



HD Box Network Camera

Quick Start Guide



Foreword

General

This 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.
 NOTE	Provides additional information as supplement to the text.

Revision History

Version	Revision Content	Release Date
V1.0.2	Updated the description of alarm output.	November 2021
V1.0.1	Updated "Important Safeguards and Warnings."	April 2021
V1.0.0	First release.	March 2019

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and car plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating of the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper User Manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.

- All the designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be deviations in the description of the technical data, functions and operations, or errors in the print. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (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 any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

Electrical safety

- All installation and operation should conform to your local electrical safety codes.
- The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Note that the power supply requirements are 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.

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 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 device away from any liquid to avoid damage 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.
- Install the device in the location where only the professional staff with relevant knowledge of safety guards and warnings can access. The accidental injury might happen to the non-professionals who enter the installation area when the device is operating normally.

Operation and Daily Maintenance

- Do not touch the heat dissipation component of the device to avoid scald.
- Carefully follow the instructions in the manual when disassembling operation about the device; otherwise, it might cause water leakage or poor image quality due to unprofessional operations. Make sure that the gasket ring is flat and properly installed in the groove before installing the cover. Contact after-sales service for desiccant replacement if there is condensed fog on the lens after unpacking or when the desiccant turns green (Not all models are included with the desiccant).
- We recommend using the device together with lightning arrester to improve lightning protection effect.
- We recommend grounding the device to enhance reliability.

- Do not touch the image sensor (CMOS) directly. Dust and dirt could be removed with air blower, or you can wipe the lens gently with soft cloth that is moistened with alcohol.
- You can clean the device body with soft dry cloth, and for stubborn stains, use the cloth 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 to clean the device body, nor can strong, abrasive detergent be used.
- Dome cover is an optical component. Do not touch or wipe the cover with your hands directly during installation or operation. For removing dust, grease or fingerprints, wipe gently with moistened oil-free cotton with diethyl or moistened soft cloth. You can also remove dust with an air blower.

**WARNING**

- Please strengthen the protection of network, device data and personal information by adopting measures which include but not limited to using strong password, changing password regularly, upgrading firmware to the latest version, and isolating computer network. For some device with old firmware versions, the ONVIF password will not be modified automatically along with the modification of the system password, and you need to upgrade the firmware or manually update the ONVIF password.
- 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 unless otherwise specified. A failure to follow this instruction might cause damage to the device.

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1 Introduction

1.1 Device Structure

Figure 1-1 Device Structure

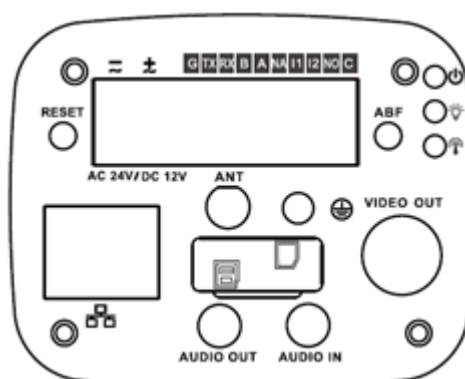


Figure 1-2 Device Structure

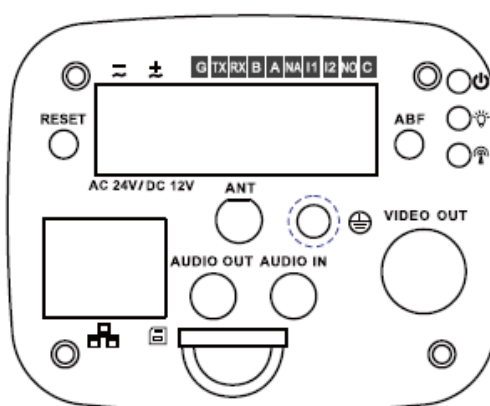


Table 1-1 Port information

Port Name		Port Function
VIDEO OUT	Video output port	Outputs analog video signal. It can connect to TV monitor to check analog video.
AC 24V/ DC 12V	Power port	Inputs 12 VDC/24 VAC power. Please be sure to supply power as instructed in the Guide.  - When using 24 VAC power, please connect the power input port to 2PIN converter first. - Device abnormality or damage could occur if power is not supplied correctly.

