

Dahua HD Box Network Camera Quick Start Guide

Version 1.0.0

Zhejiang Dahua Vision Technology Co., LTD

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.

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.
- 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.

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
Network Camera Unit	1
C/CS Lens Adapter Ring	1
Quick Start Guide	1
CD	1

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1 Device Structure

1.1 Rear Panel

Note:

- The figures are for reference only, which are used to know the functions of the rear panel.
- Different devices may have different structures of rear panel, please refer to the actual product for more details.

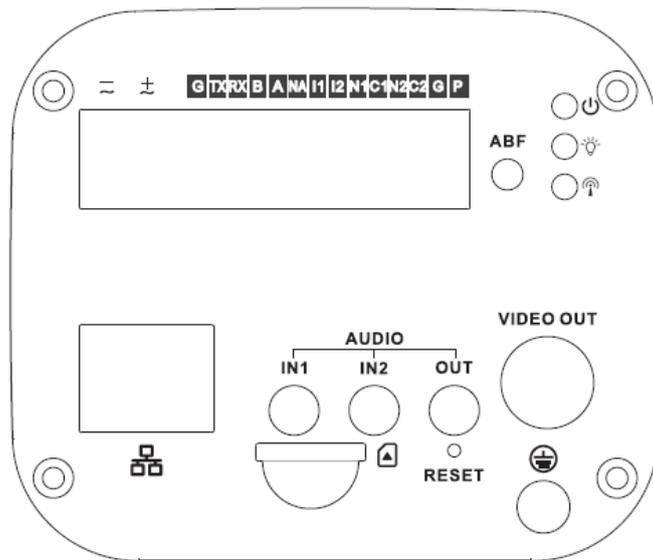


Figure 1-1

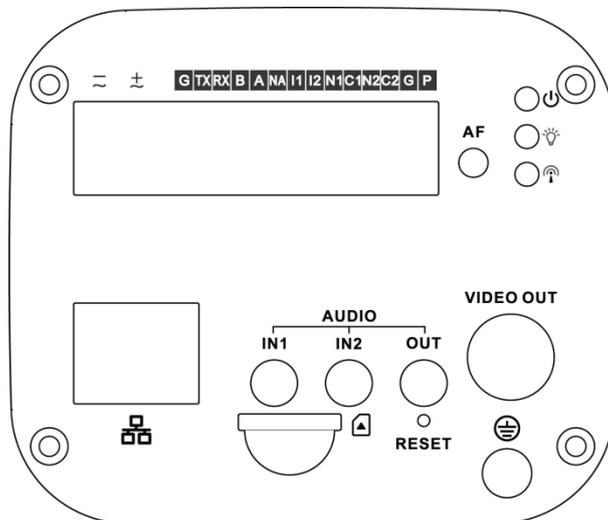


Figure 1-2

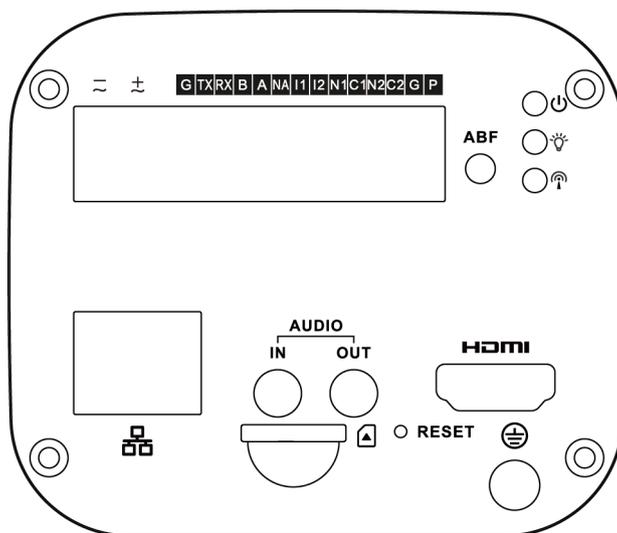


Figure 1-3

Please refer to Table 1-1 for detail information.

