

E&P Series Fixed Dome Camera Quick Start Guide

Date **2025-02-20**

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1 Packing List

Table 1-1 Packing list

Item	Quantity	Item	Quantity
Network camera	1	Self-tapping screw	3
Safety precautions	1	Positioning sticker	1
Expansion bolt	3		

The actual tools, terminals, and screws may vary between camera models.

 NOTE

Different models of devices have different appearances and structures. The figures in this document are for reference only.

2 Cable Connectors and Slots

3 Cable Connectors and Slots

- 3.1 Cable Connectors
- 3.2 Reset Button and SD Card Slot

3.1 Cable Connectors

The cable connectors vary between camera models. A label is attached to the end of each cable for unique identification. Cables can also be identified by their appearance. This section introduces all the cable connectors.

Table 3-1 Cable connectors

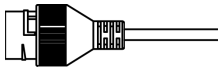
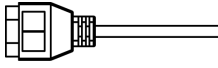
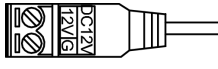
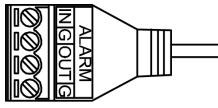
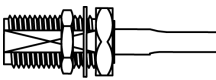
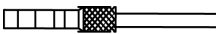
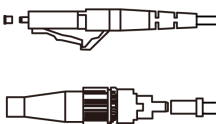
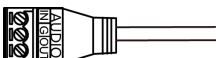
Diagram	Label and Description
	LAN: Connects to the LAN port. For a camera with dual network ports, one port can be connected to a switch, and the other port can be connected to another camera to transmit video data from the camera to the current camera for intelligent analysis.
	POWER: Connects to the 12 V DC power input port.
	POWER: Connects to the 24 V AC power input port.
	DC 12V: Connects to the 12 V DC power output port. GND: Connects to the ground port.
	RS485: Connects to the RS-485 port. This port provides a transparent data channel for half-duplex transmission between the camera and the connected device.
	ALARM_OUT: Connects to the alarm output port.

Diagram	Label and Description
	ALARM_OUT_GND: Connects to the alarm output ground port. This port is marked with ALARM_REF for some camera models. ALARM_OUT_GND and ALARM_OUT work together to form alarm output.
	ALARM_IN: Connects to the alarm input port. There may be multiple alarm input ports. For n number of ports, they are numbered as follows: ALARM_IN0, ALARM_IN1, ..., ALARM_IN n . Each port connects to the ALARM_IN_GND to form a single alarm input.
	ALARM_OUT_IN: Connects to the alarm input ground port. This port is marked with ALARM_GND for some camera models.
	GPS connector, which is used to connect to GPS antenna. The GPS connector is available only for some camera models.
	GND: Connects to the ground port.
	SFP_RX/SFP_TX Connects to the optical fiber port (FC port for external optical fibers and LC port for internal optical fibers). Cameras whose pigtails provide one optical fiber port support only single-mode, single-fiber, and bidirectional optical modules. Cameras whose pigtails provide two optical fiber ports support single-mode, single-fiber, and bidirectional optical modules or single-mode and dual-fiber optical modules. When single-mode, single-fiber, and bidirectional transmission is used, ensure that the optical fiber (LC port) inserted into the SFP optical module is of the same type (SFP_RX or SFP_TX) as that (FC port) connected to the optical fiber adapter.
	AUDIO IN/AUDIO OUT/AUDIO_GND Connects to the audio input/output port and audio ground port.

3.2 Reset Button and SD Card Slot

Figure 3-1 Reset button and SD card slot

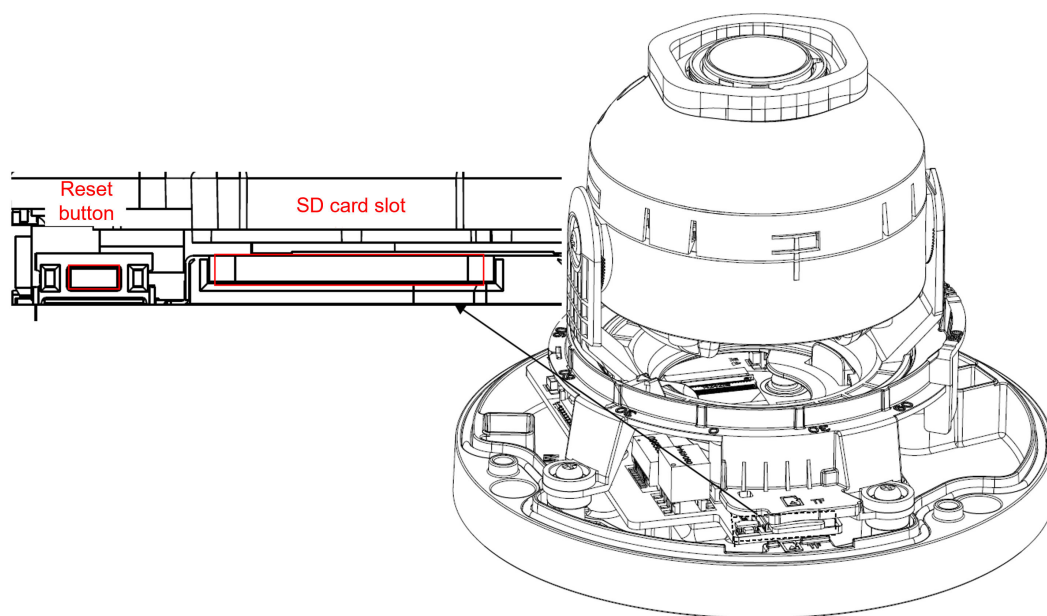


Table 3-2 Reset button and SD card slot description

N o.	Item	Description
1	Reset button	Reset button. To restart the camera, hold down the reset button for less than 3s while the camera is running. To restore the camera to factory defaults, hold down the reset button for at least 5s while the camera is running.
2	SD card slot	SD card slot. The SD card slot supports only class 10 or higher microSD cards. To replace a microSD card, the camera must be powered off. Otherwise, a system exception may occur. Upon the first use, log in to the camera web system and format the SD card. Use a compatible SD card. If you use an SD card that is not in the compatibility list, compatibility issues may occur.