Indicator Light	Red light 	● System boots up-red light is normally on. ● System upgrades-green light flashes. ● System resets-green light is off. ● Device works normally-green light is normally on. ● Recording status display: recording-green light flashes. ● It detects wireless device-yellow light is normally on.
	Green light 	
	Yellow light 	
IN1	Alarm input port 1	Receives the on-off signal from the external alarm source.
NO	Alarm output port	Alarm output port. It is to output alarm signal to the alarm device. ● NO: Normally open alarm output end. ● C: Alarm output common end.
C		
IN2	Alarm input port 2	Receives the on-off signal from the external alarm source.
A	RS485 port	RS485_A port, control external PTZ etc.
B		RS485_B port, control external PTZ etc.
RX	RS232 port	Receiving end of RS232 serial port.
TX		Sending end of RS232 serial port.
G	GND	Ground end of RS232 serial port.
NA	IR light port	External IR light signal control port.
RESET	RESET button	Restores 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.
AUDIO OUT	Audio output port	3.5mm JACK port, output audio signal to the passive device such as earphone and etc.
AUDIO IN	Audio input port	3.5mm JACK, input audio signal from devices such as pick-up.

LAN  /OPT	Network port /MB optical fiber port	- LAN: Connects to standard Ethernet cable and provides PoE power supply function. - OPT: Transmits MB Ethernet data.
SD	SD card port	Connects to SD card.
	GND	Please make sure that the device is securely earthed to prevent the thunderstorm strike when using the device.
ATN	Antenna port	Reserved port

1.2 Connecting Alarm Input/output



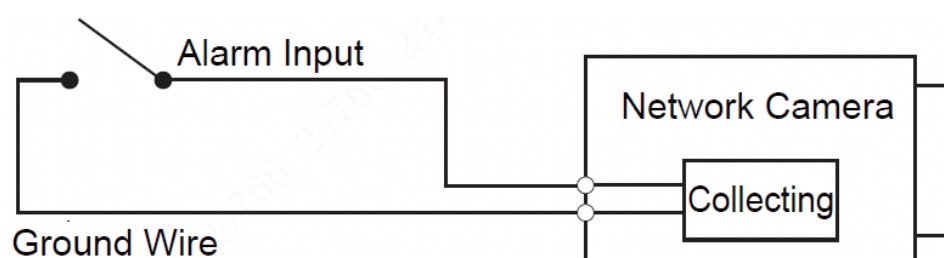
Alarm input/output is available on select models.

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

Device collects different states of alarm input port when the input signal is idling and being grounded.

- Device collects logic "1" when input signal is connecting to +3 V to +5 V or idling.
- Device collects logic "0" when input signal is grounded.

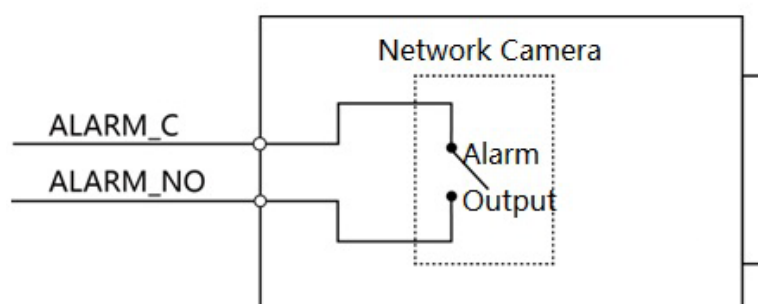
Figure 1-3 Alarm input



Step 2 Connect alarm output device to the alarm output end of the I/O port. The alarm output is relay switch output, which can only connect to NO alarm devices.

The ALARM_NO port and the ALARM_C port with the same number constitute a switch for alarm output, see Figure 1-4. The switch is open normally and closes when there is alarm output.

Figure 1-4 Alarm output



Step 3 Log in web page, and configure alarm input and alarm output in alarm setting.