Port Name		Port Function
VIDEO OUT	Video output port	<ul style="list-style-type: none"> ● Output analog video signal. It can connect to TV monitor to check image. ● It can preview image via the DVR which supports HDCVI when it outputs HDCVI signal.
HDMI	HDMI interface	It can connect to HDMI monitor to preview image.
AC 24V/ DC 12V	Power port	Able to input 12V DC or AC 24V power supply, and support power supply at the same time
Indicator Light	Red light 	<ul style="list-style-type: none"> ● System boots up-red light is normally on ● System upgrades-red light flashes ● System resets-green light is off, red light is normally on.
	Green light 	<ul style="list-style-type: none"> ● Normal working status-green light is normally on. ● Display record status: recording-green light flashes.
	Yellow light 	<ul style="list-style-type: none"> ● Detect the wireless device-yellow light is normally on.
G	GND	Ground end of RS232 serial port.

TX	RS232 port	Sending end of RS232 serial port
RX		Receiving end of RS232 serial port
B	RS484 port	RS485_B port, control external PTZ etc.
A		RS485_A port, control external PTZ etc.
NA	IR light port	External IR light signal control port.
I1	Alarm input port 1	It is to receive the on-off signal from the external alarm source.
I2	Alarm input port 2	It is to receive the on-off signal from the external alarm source.
N1	Alarm output port	<ul style="list-style-type: none"> ● Alarm output port, output alarm signal to alarm device. ● N1/N2: Normally open alarm output end. ● C1/C2: Alarm output public end. <p>Note: N1 can only be used with C1 while N2 can only be used with C2 when connecting alarm device.</p>
C1		
N2		
C2		
P	Power foldback output port	It outputs DC 12V power; P connects to positive pole while G connects to negative pole.
G (adjacent to P)		
RESET	RESET button	Restore device factory default setup. When system is running normally, press the RESET button for at least 5 seconds, system can restore factory default setup.
ABF	Auto back focus adjustment	Auto back focus adjustment, by adjusting Sensor board position to achieve precise back focus adjustment.
AF	Auto focus function	The device lens mount is M43 and it supports the function when installing motorized lens. It can realize accurate auto focus via one button.
AUDIO OUT	Audio output port	3.5mm JACK port, output audio signal to the passive device such as earphone and etc.
AUDIO IN1	Audio input port	3.5mm JACK, input audio signal from devices such as pick-up. Note:
AUDIO IN2		

		Some devices are only equipped with 1 channel audio input port.
LAN  /OPT	Network port /MB optical fiber port	LAN: Connect to standard Ethernet cable and provide PoE power supply function. OPT: Transmit MB Ethernet data.
SD 	SD card port	Connect it to SD card.
	GND	Please make sure the device is securely earthed to prevent the thunderstorm strike when using the device.

Table 1-1

1.2 Dimension

Note

The figures are for reference only, which are used to know the device dimension.

Please refer to the actual device for more details. The unit is mm (inch).