 NOTE

- Exercise caution when restoring the camera to factory defaults. After the camera is restored to factory defaults, user accounts and some other configuration data may be lost.

4 Device Installation

- [4.1 Installation Requirements](#)
- [4.2 Installation Tools](#)
- [4.3 Safety Precautions](#)
- [4.4 SD Card Installation](#)
- [4.5 Ceiling-mounted Installation](#)
- [4.6 Pendant-mounted Installation](#)
- [4.7 Wall-mounted Installation](#)
- [4.8 Cable Connection](#)
- [4.9 Waterproofing and Insulation](#)

4.1 Installation Requirements

Item	Function
Operating temperature	Do not enable the illuminator at an operating temperature higher than 40°C. Enabling the illuminator in such environments may damage the camera or shorten its service life.
Corrosion resistance class	Class C corrosion-resistant cameras can be installed in areas more than 1500 m away from the seashore (far enough away from chemical plants and heavily polluted areas). Class D corrosion-resistant cameras can be installed in areas within 1500 m from the seashore or on offshore platforms.

Item	Function
Installation location	Keep the camera away from highly reflective substances such as glass, ceramic tiles, water, and leaves. Do not directly expose the camera lens to intense light (such as sunlight, street lamps, and vehicle headlights). Do not install an infrared camera in a dark corner indoors.
Device protection	Do not remove the transparent protective film from the dome cover or viewing window during the installation, so as to prevent the dome cover or viewing window from being scratched or polluted. Do not move the wiper manually during the installation, so as to avoid damaging the wiper. (For bullet cameras whose housings contain a ventilation hole for air circulation) Do not remove the adhesive tape from the housing, so as to prevent water ingress.

4.2 Installation Tools

Table 4-1 lists the tools to be prepared.

Table 4-1 Installation tools

Tool	Specification and Function	Picture
Camera tester	Used to check the camera's viewing angle and video image.	
Multimeter	Used to check whether the camera's input power meets the requirements.	
Cable tester	Used to test whether a network cable is made and connected correctly.	

Tool	Specification and Function	Picture
Hammer drill	Drill bit size: 5 mm Used to drill holes in scenarios such as wall-mounted and pendant-mount installation scenarios.	
RJ45 crimping tool	Used to make an RJ45 connector.	
Wire stripper	Used to strip the jacket from power cables, alarm cables, and other cables.	
Allen wrench	Specification: H3 Used to loosen and tighten M4 hex socket screws.	
Phillips screwdriver	Specification: 0#, 1#, 2#, and 3# Used to loosen and tighten Phillips screws.	
Flat-head screwdriver	Screwdriver bit width: 2.5 mm; screw bit length: > 75 mm Used to loosen and tighten flat-head screws.	

Tool	Specification and Function	Picture
Claw hammer	Used to drive expansion screws into the wall.	
Tape	Used to measure distance, for example, measuring the cable length and installation height.	
Socket wrench	Specification: M6	
ESD gloves	Used to prevent electrostatic discharges.	
Marker	Used to make marks, for example, marking the installation position and hole positions.	
Scissors	Used to cut waterproof tape, insulation tape, and others.	
Wrench	Specification: 10 mm open-end wrench or adjustable wrench Used to tighten screws.	
Diagonal pliers	Used to cut off excess hose clamps.	

Tool	Specification and Function	Picture
Dust-free cloth	Used to wipe the camera lens or viewing window.	

4.3 Safety Precautions

Carefully read and strictly comply with the following instructions. Pay special attention to the warnings in this manual.

Electrical Safety

If a wrong type of battery is used, the battery may explode. Dispose of used batteries according to the instructions delivered with the battery.

The power adapter to be used by the device must meet the input voltage and current requirements displayed on the device label.

Use auxiliaries delivered with this product and recommended by the manufacturer.

High and low current cables must be kept at least 5 cm apart. When connecting cables to the device, take care to avoid connecting high current cables to low current ports, as doing so may damage your device.

Use Safety

After the camera is unpacked, install and power it on within 24 hours. Do not install the camera in rainy, windy, or dusty conditions, so as to prevent water or dust from getting into the device.

Carry a device by the device body. Do not pull the pigtails.

Ensure that the camera installation surface or pole can sustain at least four times the total weight of the camera, housing, and bracket.

Avoid any unauthorized modifications on the design of the structure, security, or performance.

Installation and maintenance must be performed by professional technical engineers or system installation engineers.

Set up scaffolding before working at heights and do not allow irrelevant people to stay in the construction area.

For a camera with a transparent dome cover made up of optical parts, do not touch or apply any forces to the transparent dome cover. Do not hit the camera body, especially the dome cover.

The desiccant may be out-of-date due to the long-term storage. If condensation does not automatically disappear after the device is unpacked and powered on for a long time, contact after-sales service personnel to replace the desiccant.

Use fixed dome cameras only indoors (not in semi-outdoor scenarios, such as under eaves).

Warning: Running this device in a living environment may cause radio interference.

Comply with related laws and regulations, and respect legal rights of others when using this device. If a camera is installed in a public place, post a clearly visible notice similar to "You have entered the detection area."



: Take proper protective measures such as wearing eye protectors when using some cameras that emit infrared light.

Cleaning Safety

Use a soft dry cloth when cleaning the camera body. Add a little neutral detergent if necessary.

Environment Safety

In areas prone to lightning strikes, a lightning arrester must be installed and grounded.

Keep the device away from water and any other liquids. Take proper waterproofing measures.

Keep the device away from heat sources, fire sources (such as heating apparatus or candles), and strong magnetic fields (for example, high-voltage power distribution cabinets).