- The alarm input on the web page is corresponding to the alarm input end of the I/O port. There will be high level and low level alarm signal generated by the alarm input device when alarm occurs, set the input mode to "NO" (default) if the alarm input signal is logic "0" and to "NC" if the alarm input signal is logic "1".
- The alarm output in the web page is corresponding to the alarm output end of the device, which is also the alarm output end of the I/O port.

2 Network Configuration

Device initialization and IP setting can be finished with the ConfigTool or in web page. For more information, see web operation manual.



- Device initialization is available on select models, and it is required at first use and after device is being reset.
- Device initialization is available only when the IP addresses of the device (192.168.1.108 by default) and the PC stays in the same network segment.
- Planning useable network segment properly to connect the device to the network.
- The following figures and interfaces are for reference only.

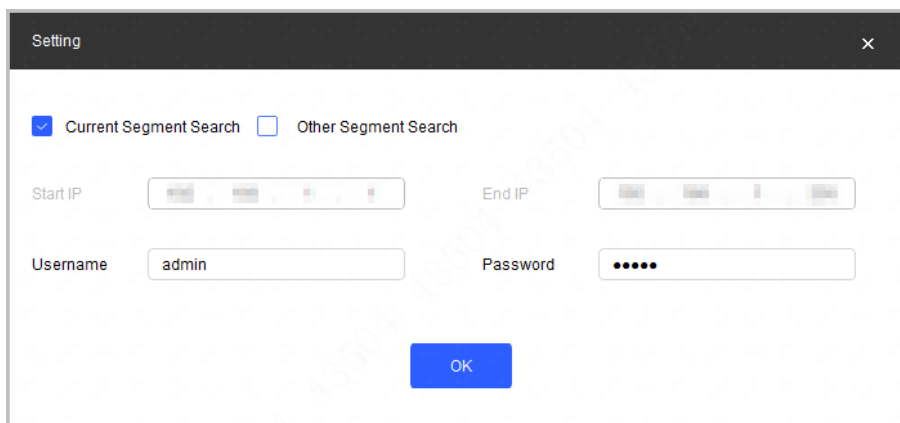
2.1 Initializing Device

Step 1 Double-click ConfigTool.exe to open the tool.

Step 2 Click  **Modify IP**.

Step 3 Click **Search Setting**.

Figure 2-1 Setting



Step 4 Select the searching way.

- **Current Segment Search (default)**
Select the **Current Segment Search** checkbox. Enter the username in the **Username** box and the password in the **Password** box. The system will search for devices accordingly.
- **Other Segment Search**
Select the **Other Segment Search** checkbox. Enter IP address in the **Start IP** box and **End IP** box respectively. Enter username and password. The system will search for the devices accordingly.



- If you select the **Current Segment Search** checkbox and the **Other Segment Search** checkbox together, the system searches for devices under both conditions.

- Enter username and password when you want to change IP, configure the system, update the device, restart the device, and more.

Step 5 Click **OK**.

Step 6 Select one or several devices in uninitialized status, and then click **Initialize**.

Step 7 Select the devices to be initialized, and then click **Initialize**.