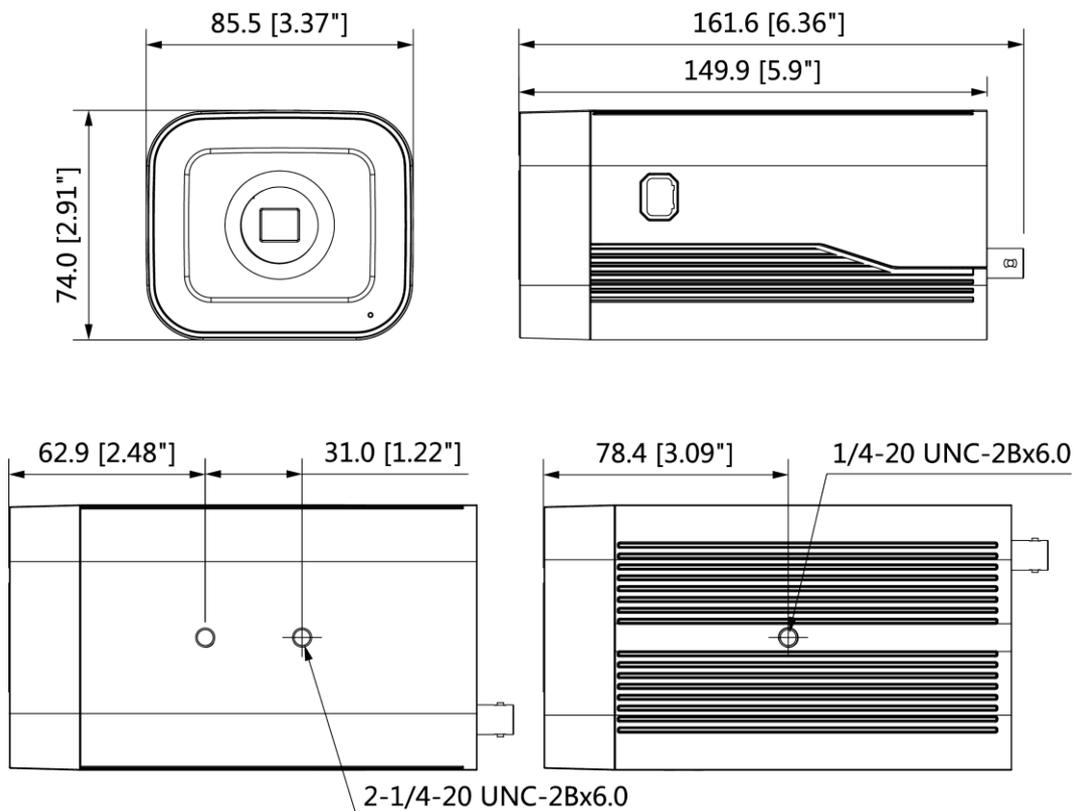


Figure 1-4

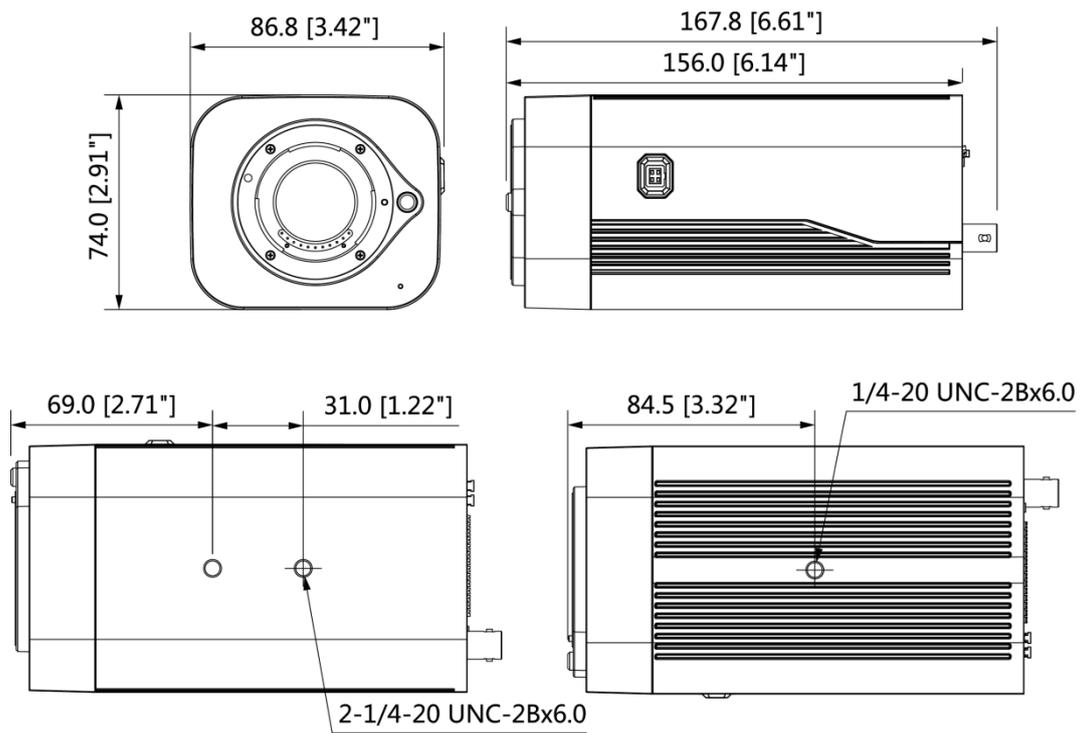
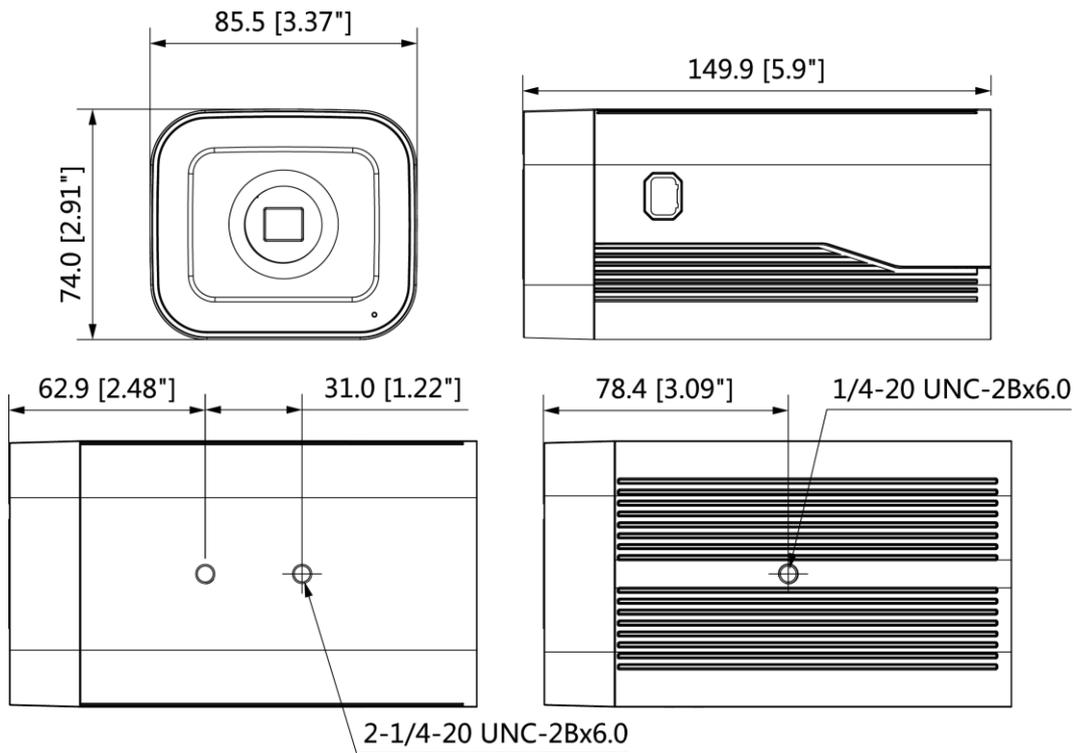


Figure 1-5



2 Device Installation

2.1 Install Device

Note

- The follow installation figures are for reference only, please refer to the actual product for more details.
- Lens assembly mode may be different according to different devices, please refer to the actual lens for more details.
- The bracket mounting wall needs to sustain at least 3X weight of camera and bracket.
- The device is not quipped with bracket by default, you needs to purchase separately if necessary.

Install Lens

- When the device lens mount is bayonet, it supports installing the lens which conforms to bayonet.

Dismantle the protection cover on the device, align the red spot on the lens with the red spot of the lens mount, and rotate the lens clockwise till it is secured and installed properly.

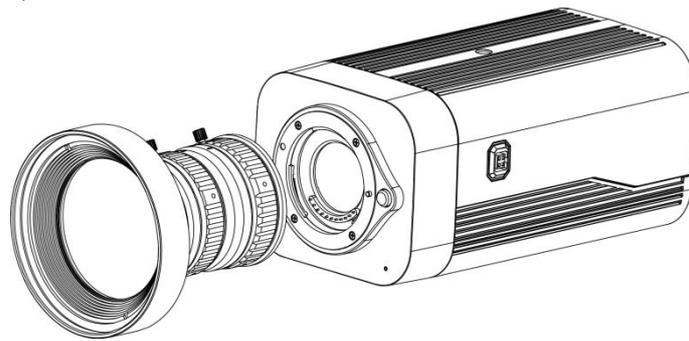


Figure 2-1

Note

First press the button on the upper side of lens mount, and then rotate the lens anticlockwise to dismantle the lens.

