

Generic Bullet Camera Quick Start Guide

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1 Packing List

Table 1-1 Packing list

Item	Quantity	Item	Quantity
Camera	1	Safety precautions	1

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

UNC 1/4"-20 screws are required during the installation.

2 Cable Connectors and Slots

- 2.1 Cable Connectors
- 2.2 Reset Button and SD Card Slot

2.1 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 2-1 Cable connectors

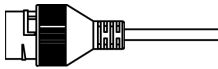
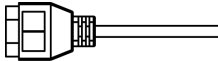
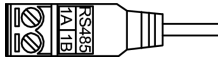
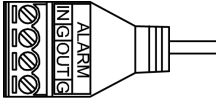
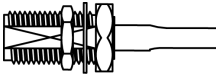
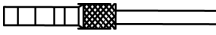
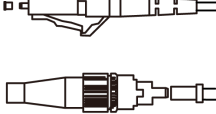
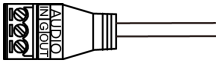
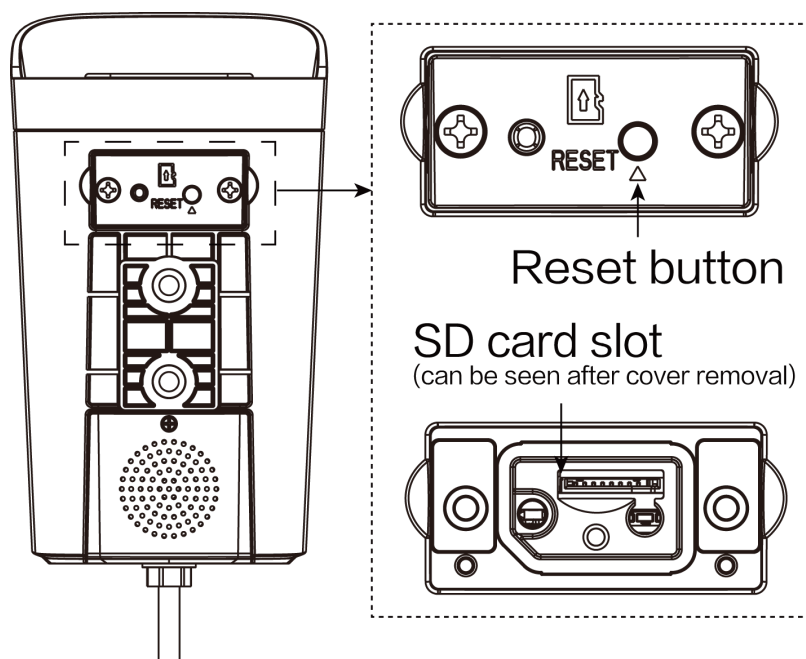
Diagram	Label and Description
	LAN: Connects to the LAN port. For a camera with dual network ports, one port can be connected to a switch, and the other port can be connected to another camera to transmit video data from the camera to the current camera for intelligent analysis. Some cameras support power over Ethernet (PoE). Cameras that support PoE have a PoE identifier on their nameplates. You can use a short port to connect to a PoE switch.
	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.

Diagram	Label and Description
	ALARM_OUT: Connects to the alarm output port.
	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.

2.2 Reset Button and SD Card Slot

Use a Phillips screwdriver to remove the camera's bottom cover. Then, you can see the reset button and SD card slot, as shown in [Figure 2-1](#).

Figure 2-1 Reset button and SD card slot**Table 2-2** 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

- The onboard storage or reset function is available only for cameras that support SD cards or the reset function.
- 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.

3 Device Installation

[3.1 Installation Requirements](#)

[3.2 Installation Tools](#)

[3.3 Safety Precautions](#)

[3.4 SD Card Installation](#)

[3.5 Wall-mounted Installation](#)

[3.6 Pendant-mounted Installation](#)

[3.7 Cable Connection](#)

[3.8 Waterproofing and Insulation](#)

3.1 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.

3.2 Installation Tools

Table 3-1 lists the tools to be prepared.

Table 3-1 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.	

3.3 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

Use auxiliaries delivered with this product and recommended by the manufacturer, such as power adapters, batteries, and brackets. We are not liable for any faults caused by other manufacturers' auxiliaries not certified by us.