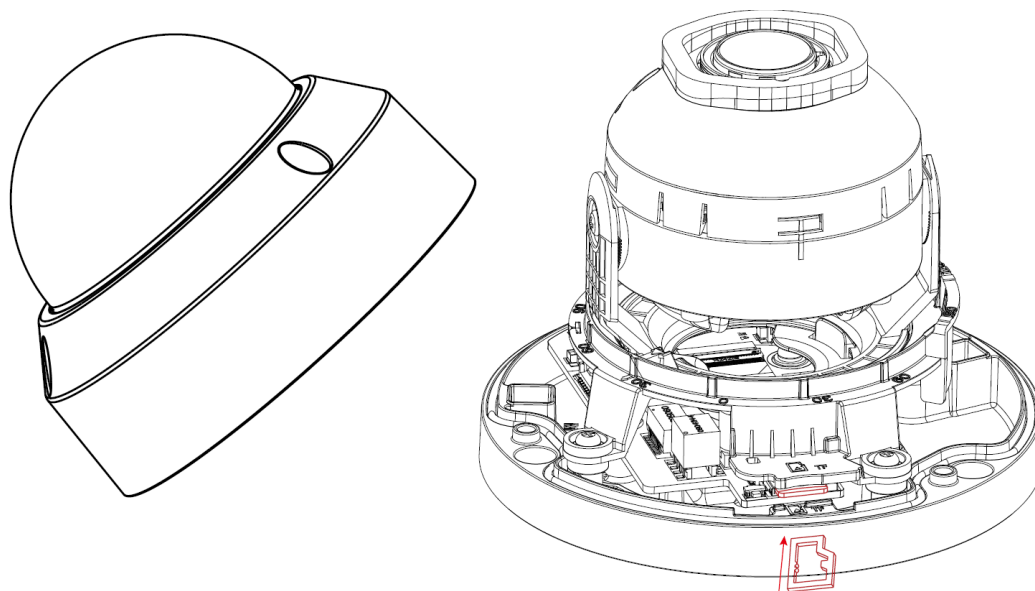
Ensure that the thickness of the wall where the device is mounted is greater than or equal to the length of the expansion tube.

If the temperature of the installation environment ever exceeds 45°C, install the product in an area accessible only to professional personnel.

The recommended stock temperature ranges from -10°C to +35°C. The recommended stock humidity ranges from 20% to 75%.

4.4 SD Card Installation

Figure 4-1 Installing the SD card



4.5 Ceiling-mounted Installation

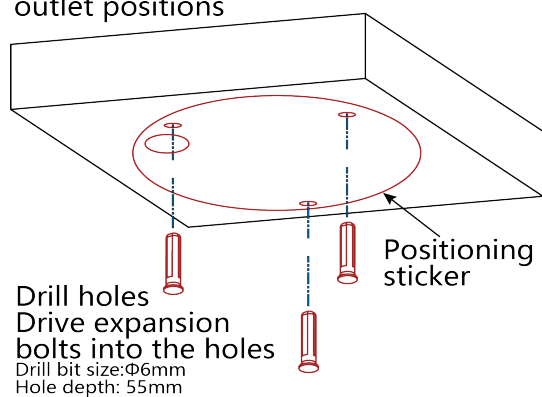
NOTE

In scenarios where a thin mounting plate (for example, an aluminum gusset plate) is used, to prevent the device from falling off, you are advised to install a wooden board on the back of the mounting plate and use self-tapping screws to secure the device. Alternatively, you can use bolts and nuts (prepared by yourself) to secure the device.

- Step 1** Affix a positioning sticker to the camera installation position. Drill holes in the specified positions marked by the sticker and drive expansion bolts into the holes.

Figure 4-2 Drilling holes

Determine the screw and cable outlet positions

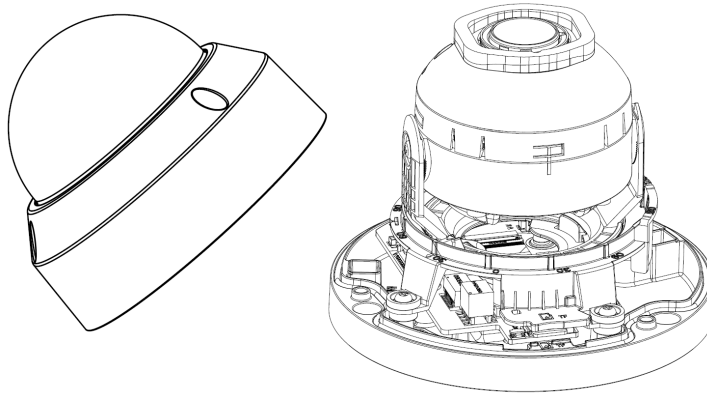


NOTE

The ceiling cannot contain obvious particles, and the flatness is less than or equal to 1 mm.

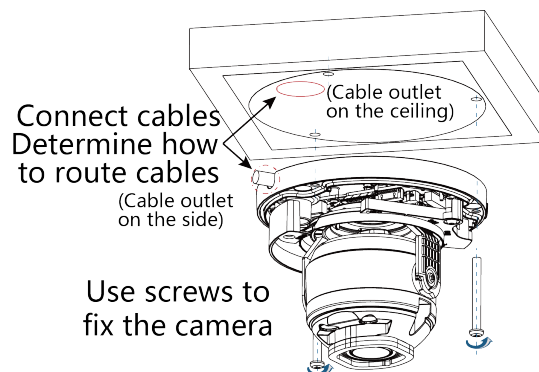
Step 2 Remove the camera housing.

Figure 4-3 Removing the housing



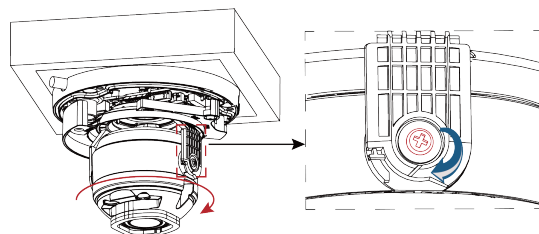
Step 3 Select a cabling method, connect the cables to the camera's pigtails, insulate the cable connectors (for details, see [4.9 Waterproofing and Insulation](#)), and tighten the screws to fix the camera in place.