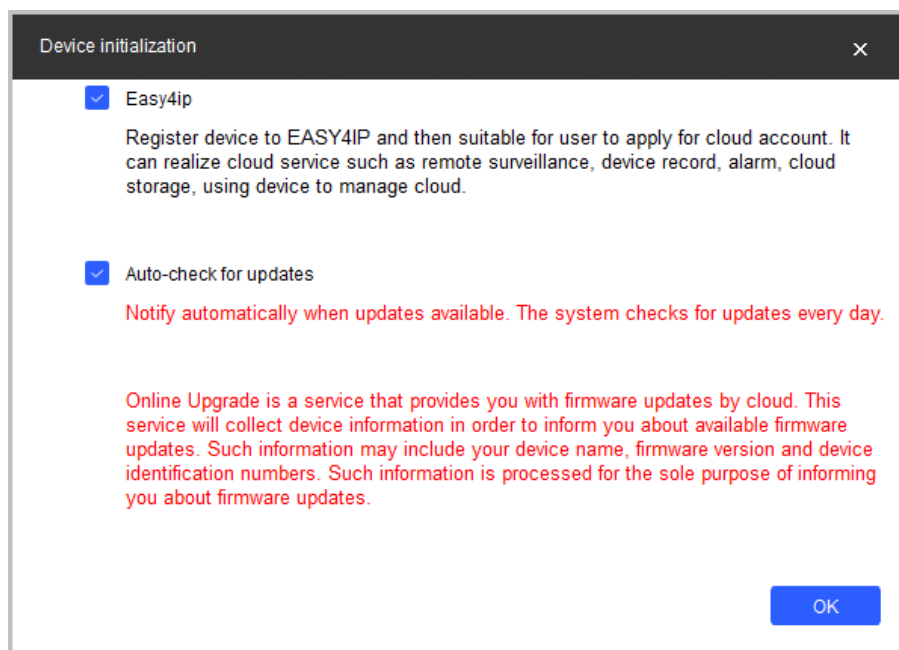


- If you do not provide the linked information for password reset, you can reset the password only through XML file.
- When initializing multiple devices, ConfigTool initializes all devices based on the password reset mode of the first selected device.

Figure 2-2 Password setting

Step 8 Set and confirm the password of the devices, then enter a valid email address, and then click **Next**.

Figure 2-3 Device initialization



Step 9 Select **Easy4ip** or select **Auto-check for updates** as needed. If neither, leave them unselected.

Step 10 Click **OK** to initialize the device.

Click the success icon (✓) or the failure icon (⚠) for the details.

Step 11 Click **Finish**.

2.2 Changing Device IP Address



- You can change IP address of one or multiple devices in one time. This section is based on changing IP addresses in batches.
- Changing IP addresses in batches is available only when the corresponding devices have the same login password.

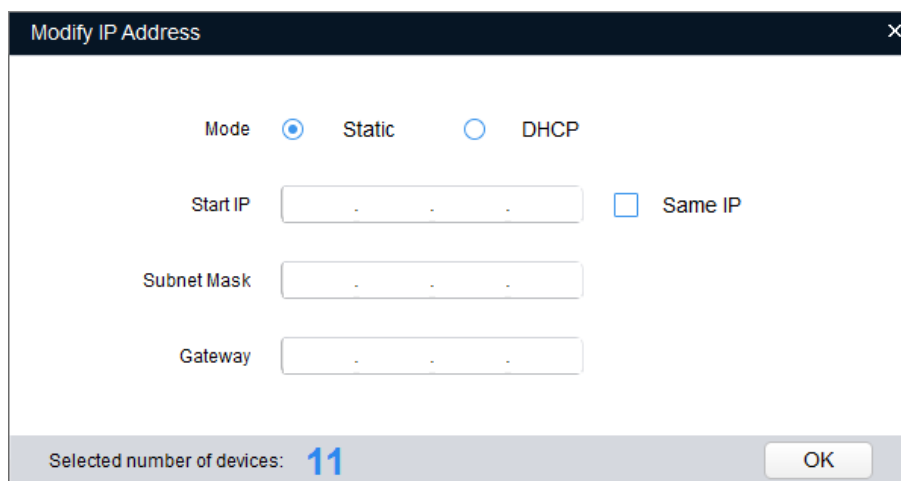
Step 12 Follow Step 1 to Step 4 in “2.1 Initializing Device” to search devices in your network segment.



After clicking **Search setting**, please make sure the **username** and **password** are the same as what you set during initialization, otherwise there will be wrong password notice.

Step 13 Select the devices which IP addresses need to be modified, and then click **Batch Modify IP**.

Figure 2-4 Change IP Address



Step 14 Select **Static** mode and enter start IP, subnet mask and gateway.

- IP addresses of multiple devices will be set to the same if you select **Same IP**.
- If DHCP server is available in the network, devices will automatically obtain IP addresses from DHCP server when you select **DHCP**.

Step 15 Click **OK**.