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.

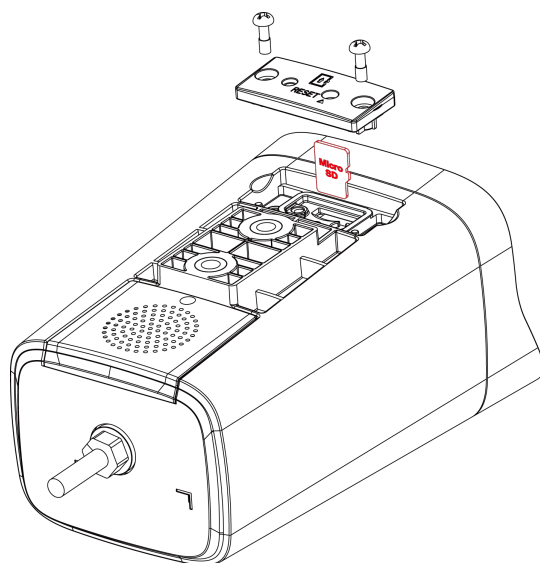
The recommended stock temperature ranges from -10°C to +35°C. The recommended stock humidity ranges from 20% to 75%.



CAUTION

- This is a Class A product, operation in a residential environment this product may cause radio interference in which case the user may be required to take adequate measures

3.4 SD Card Installation



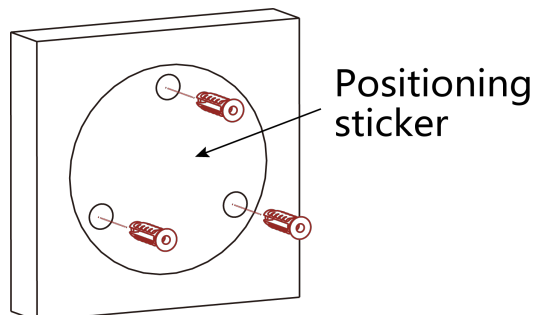
CAUTION

- When the camera is not or cannot be connected to a video security platform for a long time, you are advised to disable video buffering to increase the service life of the microSD card.
- Do not remove the protective film from the viewing window before the installation is complete.

3.5 Wall-mounted Installation

- Step 1** Determine the camera installation position, attach a positioning sticker to the installation position, and drill holes according to the marks on the sticker. Use a claw hammer to drive expansion bolts into drilled holes.

Figure 3-1 Driving expansion bolts

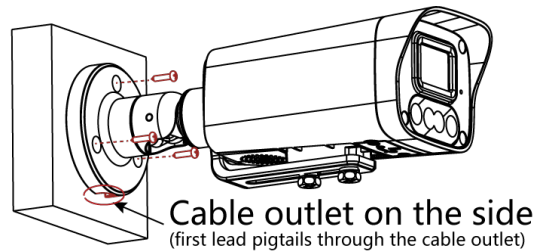


Drill holes and drive expansion bolts into the holes

Drill bit size: Ø6 mm;
hole depth: 30.5 mm

- Step 2** Route the camera pigtails out of the cable outlet, fix the bracket in place, and connect the camera pigtails to the cables.

Figure 3-2 Fixing the bracket in place

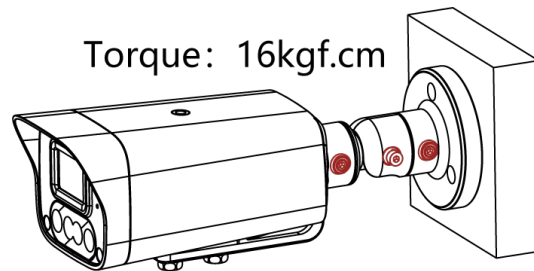


Fix the bracket in place

Torque: 12kgf.cm

- Step 3** Loosen the screws on the bracket, adjust the camera's viewing angle, and tighten the screws.