Figure 4-4 Connecting the camera



Step 4 Loosen the screws that are used to fix the lens in place, adjust the camera's viewing angle, and tighten the screws.

Figure 4-5 Adjusting the camera's viewing angle

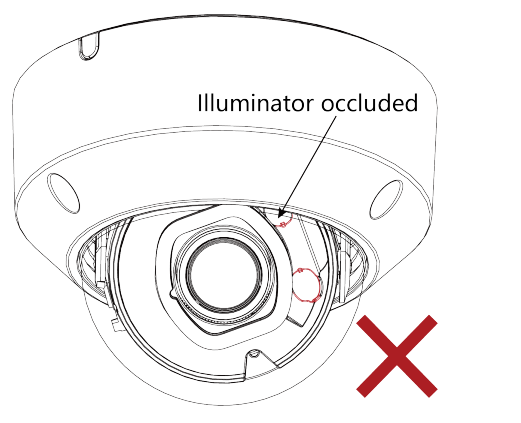
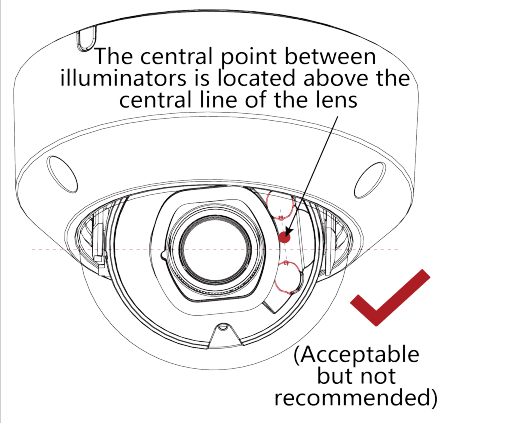


Adjust the camera's viewing angle

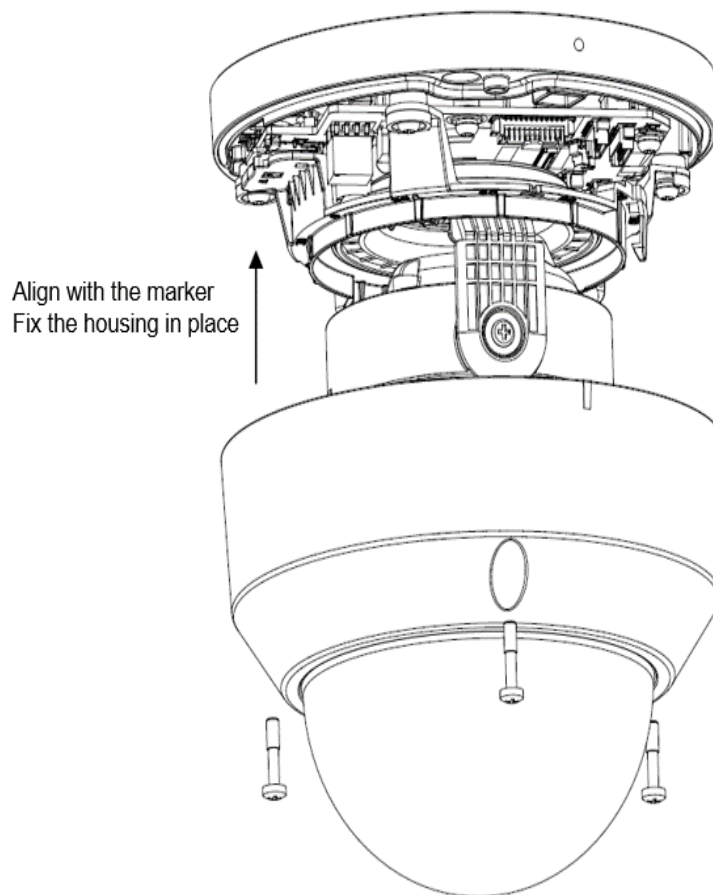
 NOTE

- This camera supports pan (–175° to +180°)/tilt (0° to 65°)/roll (–175° to +180°) adjustment.
- By default, the camera is horizontally installed, and the video image is displayed horizontally. During the installation, properly adjust the viewing angle to avoid video image flip after the installation.
- Ensure that the illuminator is not occluded when adjusting the viewing angle. [Table 4-2](#) lists examples of a viewing angle that is incorrect or acceptable but not recommended.

Table 4-2 Viewing angle that is incorrect or acceptable but not recommended

Incorrect	Acceptable But Not Recommended
 The diagram shows a top-down view of the camera housing. A red arrow points to the illuminator area, which is partially covered by the lens housing. A large red 'X' is placed at the bottom right of the diagram. Illuminator occluded	 The diagram shows a top-down view of the camera housing. A red arrow points to the central point between the illuminators, which is located above the central line of the lens. A large red checkmark is placed at the bottom right of the diagram. The central point between illuminators is located above the central line of the lens (Acceptable but not recommended)

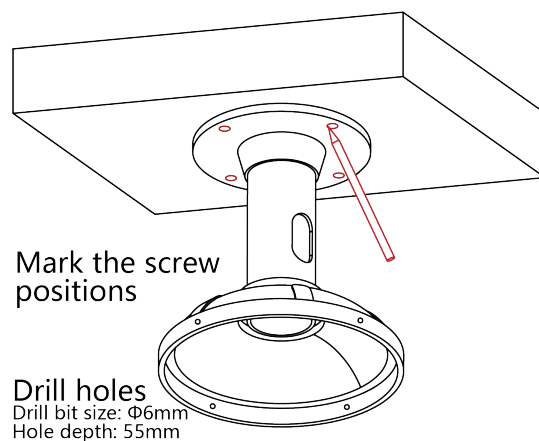
Step 5 Align the marks on the housing with the screw holes on the base, close the housing, and tighten the screws.