- When the lens mount is screw-threaded, different types of lens have different installation modes; please select according to the actual situation.

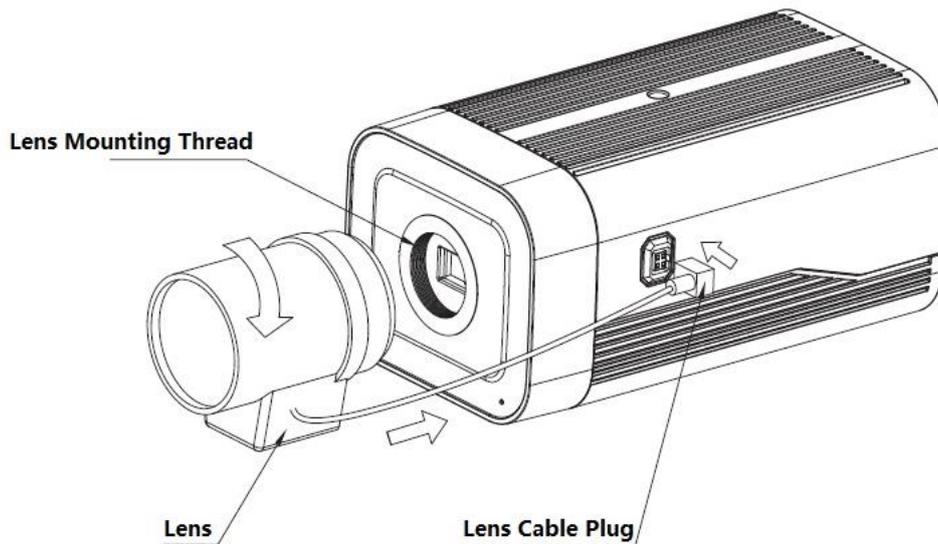


Figure 2-2

- ✧ Install auto aperture lens
 1. Dismantle the protection cover on the device, align the lens with the lens mounting location of the device, rotate the lens clockwise till it is secured and installed properly.
 2. Insert the plug of lens cable into the auto aperture lens connector of the device side panel.
- ✧ Install manual aperture lens
 1. Dismantle the protection cover on the device.
 2. Install the C/CS adapter onto the device, rotate it clockwise to the end and make it closely adhere to the focusing ring on the device. (Only type C lens needs to install adapter ring).
 3. Align C mount lens with the lens mounting location of C/CS adapter ring (CS mount lens aims at the lens mounting location on the device focusing ring), rotate the lens clockwise till it is secured and properly installed.
 4. Use slotted screwdriver to loosen the screw of focusing ring, rotate the focusing ring outward anticlockwise for several millimeters and focus manually, meanwhile it needs to observe the image definition. It has to make back focus adjustment if it fails to adjust clearly.
 5. Use slotted screwdriver to tighten the screw after focus adjustment is completed, fix the focusing ring and then installation is completed.