2.3 Logging in to Web Page

Step 1 Open IE browser, enter the IP address of the device in the address bar and press the Enter key.

If the setup wizard is displayed, follow the instructions to finish the settings.

Step 2 Enter user name and password in the log in box, and then click **Login**.

Step 3 For first time login, click **Click Here to Download Plugin** and install the plugin as instructed. The home page is displayed when the installation is finished.

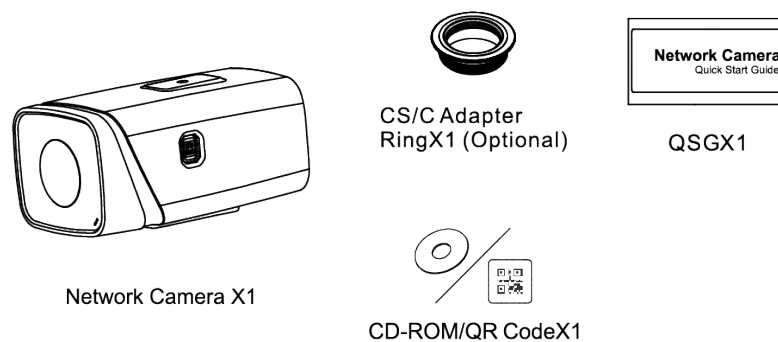
3 Installation

3.1 Packing List



- The tool required for the installation such as electric drill is not provided in the packing.
- The operation manual and related tool are contained in the disk or the QR code.

Figure 3-1 Packing list



3.2 Dimension

Figure 3-2 Model A: Dimensions (mm[inch])

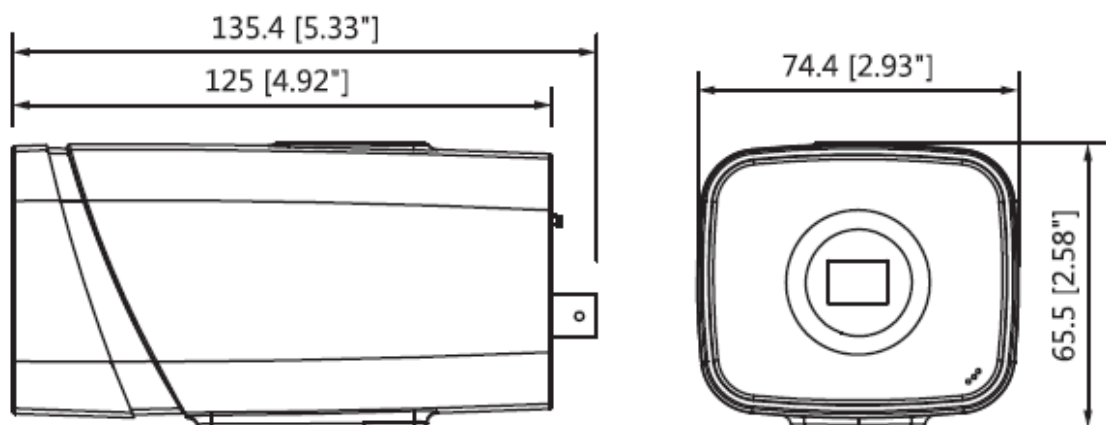
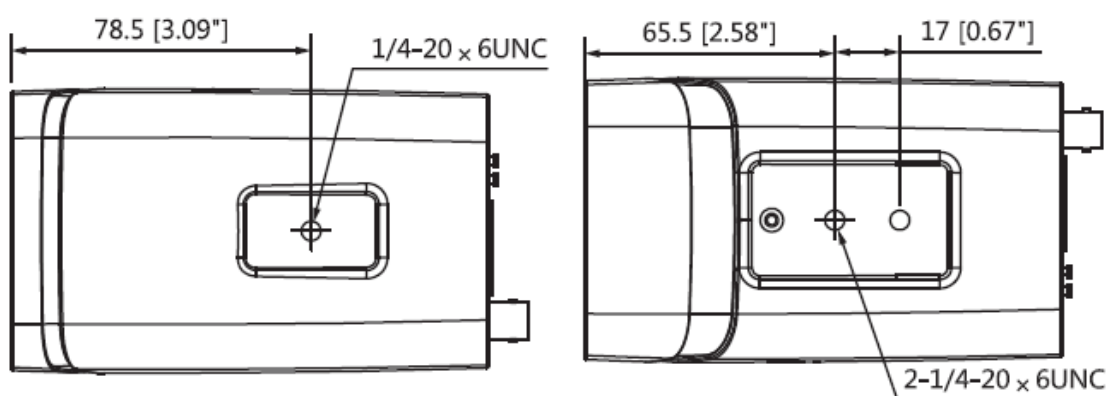