Figure 4-6 Fixing the housing in place

-----End

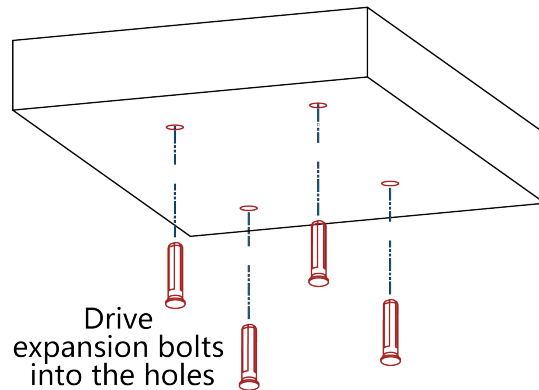
4.6 Pendant-mounted Installation

Step 1 Place the pendant-mount bracket in the desired installation position, use a marker to mark the screw installation positions, and drill holes in the marked positions.

Figure 4-7 Drilling holes

Step 2 Drive expansion bolts into the holes.

Figure 4-8 Driving expansion bolts into the holes

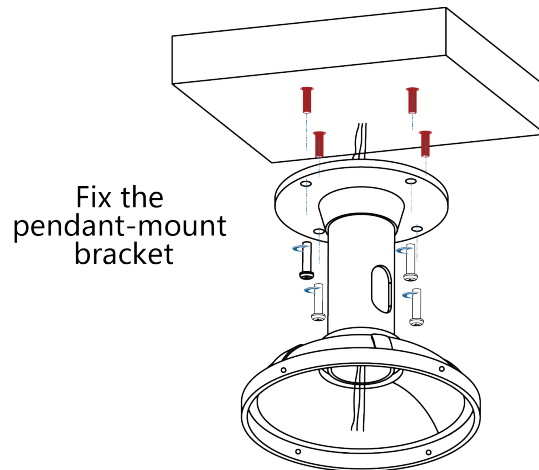


Step 3 Route the cables through the bracket. Thread the expansion bolts through the screw holes on the bracket. You are advised to partially tighten the screws first, and fully tighten the screws to fix the bracket in place after determining the installation position.

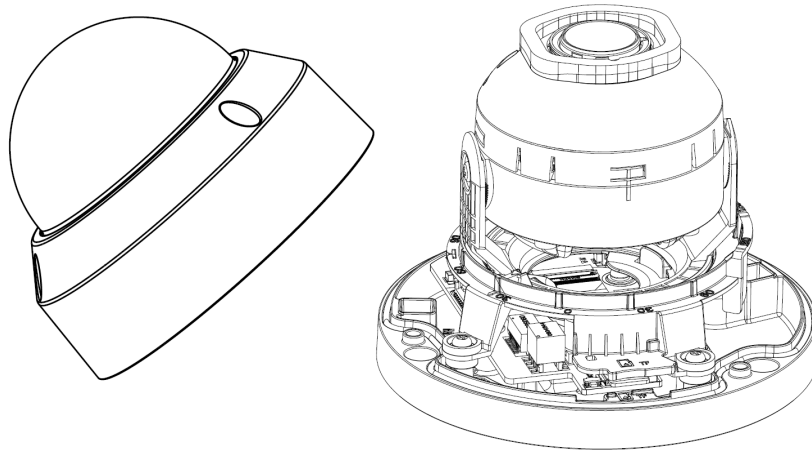
 NOTE

You are advised to use a screwdriver with a bit longer than 150 mm to fix the pendant-mount bracket in place.

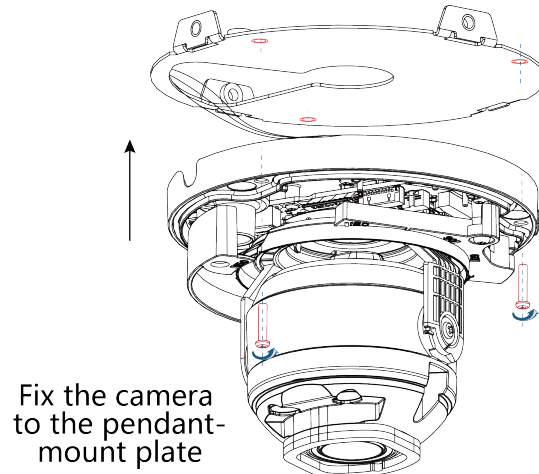
Figure 4-9 Fixing the bracket in place



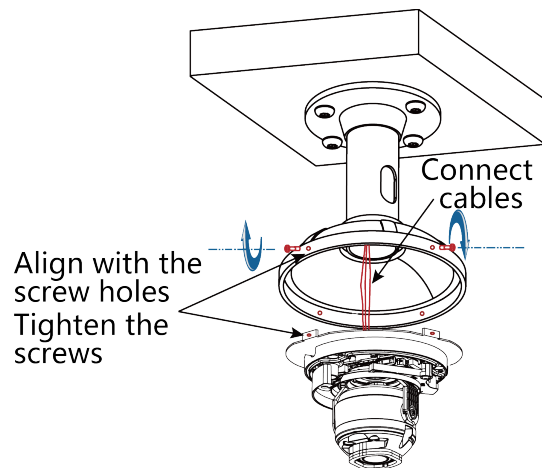
Step 4 Remove the camera housing.

Figure 4-10 Removing the housing

Step 5 Align the screw holes on the camera base with the installation slots on the mounting plate. Thread the screws through the screw holes, and tighten the screws.

Figure 4-11 Fixing the camera in place

Step 6 Connect the cables to the camera pigtails and insulate the cable connectors (for details, see [4.9 Waterproofing and Insulation](#)). Align the screw holes on the mounting plate with those on the installation bowl. Thread the screws through the screw holes, and tighten the screws.