Figure 3-3 Adjusting the camera's viewing angle

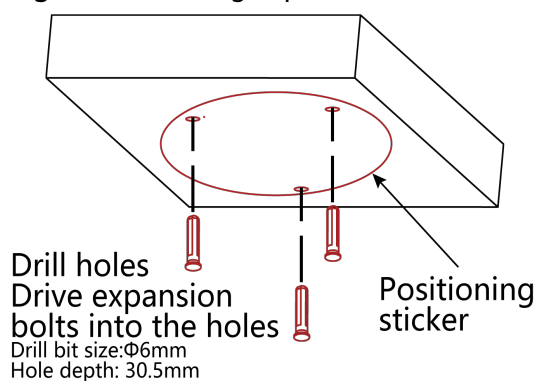


Loosen the screws on the bracket, adjust the camera's viewing angle, and tighten the screws

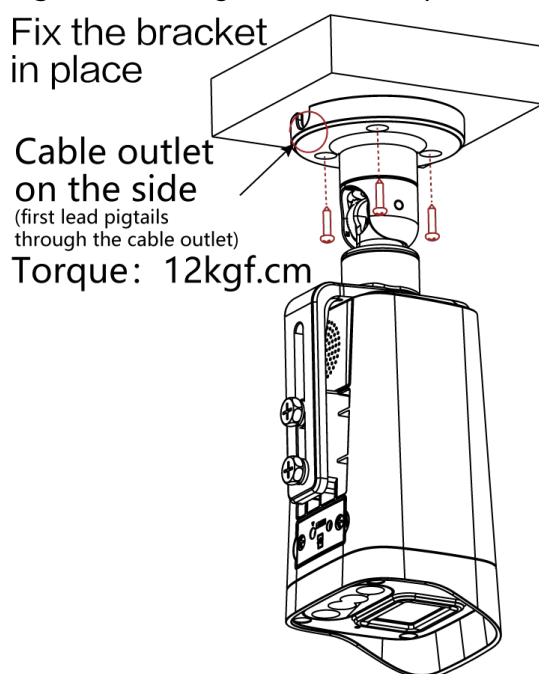
----End

3.6 Pendant-mounted Installation

- Step 1** Determine the camera installation position, attach a positioning sticker to the installation position, and drill holes according to the marks on the sticker. Use a claw hammer to drive expansion bolts into drilled holes.

Figure 3-4 Driving expansion bolts

Step 2 Route the camera pigtails out of the cable outlet, fix the bracket in place, and connect the camera pigtails to the cables.

Figure 3-5 Fixing the bracket in place

Step 3 Loosen the screws on the bracket, adjust the camera's viewing angle, and tighten the screws.

Figure 3-6 Adjusting the camera's viewing angle

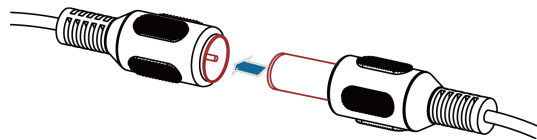
Loosen all screws on the bracket and adjust the camera's viewing angle. Then tighten the screws. Torque: 16kgf.cm



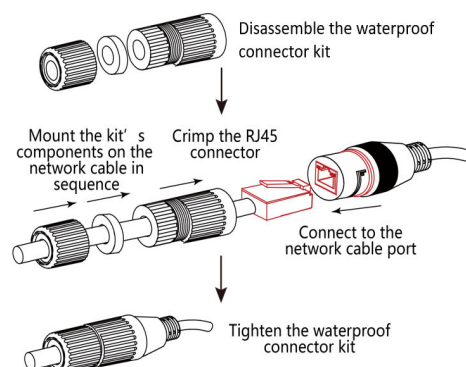
----End

3.7 Cable Connection

- Connect the power cable.

Figure 3-7 Connecting the power cable

- Connect the network cable, as shown in [Figure 3-8](#).

Figure 3-8 Connecting the network cable

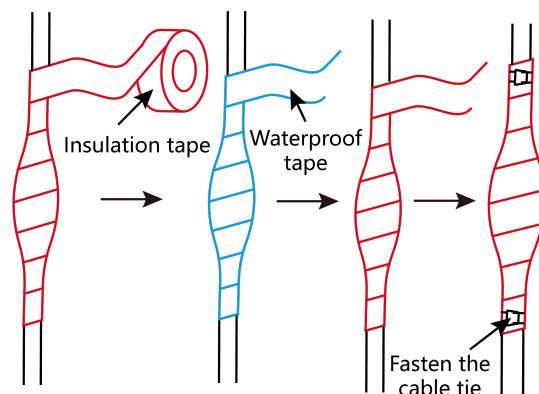
3.8 Waterproofing and Insulation

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 3-9](#).