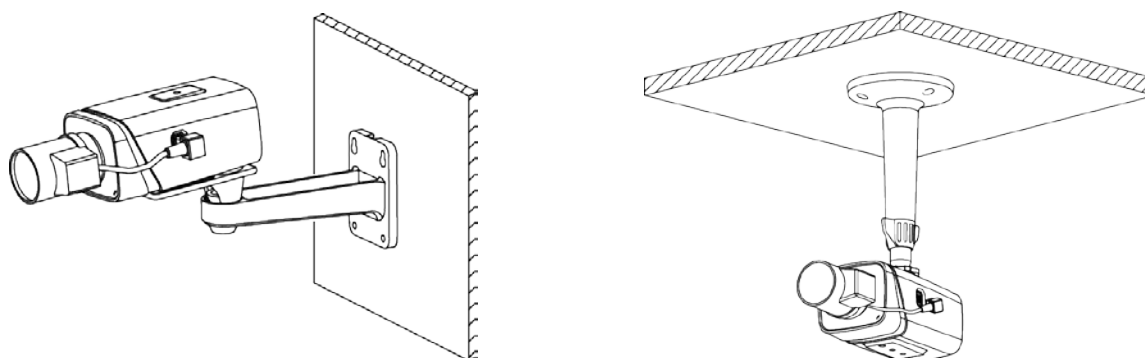
Figure 3-3 Model B: Dimensions (mm[inch])



3.3 Installing Device

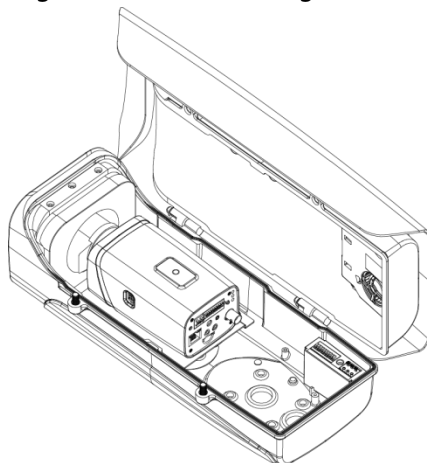
3.3.1 Installation Method

Figure 3-4 Installation method



Use housing if the device needs to be installed outdoors to avoid device damage caused by water soaking.

Figure 3-5 Install Housing

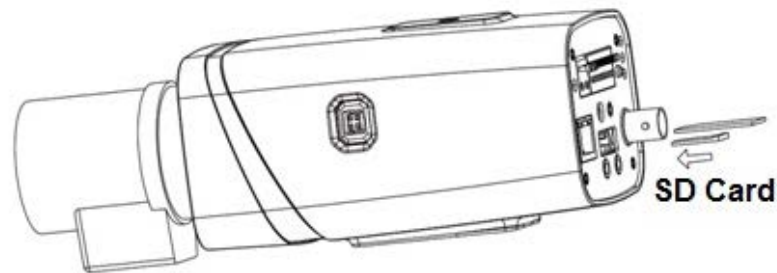


3.3.2 Installing SD Card (Optional)



- SD card slot is available on select models.
- Disconnect the power from the device before installing the SD card.
- Press the reset button for 10 seconds to reset the device.

Figure 3-6 Install SD card



3.3.3 Attaching Device



Make sure that the mounting surface is strong enough to hold at least three times of the device weight.