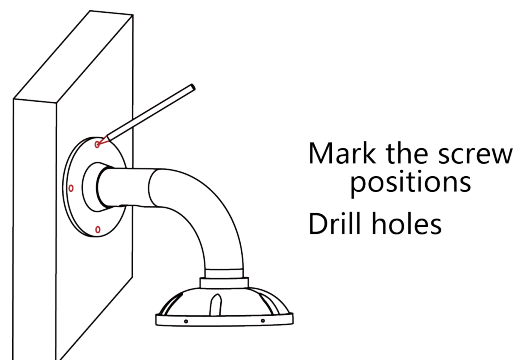
Figure 4-12 Connecting the bracket to the camera body**NOTE**

For details about the installation procedure, see steps 4 and 5 in [4.5 Ceiling-mounted Installation](#).

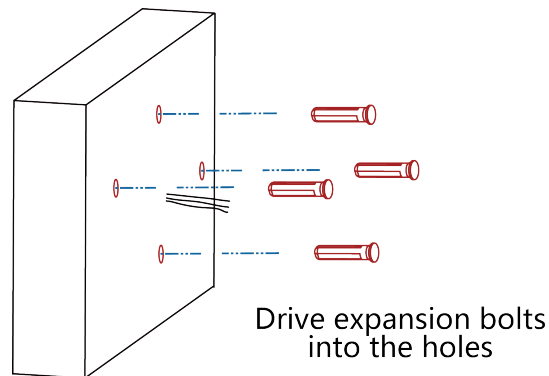
----End

4.7 Wall-mounted Installation

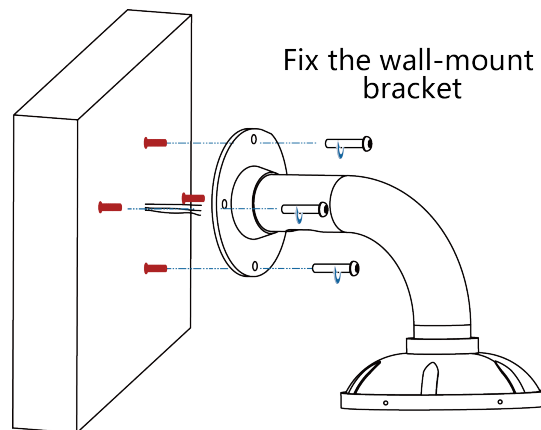
Step 1 Place the wall-mount bracket in the desired installation position, use a marker to mark the screw installation positions, and drill holes in the marked positions.

Figure 4-13 Drilling holes

Step 2 Drive expansion bolts into the holes.

Figure 4-14 Driving expansion bolts into the holes

Step 3 Route the cables through the bracket. Thread the expansion bolts through the screw holes on the bracket and tighten the nuts to fix the bracket in place.

Figure 4-15 Fixing the wall-mount bracket in place

NOTE

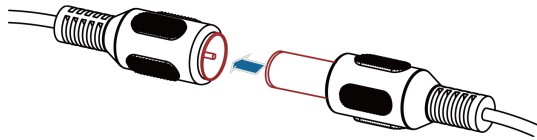
For details about the installation procedure, see steps 4 through 6 in [4.6 Pendant-mounted Installation](#).

-----End

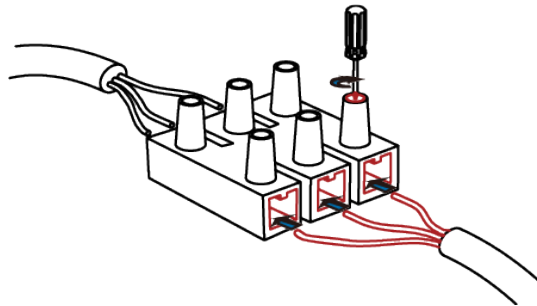
4.8 Cable Connection

CAUTION

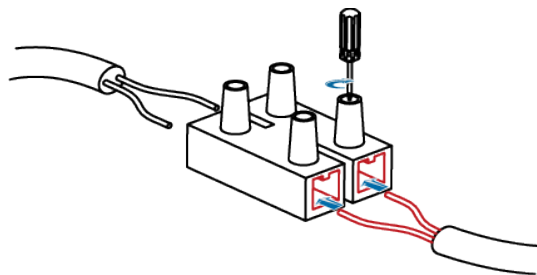
- If multiple cameras use centralized power supply (excluding PoE), the two-core wires of each camera's power cable must be simultaneously controlled by the same circuit breaker to prevent the camera power module from being burnt.
- Connect the power cable.

Figure 4-16 Connecting the power cable

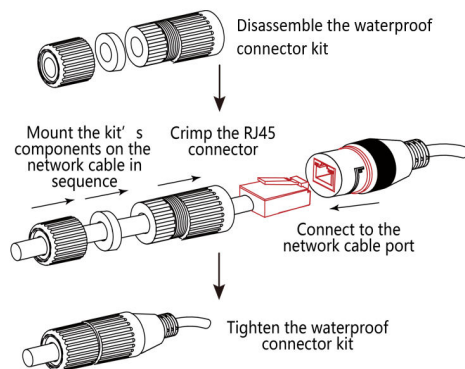
- Connect the audio cable. You can use wiring terminals or use bare wires for connection, as shown in [Figure 4-17](#).

Figure 4-17 Connecting the audio cable

- Connect the alarm cable and RS-485 cable. It is recommended that twisted pair cables be used as alarm cables. The diameter of the cable core ranges from 22 AWG to 28 AWG. You can use wiring terminals or use bare wires for connection, as shown in [Figure 4-18](#).

Figure 4-18 Connecting the alarm cable and RS-485 cable

- Connect the network cable, as shown in [Figure 4-19](#).