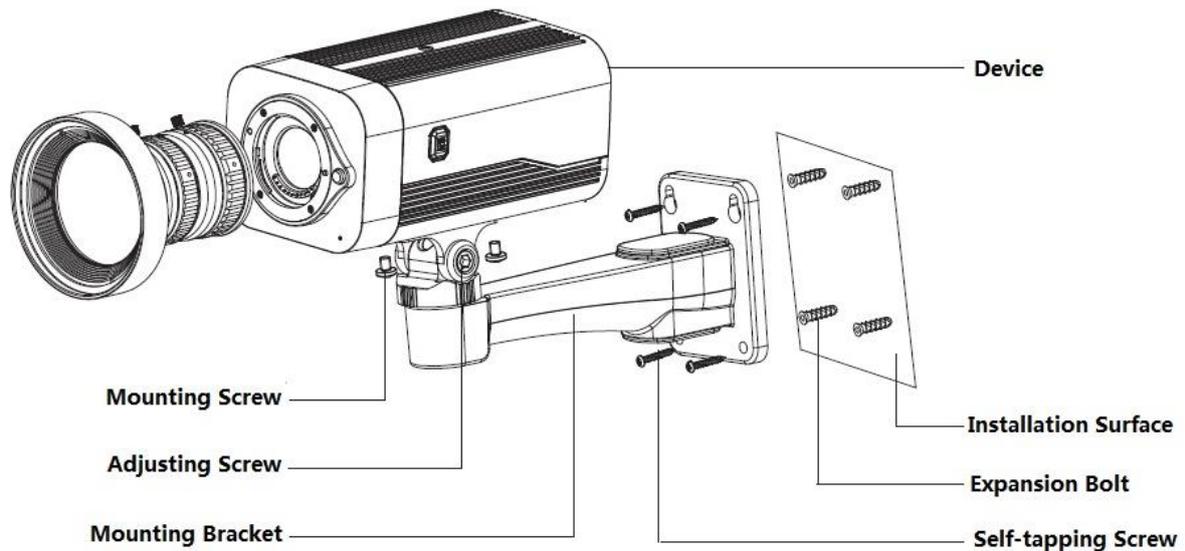


Figure 2-3

Fix Device

Step 1

Mark the mounting hole sites of the bracket on the mounting surface according to actual requirements, and dig mounting holes, then insert the expansion bolts into the mounting holes and lock them firmly.

Step 2

Lead in external cable from the cable exit hole of bracket, you can select bottom cabling or side cabling.

- Bottom cabling: It is to lead in cable directly from mounting surface, which can effectively protect cable.
- Side cabling: it is to lead in cable directly from cable exit groove of the bracket, which can prevent cable from being damaged.

Step 3

Align the screw holes of bracket bottom with the mounting hole sites of mounting surface, use self-tapping screws to fix the bracket on the mounting surface.

Step 4

Align the mounting hole sites of enclosure bottom with the mounting hole sites of bracket front, and then insert locking screw into the screw hole and lock it firmly.

2.2 Connect Device Cable

- Connect device corresponding power, audio cable and other cables 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.

2.3 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".

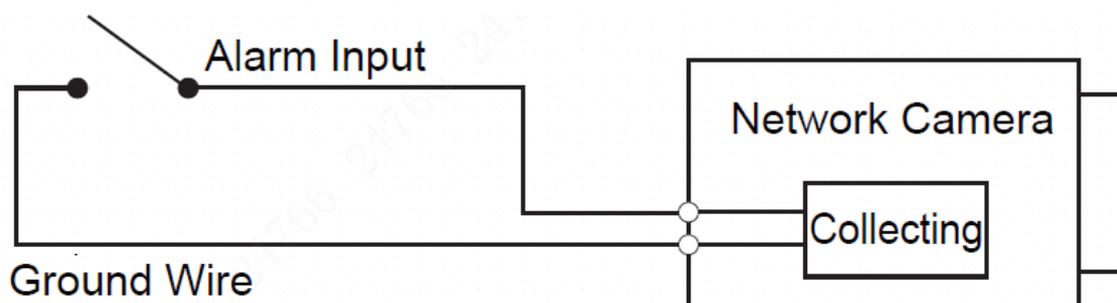


Figure 2-4

Step 2

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

N1 and C1 or N2 and C2 make up a switch to provide the alarm output, which is shown in Figure 2-5. Generally the switch is on, and it will be off when there is an alarm output.