Figure 3-7 Cable going through the cable tray

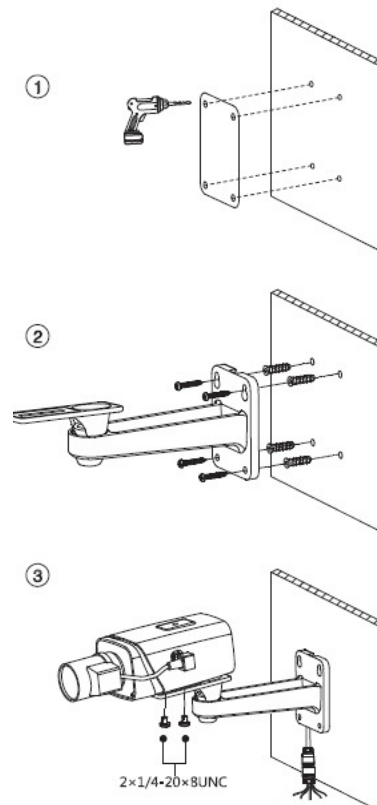
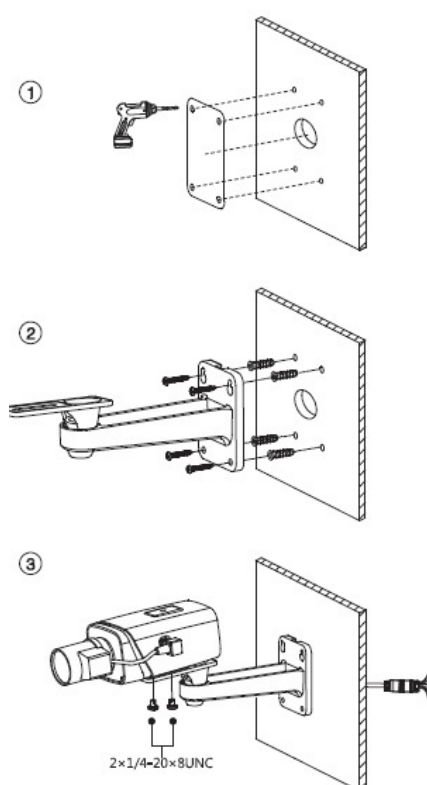


Figure 3-8 Cable going through the wall



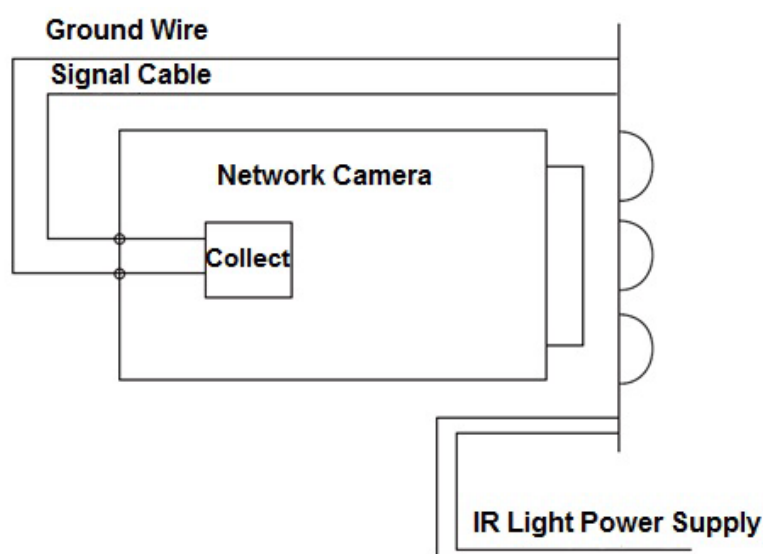
3.3.4 Connecting IR Light (Optional)

Log in to web page, select **Setting** > **Camera** > **Day/Night**, and select **Sensor Input**. It does not need to configure if there is no such an item.