Figure 4-19 Connecting the network cable

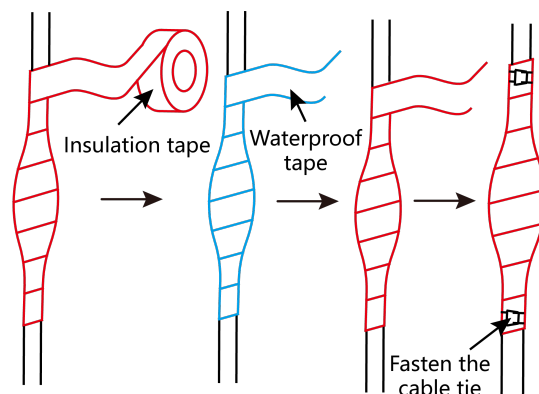
4.9 Waterproofing and Insulation

NOTE

- Waterproof and insulate all cables including power cables, network cables, and unused pigtail cables.
- Cutting off the pigtail cables will void your warranty.
- Before waterproofing and insulation, check the cabling and ensure that the camera works properly to avoid redoing the waterproofing and insulation.
- The waterproof tape must cover the cable bundle from the insulation sheath all the way to the cable conduit (for example, a PVC tube). The tape must be wrapped tightly and there must be no gaps in the coverage, so as to prevent water from seeping in.
- If a corrugated pipe is installed, a drainage hole should be deployed at the lowest point of the pipe to allow water to escape from the pipe. Continuous soaking may cause pigtail damage.

Step 1 Waterproof and insulate the cable connectors, as shown in [Figure 4-20](#).

Figure 4-20 Wrapping with insulation and waterproof tape

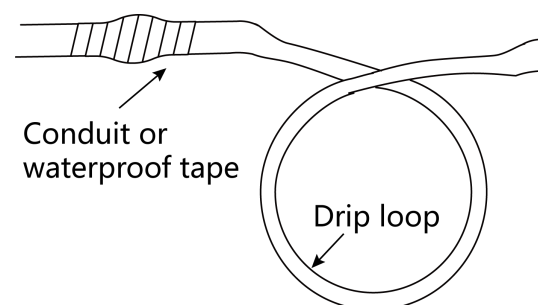


NOTE

You need to stretch the waterproof tape evenly to twice its original length.

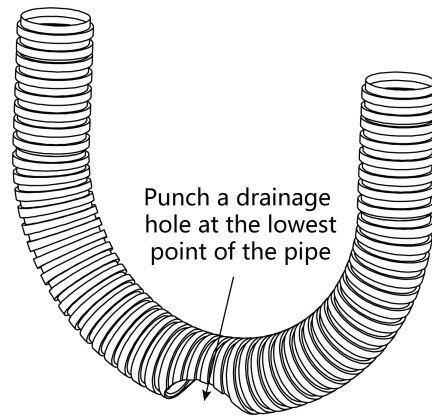
Step 2 Cover the rest of the cabling in a conduit or with waterproof tape. Make a drip loop to create an artificial lowest point of the cable, as shown in [Figure 4-21](#).

Figure 4-21 Drip loop



- Step 3** If a corrugated pipe is installed, a drainage hole should be deployed at the lowest point of the pipe (as shown in [Figure 4-22](#)) to allow water to escape from the pipe. Continuous soaking may cause pigtail damage.

Figure 4-22 Corrugated pipe



----End

5 Setting Basic Network Parameters

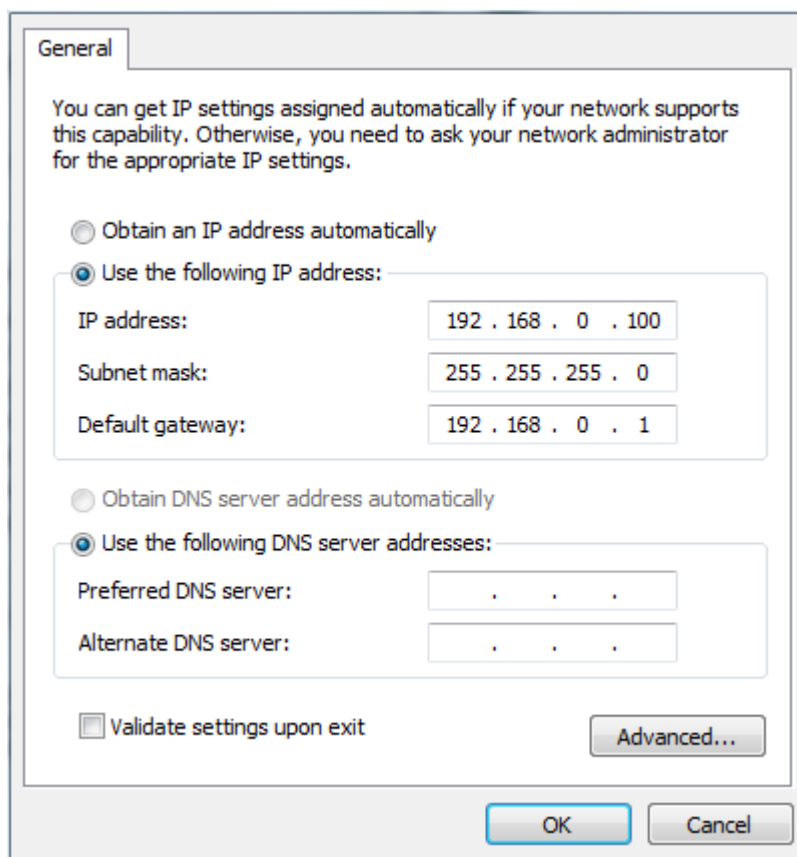
[5.1 Setting the Computer IP Address](#)

[5.2 Activate a Camera](#)

[5.3 Changing the Camera IP Address](#)

5.1 Setting the Computer IP Address

- Step 1** Connect the camera directly to a computer.
- Step 2** On your computer, choose **Control Panel > Network and Internet > Network and Sharing Center**.
- Step 3** Click **Change adapter options**. The **Network Connections** page is displayed.
- Step 4** Right-click the icon of the network corresponding to the IP address to be set and choose **Properties** from the shortcut menu.
- Step 5** In the dialog box that is displayed, double-click **Internet Protocol Version 4 (TCP/IPv4)**. The **Internet Protocol Version 4 (TCP/IPv4) Properties** window is displayed.
- Step 6** Change the IP address, subnet mask, and default gateway of your computer to ensure that the computer IP address is on the same network segment as the camera IP address.