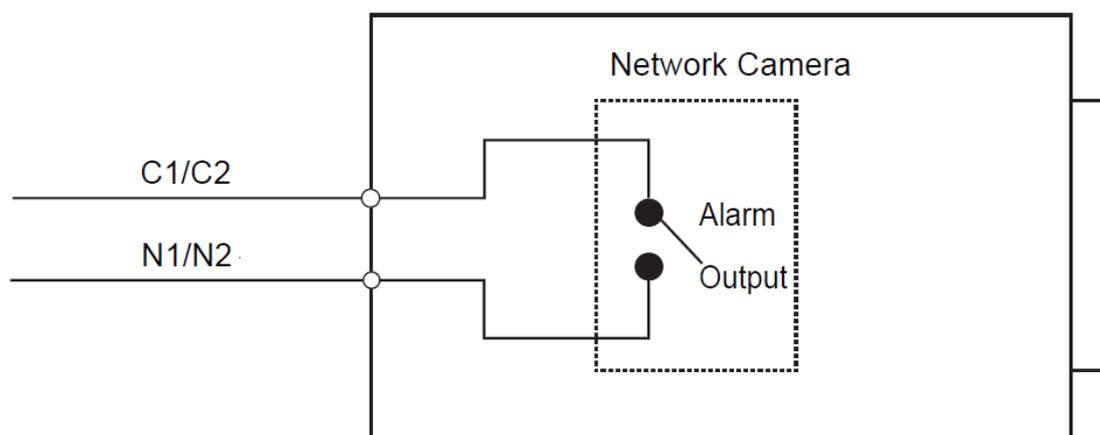


Figure 2-5

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.

I/O port application (Optional).

Note

Please implement the step when it needs to use RS232 port, RS485 port, and alarm input output or power reverse output.

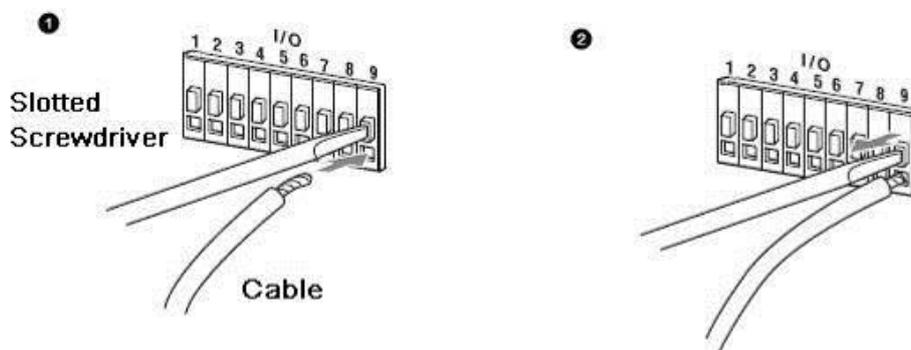


Figure 2-6

Step 1

Use the small slotted screwdriver to press the corresponding button of cable groove.

Step 2

Insert the cable into the groove.

Step 3

Release the screwdriver which presses the groove button and complete cable installation.

2.4 Adjust Device Angle

Step 1

Loosen the device adjusting screw, adjust the device up and down, and set the monitoring direction of the device according to the requirement.

Step 2

Tighten the adjusting screw firmly.

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.