Figure 3-9 Wrapping with insulation and waterproof tape

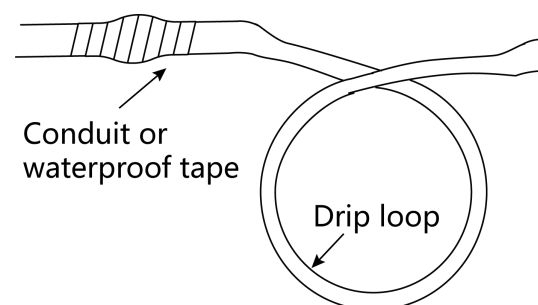


NOTE

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

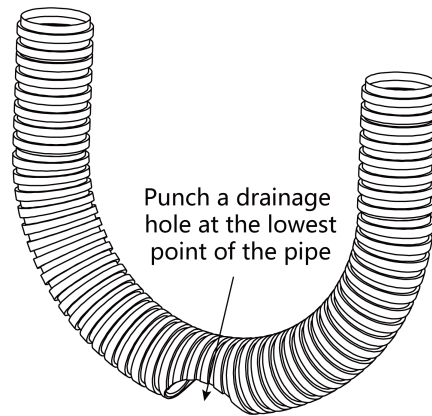
Step 2 Cover the rest of the cabling in a conduit or with waterproof tape. Make a drip loop to create an artificial lowest point of the cable, as shown in [Figure 3-10](#).

Figure 3-10 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 3-11](#)) to allow water to escape from the pipe. Continuous soaking may cause pigtail damage.

Figure 3-11 Corrugated pipe



----End

4 Setting Basic Network Parameters

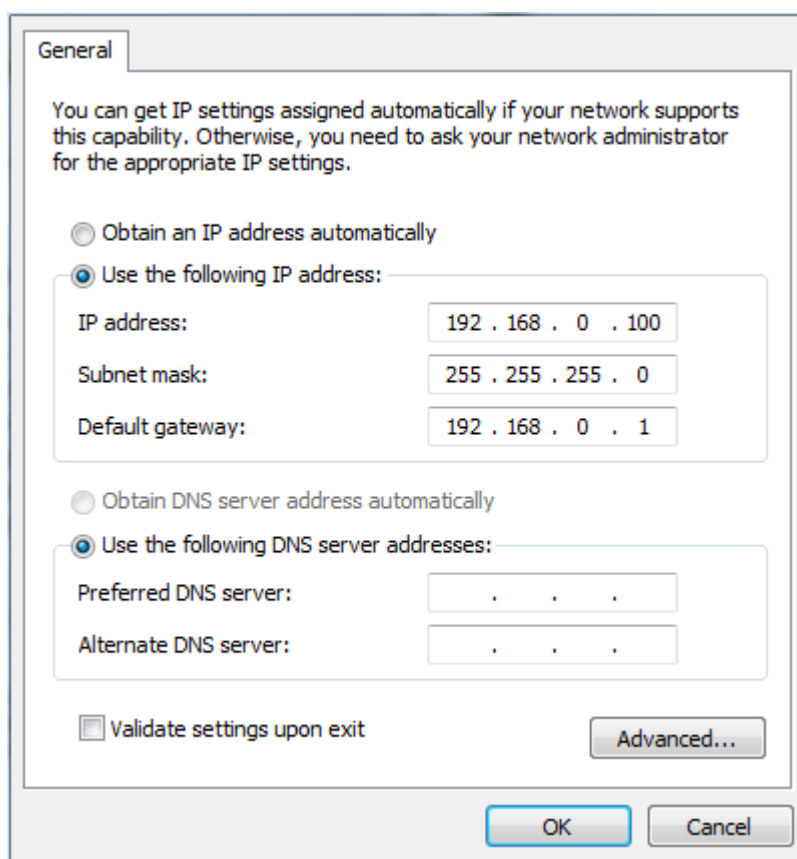
[4.1 Setting the Computer IP Address](#)

[4.2 Activate a Camera](#)

[4.3 Changing the Camera IP Address](#)

4.1 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 4-1 Internet Protocol Version 4 (TCP/IPv4) Properties window

-----End

4.2 Activate a Camera

Step 1 Open Internet Explorer, enter the camera IP address (192.168.0.120 by default) in the address box, and press **Enter**.

