168 . 8 . 1".
- Footer:** A grey bar at the bottom contains the text "Selected number of devices: 2" (where "2" is in blue) and an "OK" button on the right.

Figure 3-2

### Step 5

Set the mode as **Static**, and enter the planned start IP, subnet mask and gateway.

### **Note**

Set the mode as **DHCP** when there is DHCP server in the network, the device will automatically acquire IP address from the DHCP server.

### Step 6

Click **OK** to complete modification of device IP address.

## 3.3 Login WEB Interface

### Step 1

Open IE browser, enter the modified camera IP address into the address bar and then press **Enter** button. Please operate according to the interface prompt if the interface displays guide of **Software License Agreement** and **Online Upgrade**.



## **Step 2**

Enter username and password, click **Login**.

## **Step 3**

For the first login, click **Click Here to Download Plug-in**, install controls according to system prompt. The main interface will be shown in Figure 3-3 after control installation is completed.

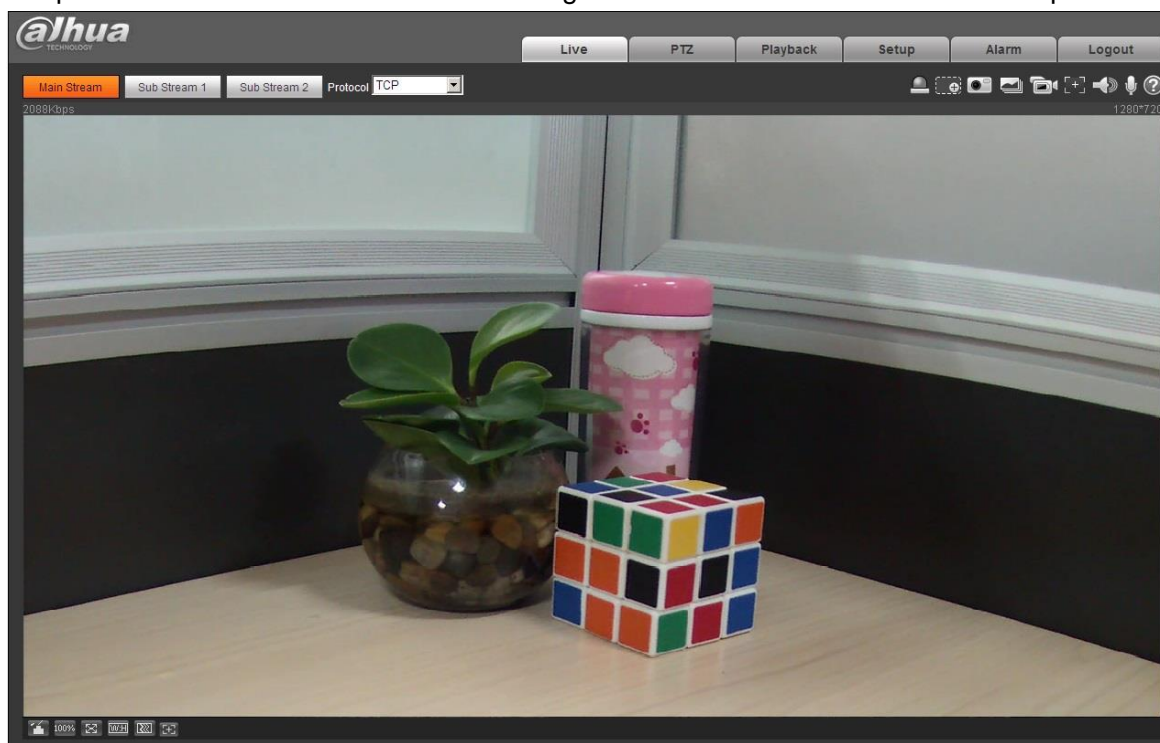


Figure 3-3



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