Figure 5-1 Internet Protocol Version 4 (TCP/IPv4) Properties window

-----End

5.2 Activate a Camera

Step 1 Open a web browser, enter **https://Camera IP address** (192.168.0.120 by default) in the address box, and press **Enter**. To avoid login failures, ensure that the proxy of your browser is disabled.

NOTE

- Supported browsers: Google Chrome 55 or later, Firefox 70 or later, Microsoft Edge 50 or later, and 360 Secure Browser 9.1 or later
- To use HTTPS to access a camera, you must enable TLS 1.1 or TLS 1.2. Otherwise, the camera web system cannot be accessed.
- You need to open the browser as the computer administrator.
- If a Dynamic Host Configuration Protocol (DHCP) server exists on the network, an IP address is automatically allocated to the camera.

Step 2 Enter the user name **admin** and password. Set the password as prompted when you log in for the first time.

Step 3 Click **Log In**.

-----End

5.3 Changing the Camera IP Address

- Step 1** Open a web browser, enter **https://Camera IP address** (192.168.0.120 by default) in the address box, and press **Enter**.
- Step 2** (Optional) Set the password as prompted at the first login and use the new password to log in.
- Step 3** In the right pane of the **View** page, click the **Network** tab. On the tab page that is displayed, change the camera IP address based on the project data plan, as shown in [Figure 5-2](#). [Table 5-1](#) describes the key parameters.
- Step 4** Click **Save** and wait until the login page is reloaded. After re-login, you can check the new IP address on the **Network** tab page.

Figure 5-2 Changing the camera IP address

▼ **Modifying an IPv4 Address**

Method of obtaining

☒ Manual ☐ Auto

* IPv4 address

90 - 85 - 100 - 194

* Subnet mask

255 - 255 - 240 - 0

Gateway

90 - 85 - 100 - 1

MAC address

60:ce:41:f8:7b:f7

Primary DNS

0 - 0 - 0 - 0

Secondary DNS

0 - 0 - 0 - 0

Save

Table 5-1 Key parameters

Parameter	Description
Method of obtaining	Method for obtaining the IP address. The options are Manual and Auto (default value). NOTE When a Dynamic Host Configuration Protocol (DHCP) server exists in the network, an IP address is automatically allocated to the camera. In this case, you can click Auto to check the IP address. The camera IP address allocated by the DHCP server is fixed.
IPv4 address	Camera IP address. This parameter can be set only when Method of obtaining is set to Manual. You must enter an IP address starting with a value that ranges from 1 to 223, except for 127, because IP addresses starting with 127 are invalid. Here, 192.168.100.194 is used as an example. If a camera is passively registered through ONVIF or SDK, only the IP address needs to be set. NOTE • You can click the magnifier icon to check whether the current IP address is available. • You cannot set this parameter to an IP address on the network segment of 127.0.0.0/8.
Subnet mask	Subnet mask of the network where the camera is located.
Gateway	Gateway IP address of the network where the camera is located.

----End

6 Verifying the Installation

After installing the device, use the checklist in [Table 6-1](#) to check the device is installed properly.

Table 6-1 Checklist

Check Item	Result
All screws are tightly fastened.	Yes ☐ No ☐
The camera is securely installed on the bracket or wall.	Yes ☐ No ☐
The ambient temperature meets the device specifications.	Yes ☐ No ☐
Insulation and waterproofing measures have been taken to protect cables installed in humid environments, and the drip loops are in correct positions.	Yes ☐ No ☐
The camera is grounded. If it is powered by PoE, the PoE switch is also grounded.	Yes ☐ No ☐
If any, the protective film and fixing rubber strip have been removed from the lens and camera body, respectively.	Yes ☐ No ☐
The camera can power up properly.	Yes ☐ No ☐
You can access the camera web system using the IP address you configured.	Yes ☐ No ☐
You can view live video from the camera in the camera web system.	Yes ☐ No ☐
You can view the desired scene on camera web pages and the image is clear, as shown in Figure 6-1 .	Yes ☐ No ☐

Check Item	Result
The detection area can be viewed clearly in low light conditions.	Yes ☐ No ☐

You can view the desired scene on the web page. The delivered images are clear.

Figure 6-1 Video image



7 FAQs

Q: What can I do if the message "There is a problem with this website's security certificate." appears after I enter the camera IP address in the address box of Internet Explorer?

A: Click **Continue to this website (not recommended)** to access the camera web page. Then, download and install the root certificate or upload your own root certificate.

Q: After the root certificate is installed, Internet Explorer still displays "There is a problem with this website's security certificate." After I click **Continue to this web (not recommended)** to access the login page, the "Certificate Error" message appears in the address box.

A: In the camera web system, choose **Configuration > System > Security Management > Certificate Management** and upload a valid certificate. After the certificate is uploaded, restart the browser.

Q: What can I do when the message "Your request for URL has a security risk. You can access this URL by clicking the Continue, I accept this risk. button. If you make this choice, it means that you accept this risk." appears during a login attempt?

A: Choose **Tools > Internet Options**, click the **Connections** tab, click **LAN Setting**, and deselect **Use a proxy for your LAN**.

Q: The message "Heating..." appears while the live video can be properly viewed.

A: If the camera is started up in a low-temperature environment, the camera may enter the low-temperature protection mode. In this case, the message "Heating..." will appear on the live video. When the temperature of the camera rises, the message will disappear.

Q: What can I do if I fail to download files or the SDC Web Control?

A: In Internet Explorer, choose **Tools > Internet Options > Advanced** and click **Reset** to restore the default browser settings. Then restart the computer and log in to the camera web system again.

Q: What can I do if I forgot the password of the **admin** user?

A: Hold down the **Reset** button for more than 5s to restore the camera to factory defaults.

 NOTE

Exercise caution when restoring the camera to factory defaults. After the camera is restored to factory defaults, user accounts and some other configuration data may be lost.