NOTE

- The following browsers are supported: Internet Explorer 10/11, Google Chrome 38 or later, and Mozilla Firefox 35–51. To use Google Chrome 45 or later, you need to install the Internet Explorer Tab (IE Tab) plug-in.
- 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

4.3 Changing the Camera IP Address

- Step 1** Open Internet Explorer, enter the 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/Time** tab. On the tab that is displayed, change the camera IP address based on the project data plan, as shown in [Figure 4-2](#). [Table 4-1](#) 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/Time** tab page.

Figure 4-2 Changing the camera IP address

The screenshot shows the 'Network/Time' configuration tab. At the top, there are three tabs: 'PTZ', 'General', and 'Network/Time', with 'Network/Time' being the active tab. Below the tabs is a section titled 'Set IP Address' with a dropdown arrow. Under this section, there are several input fields: 'IPv4 address assignment' with a dropdown menu showing 'Use the following IP address'; 'IPv4 address' with a text box containing '90 . 56 . 136 . 48' and a search icon; 'IPv4 subnet mask' with a text box containing '255 . 255 . 240 . 0'; 'IPv4 gateway' with a text box containing '90 . 56 . 128 . 1'; 'Primary DNS' with a text box containing '0 . 0 . 0 . 0'; and 'Secondary DNS' with a text box containing '0 . 0 . 0 . 0'. At the bottom of this section is a 'Save' button.

Table 4-1 Key parameters

Parameter	Description
IPv4 address assignment	• Obtain IP address automatically: If a Dynamic Host Configuration Protocol (DHCP) server is deployed on the network, the system automatically configures the IP address, subnet mask, gateway IP address, and DNS for the camera. • Use the following IP address: You need to manually set the IP address, subnet mask, gateway IP address, and DNS for the camera.

Parameter	Description
IPv4 address	Camera IP address. This parameter is available only when IPv4 address assignment is set to Use the following IP address. Enter the planned IP address. You must enter an IP address starting with a value that ranges from 1 to 223, for example, 192.168.100.194. 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 or 169.254.0.0/16.
IPv4 subnet mask	Subnet mask of the network where the camera is located.
IPv4 gateway	Gateway IP address of the network where the camera is located.

----End

5 Verifying the Installation

After installing the device, use the checklist in [Table 5-1](#) to check the device is installed properly.

Table 5-1 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 5-1 .	Yes ☐ No ☐

Check Item	Result
The detection area can be viewed clearly in low light conditions.	Yes ☐ No ☐
The following check items are applicable to scenarios where the camera is installed in outdoor areas, areas that are prone to lightning strikes, or indoor areas with high induced voltage such as high-voltage substations.	
The pole is grounded through a downlead.	Yes ☐ No ☐
A lightning rod is installed on the pole and the camera is within the protection range of the lightning rod. If no lightning rod is installed, the camera is within the protection range of other surge protection devices.	Yes ☐ No ☐
All ground cables are connected to the ground bar, and the ground bar is grounded through a downlead.	Yes ☐ No ☐
A power surge protector is installed.	Yes ☐ No ☐
A network port surge protector is installed.	Yes ☐ No ☐
The surge protector is grounded to the nearest ground point.	Yes ☐ No ☐
The cables of the surge protector are correctly connected.	Yes ☐ No ☐
The camera with a ground cable is grounded to the nearest ground point.	Yes ☐ No ☐
Waterproof measures are taken according to instructions in the quick start guide.	Yes ☐ No ☐
A drainage hole is deployed at the lowest point of the corrugated pipe.	Yes ☐ No ☐
All screws are securely tightened.	Yes ☐ No ☐
The Sensing Edge device is grounded to the nearest ground point.	Yes ☐ No ☐
The cross-sectional areas of the ground copper bar in the network box, surge protector's ground cable, and camera's ground cable are greater than or equal to 16 mm ² , 6 mm ² , and 4 mm ² , respectively.	Yes ☐ No ☐

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

Figure 5-1 Video image

6 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.