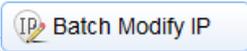
Step 2

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

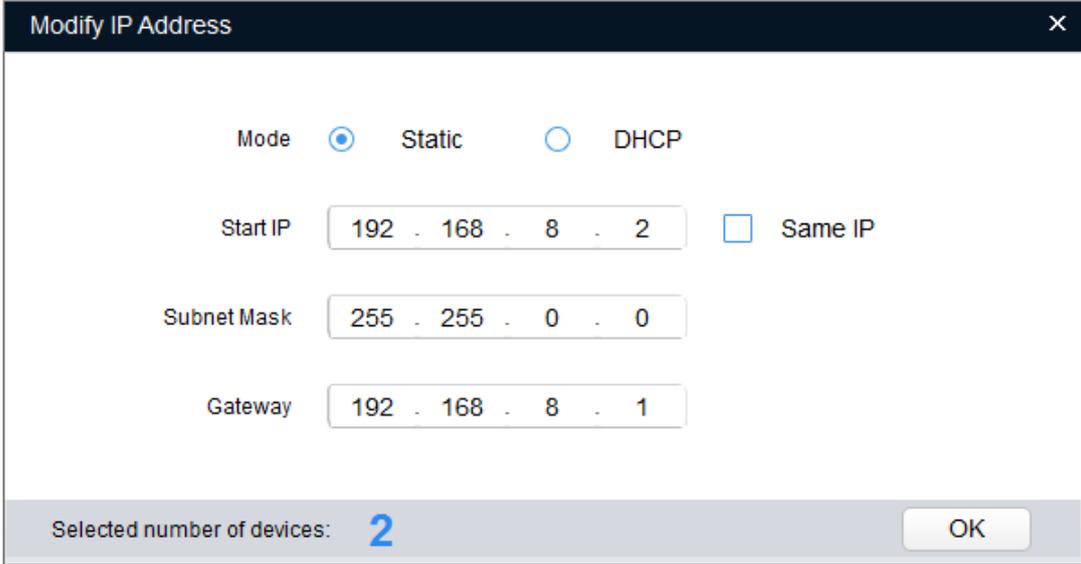
Step 3

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 "Mode" section has two radio buttons: "Static" (selected) and "DHCP". Below this are three input fields: "Start IP" with the value "192 . 168 . 8 . 2", "Subnet Mask" with "255 . 255 . 0 . 0", and "Gateway" with "192 . 168 . 8 . 1". To the right of the "Start IP" field is an unchecked checkbox labeled "Same IP". At the bottom left, it says "Selected number of devices: 2". At the bottom right is an "OK" button.

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.

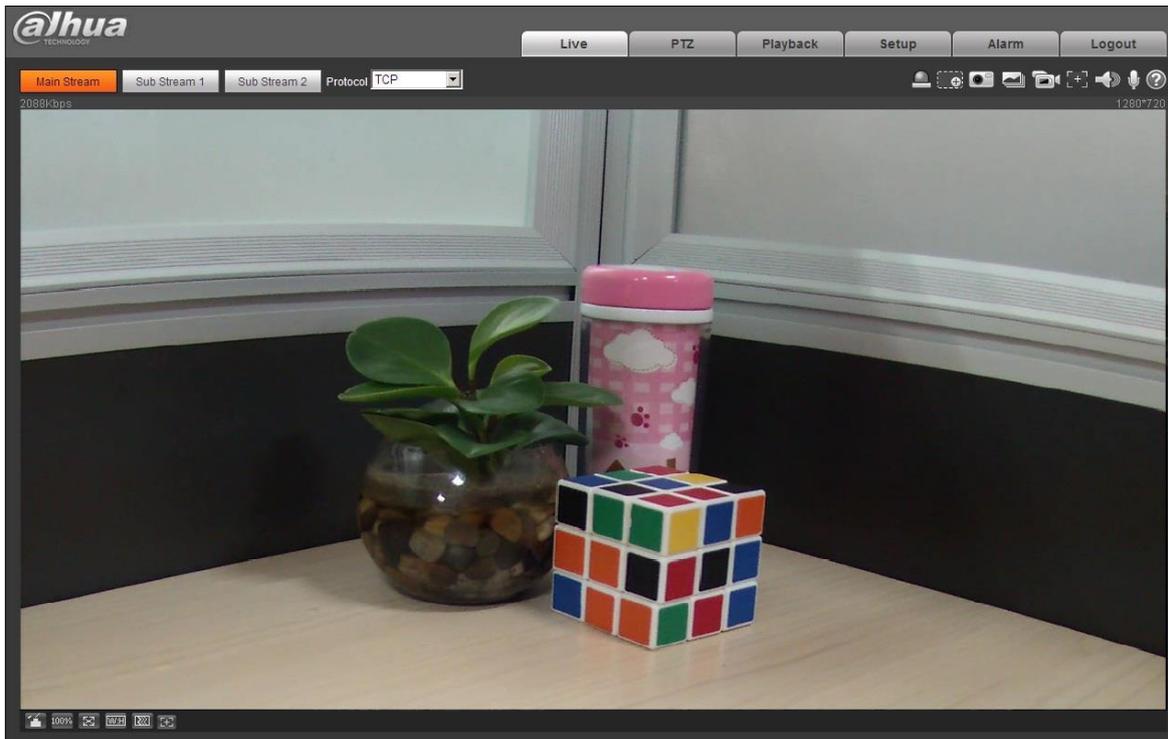


Figure 3-3



Zhejiang Dahua Vision Technology Co., Ltd

Address: No.1199 Bin'an Road, Binjiang District, Hangzhou, PRC.

Postcode: 310053

Tel: +86-571-87688883

Fax: +86-571-87688815

Email: overseas@dahuatech.com

Website: www.dahuasecurity.com