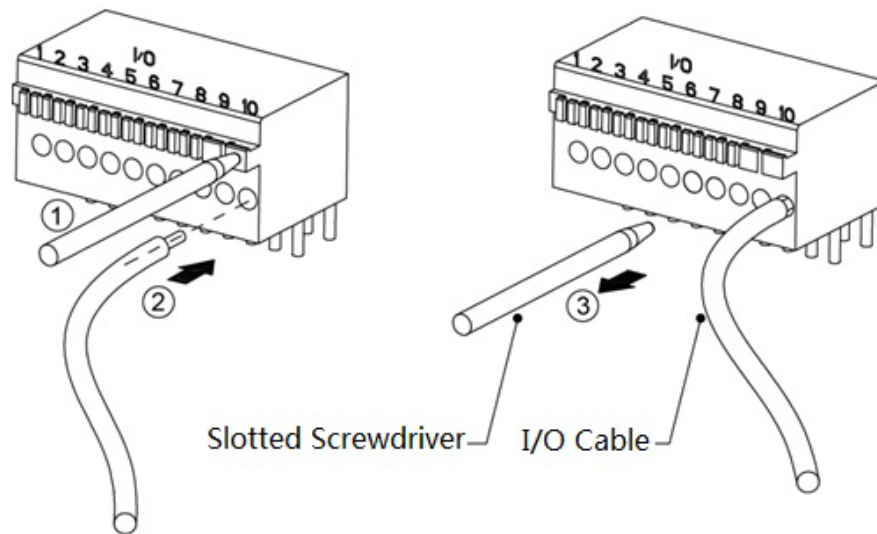
IR synchronization input signal. When the external IR light is enabled, the signal cable on the light board outputs 3.3 V/1 mA. It outputs 0 V when the IR light is off.

Figure 3-9 Connecting IR light



3.3.5 Using I/O Port

Figure 3-10 Using I/O port



3.3.6 Installing Lens



Auto iris socket: it needs to plug the cable of auto iris lens into auto iris socket when the installed lens is auto iris lens.

Figure 3-11 CS lens

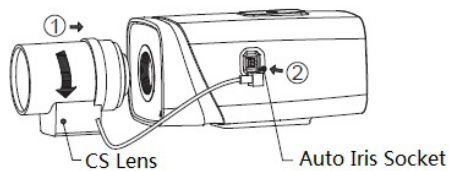
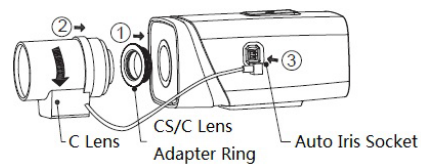
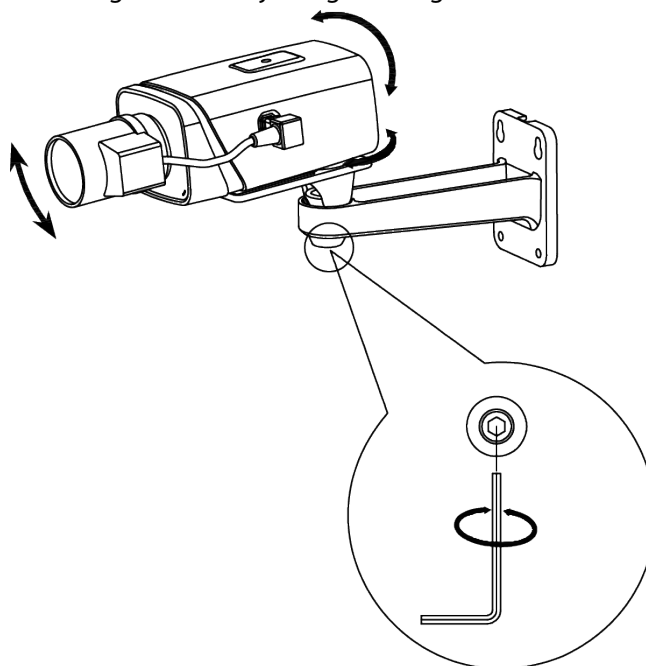


Figure 3-12 C Lens



3.3.7 Adjusting Angle

Figure 3-13 Adjusting lens angle



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